Republik Indonesia
Kementerian Perhubungan
Direktorat Jenderal Perhubungan Laut

Republik Indonesia
Proyek Kajian Studi
Untuk
Maritime Traffic Safety System
Development Plan

(Rencana Pengembangan Sistem Keselamatan Lalu Lintas Maritim)

Volume Terpisah (Fase-2)
(Lampiran)

April, 2023

Japan International Cooperation Agency (JICA)
Japan Aids to Navigation Association (JANA)

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Lampiran 1

MoM (Oct., 2021)

MINUTES OF MEETINGS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
DIRECTORATE GENERAL OF SEA TRANSPORTATION
THE REPUBLIC OF INDONESIA
FOR AMENDMENT OF THE RECORD OF DISCUSSIONS
ON
THE PROJECT FOR REVIEW OF THE STUDY FOR MARITIME TRAFFIC SAFETY SYSTEM DEVELOPMENT PLAN

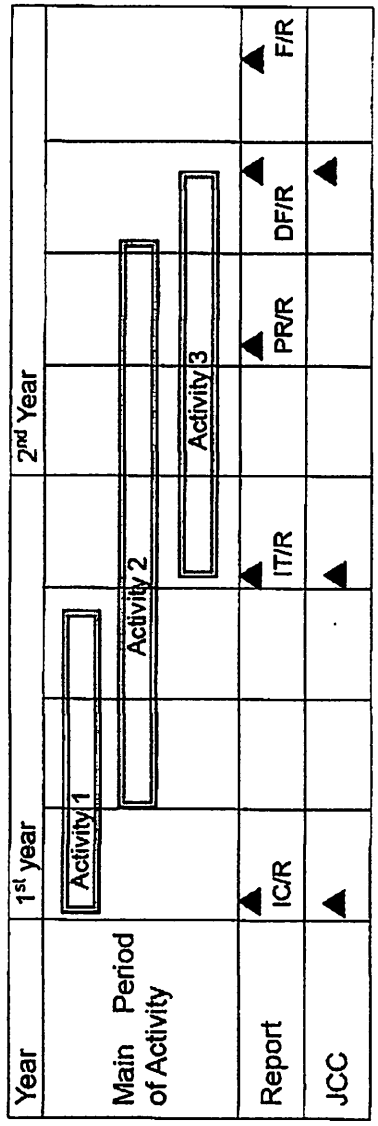
The Japan International Cooperation Agency (hereinafter referred to as "JICA") and Directorate General of Sea Transportation in the Republic of Indonesia (hereinafter referred to as "DGST") hereby agree that the Record of Discussions on the Project for Review of the Study for Maritime Traffic Safety System Development Plan (hereinafter referred to as "the Project") signed on 22 March 2017 will be amended as follows;

1. Amendment of outline of the project

Before	Amended Version
4. Activities	4. Activities 4) NAVIGASI, each DISNAV, and JICA Experts formulate Master Plan about; i) Aids to Navigation and VTS, including "Ships Routeing" which is derived from these ii) Coastal Radio Station iii) Vessels for Aids to Navigation In this activity, NAVIGASI and each DISNAV actively get and analyze data on i) Aids to Navigation and VTS, including "Ships Routeing", ii) Coastal Radio Station, and iii) Vessels for Aids to Navigation following JICA experts advices based on Annex 4.
5. Input (2) Input by DGST	5. Input (2) Input by DGST (f) Regarding with Activities 4), NAVIGASI and each DISNAV actively get and analyze data on i) Aids to Navigation and VTS, including "Ships Routeing", ii) Coastal Radio Station, and iii)

	Vessels for Aids to Navigation following JICA experts advice based on Annex 4.
8. Duration 2 years from the arrival of the first expert. Tentative schedule is shown below.	8. Duration 4 years from the arrival of the first expert.

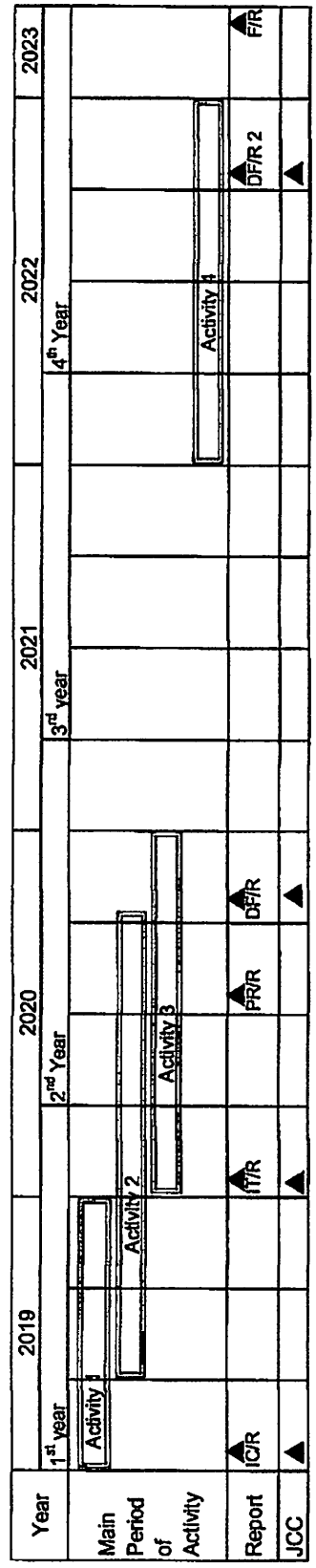
Tentative Schedule



9. Reports

Tentative schedule is shown below.

Tentative Schedule



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	9. Reports (6)15 copies of Final Report within three (3) months after the receipt of the comments on the Draft Final Report ver.2
Reason: This amendment is necessary to meet additional request from DGST written in letter (Ref.No: AL703/1/6/DJPL/2021 Jakarta 8 January 2021) (Annex 3).	

2. Retroactive (Record of Discussions Annex 1)

Before	Amended Version
None	This amendment will become retroactive to April 1, 2021
Reason: JICA and DGST agreed the necessity of the extension of the project by exchanging letters with the date of 25 December 2020 (Annex 2) and 8 January 2021 (Annex 3). However, the amendment of R/D has not been implemented in a timely manner due to the outbreak of COVID-19. Therefore, this amendment shall be effective retroactively to 1 April, 2021, the expiration date of the previous duration.	

The parties acknowledge and agree that this Minutes of Meetings may be executed by electronic signature, which is considered as an original signature for all purposes and has the same force and effect as an original signature. "Electronic signature" includes faxed versions of an original signature or electronically scanned and transmitted versions of an original signature.

Annex 1 : Record of Discussions on the Project for Review of the Study for Maritime Traffic Safety System Development Plan in the Republic of Indonesia Agreed upon between Directorate General of Sea Transportation and Japan International Cooperation Agency (signed on 22 March 2017)

Annex 2 : Additional work for "The Project for Review of the Study for Maritime Traffic Safety System Development Plan" (25 December 2020)

Annex 3 : Re: "The project for Review of the Study for Maritime Traffic Safety System Development Plan"(Ref.No: AL703/1/6/DJPL/2021 Jakarta 8 January 2021)

Annex 4 : TOR for the additional activities

Jakarta, 13th October 2021

For Shigenori Ogawa
Chief Representative
JICA Indonesia Office
Japan

ARIF TOHA
Secretary for Directorate General of
Sea Transportation
Ministry of Transportation
Republic of Indonesia

RECORD OF DISCUSSIONS

ON

THE PROJECT FOR REVIEW OF THE STUDY FOR MARITIME TRAFFIC SAFETY SYSTEM DEVELOPMENT PLAN

IN

THE REPUBLIC OF INDONESIA

AGREED UPON BETWEEN

DIRECTORATE GENERAL OF SEA TRANSPORTATION

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Jakarta, 22 March 2017

Naoki Ando
Chief Representative
JICA Indonesia Office
Japan

Ir. I NYOMAN SUKAYADNYA, MM
Secretary for Directorate General of
Sea Transportation
Ministry of Transportation
Republic of Indonesia

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Based on the minutes of meetings on the Detailed Planning Survey on the Project for Review of the Study for Maritime Traffic Safety System Development Plan in Republic of Indonesia (hereinafter referred to as "the Project") signed on 27 January, 2017 between Directorate General of Sea Transportation (hereinafter referred to as "DGST") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with DGST and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project and the main points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that DGST, the counterpart to JICA, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of the Republic of Indonesia (hereinafter referred to as "ROI").

The Project will be implemented within the framework of the Colombo Plan Technical Cooperation Scheme between the Government of Japan (hereinafter referred to as "GOJ") and the Government of Indonesia (hereinafter referred to as "GOI").

Appendix 1: Project Description
Appendix 2: Main Points Discussed
Appendix 3: Minutes of Meetings on Detailed Planning Survey on the Project for Review of the Study for Maritime Traffic Safety System Development Plan in Republic of Indonesia (if any change from)

Appendix 1

PROJECT DESCRIPTION

I. BACKGROUND

In 2002, DGST had conducted the Study for the Maritime Traffic Safety System Development Plan (hereinafter referred to as "the Previous Plan") which contained Master Plan up to year 2020 and Short Term Plan up to year 2007 in cooperation with JICA. GMDSS (Global Maritime Distress and Safety System), Aids to Navigation, VTS (Vessel Traffic Service) and Ship Reporting System were finally selected as the Priority Projects in the Previous Plan.

With the maximum effort of DGST, some of the proposed projects had been implemented. However, after more than 10 years since the Pervious Plan, along with the rapid social and economic development of ROI, the volume of sea traffic become larger than expected and the technologies in the field of shipping are improving. In addition, based on the President Joko Widodo's Global Maritime Axis (GMA) vision, its five pillars, not only sea toll road project but also other projects relating to the vision have been implemented on a fast track.

To cope with above situation, GOI requested GOJ to conduct the Project to review and update of the Pervious Plan.

II. OUTLINE OF THE PROJECT

1. Title of the Project

The Project for Review of the Study for Maritime Traffic Safety System Development Plan in the Republic of Indonesia

2. Expected Goals which will be attained after implementing the Proposed Plan

Maritime Traffic in all regions of the Republic of Indonesia is properly monitored and safety and efficiency of smooth maritime traffic is improved.

3. Outputs

Maritime Traffic Safety System Development Plan elaborated in 2002 under the assistance of JICA will be reviewed and updated.

4. Activities

1) Review and analysis of present condition of Maritime Traffic Safety including:
   i) Social economy
   ii) Natural environment
   iii) Sea lanes
   iv) Maritime Shipping, Traffic Routes, Shipping Accidents and Risk Management
   v) Sea Borne Cargoes and Passengers
   vi) Information Technology and Commercial Energy Supply
   vii) Ports and Harbors
   viii) Existing related plans and strategies
   ix) Implementation status of the Previous Plan

2) Update the Master Plans up to the target year of 2040:
   i) To set up socio-economic framework up to the target year

ii) To forecast the future demands of Maritime Traffic up to the target year
iii) To propose the possibility / necessity of establishment of ship routing
iv) To make a plan of improvement and establishment of Aids to Navigation
v) To make a plan of improvement and establishment of VTS system
vi) To make a plan of improvement and establishment of Maritime Telecommunication system including coastal radio, GMDSS and IT.
vii) To make a plan of building, improvement and deployment of Buoy Tenders
viii) To make a plan of education and training program for operation and maintenance of above equipment, ship and systems

3) Formulation of short term plans and implementation of Feasibility Study with rough cost estimates on the priority projects up to the target year of 2025:
i) To formulate short term plan up to the target year
ii) To select priority area and 5 priority projects from the short term plan
iii) To conduct basic design and rough cost estimation of the 5 priority projects
iv) To conduct economic and financial analysis of the 5 priority projects
v) To conduct natural and environmental survey for the 5 priority projects

5. Input

(1) Input by JICA

(a) Dispatch of Mission

- Team Leader
- Aids to Navigation
- VTS
- GMDSS
- Buoy Tender
- Education and Training
- IT
- Economic and Financial Analysis
- Natural and Environmental Consideration
- Coordinator

(b) Training

JICA will receive the Indonesian personnel concerned with the Project for technical training in Japan and the third countries as needed.

Input other than indicated above will be determined through mutual consultations between JICA and DGST during the implementation of the Project, as necessary.

(2) Input by DGST

DGST will take necessary measures to provide at its own expense:

(a) Services of DGST's counterpart personnel and administrative personnel as referred to in II-6;
(b) Suitable work space for maximum 6 persons with necessary equipment (including table, chair, and Internet connection) in the office of DGST;
(c) Available data (including maps and photographs) and information related to the Project;
(d) Means of transport and travel allowances for DGST's counterpart personnel for official travel within ROI;
(e) Credentials or identification cards for JICA Study Team;

6. Implementation Structure

The project organization chart is given in the Annex 1. The roles and assignments of relevant organizations are as follows:

(1) DGST

(a) Project Director

Secretary for Directorate General of DGST will be responsible for overall administration and implementation of the Project.

(b) Project Manager in DGST

Director of Navigation, DGST will be responsible for the administration of the Project component related to DGST.

(c) Deputy Project Manager

Deputy Director for Technical Planning of Navigation, DGST will be responsible for the technical aspects of the Project component related to DGST.

(2) JICA Study Team

The JICA Study Team will give necessary technical guidance, advice and recommendations to DGST on any matters pertaining to the implementation of the Project.

(3) Joint Coordinating Committee

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held whenever deems it necessary. A list of proposed members of JCC is shown in the Annex 2.

7. Project Site(s) and Beneficiaries

Project Site: Master Plan will be covered all regions of the Republic of Indonesia.
The 5 priority projects will be selected at the 2nd JCC
Beneficiaries: (Direct) DGST
(Indirect) Indonesian People

8. Duration

2 years from the arrival of the first expert. Tentative schedule is shown below.

Tentative Schedule

Year	1st year				2nd Year			
Main Period of Activity	Activity 1							
		Activity 2						
				Activity 3				
Report	▲ IC/R			▲ IT/R		▲ PR/R	▲ DF/R	▲ F/R
JCC	▲			▲			▲	

IC/R: Inception Report, IT/R: Interim Report, PR/R: Progress Report,
DF/R: Draft Final Report, F/R: Final Report

9. Reports

JICA will prepare and submit the following reports to the DGST in English and Indonesian.

(1) 15 copies of Inception Report which explains overall project work plan at the commencement of the first work period in ROI

(2) 15 copies of Interim Report which will include mainly the result of activities in activity 1 and rough draft of Master Plan at the time about 9 months after the commencement of the first work period in ROI

(3) 15 copies of Progress Report which will include the draft of Master Plans, rough draft of short term plan and rough draft of the feasibility study of priority projects at the time of 15 months after the commencement of the first work period in ROI

(4) 15 copies of Draft Final Report which will include the draft of short term plan at the time of 21 months after the commencement of the first work period in ROI

(5) 15 copies of Final Report within three (3) month after the receipt of the comments on the Draft Final Report

10. Environmental and Social Considerations

DGST will abide by 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

III. UNDERTAKINGS OF DGST and GOI

1. DGST and GOI will take necessary measures to:

(1) ensure that the technologies and knowledge acquired by the ROI nationals as a result of Japanese technical cooperation contributes to the economic and social development of ROI, and that the knowledge and experience acquired by the personnel of ROI from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project;

(2) grant privileges, exemptions and benefits to members of the JICA missions referred to in II-5 above and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in ROI;

(3) provide security-related information as well as measures to ensure the safety of members of the JICA missions; and

(4) permit members of the JICA missions to enter, leave and sojourn in ROI for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees.

Other privileges, exemptions and benefits will be provided in accordance with the Colombo Plan Technical Cooperation Scheme between the Government of Japan and the ROI.

IV. MONITORING AND EVALUATION

JICA will conduct the following evaluations and surveys to verify how the proposed plan is utilized and draw lessons. The DGST is required to provide necessary support for them.

1. Ex-post evaluation three (3) years after the project completion, in principle
2. Follow-up surveys on necessity basis

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting support for the Project, DGST will take appropriate measures to make the Project widely known to the people of ROI.

VI. MISCONDUCT

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, DGST and relevant organizations will provide JICA with such information as JICA may reasonably request, including information related to any concerned official of the government and/or public organizations of the ROI.

DGST and relevant organizations will not, unfairly or unfavorably treat the person and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project.

VII. MUTUAL CONSULTATION

JICA and DGST will consult each other whenever any major issues arise in the course of Project implementation.

VIII. AMENDMENTS

The record of discussions may be amended by the minutes of meetings between JICA and DGST.

The minutes of meetings will be signed by authorized persons of each side who may be different from the signers of the record of discussions.

Annex 1 Project Organization Chart
Annex 2 Proposed Members of Joint Coordinating Committee

Appendix 2

MAIN POINTS DISCUSSED

1. Both sides confirmed that the project is categorized as "Goods / Services" as stipulated in Article 42 (1) c of Government Regulation No. 10/2011.

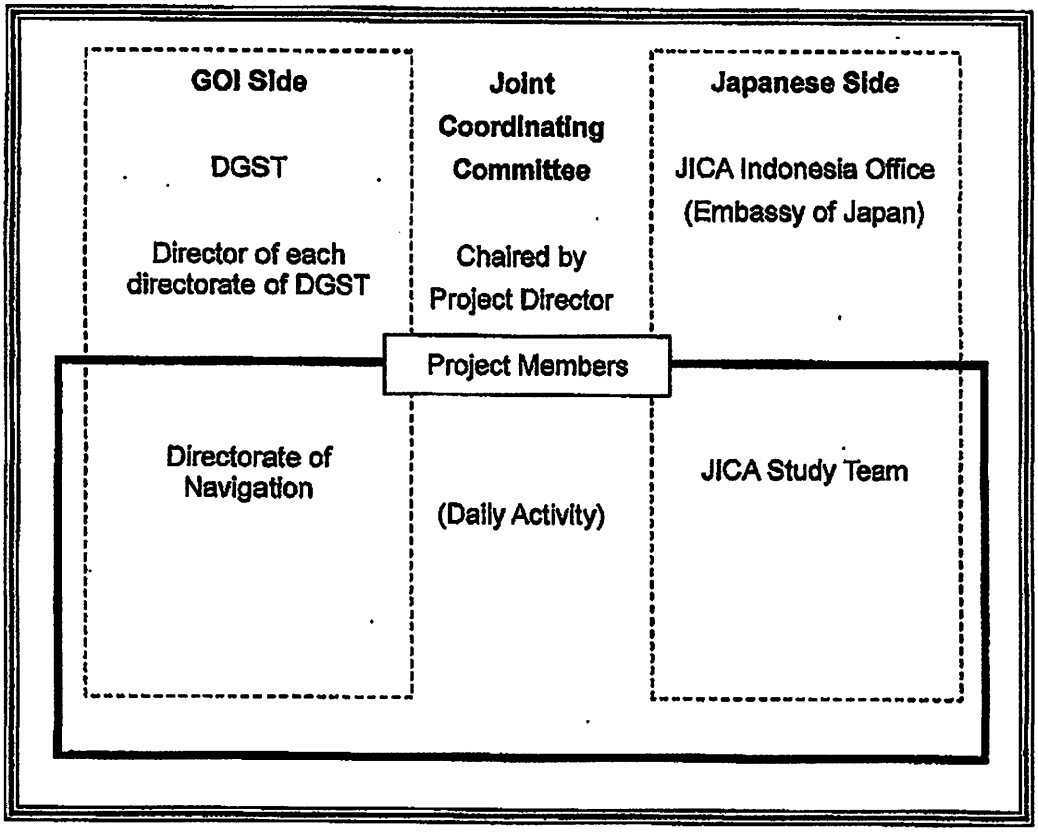
2. In accordance with Regulation of Minister of Finance No. 191/ PMK.05 /2011, the DGST shall submit BAST (handover delivery certificate of goods/services) to the Ministry of Finance of Indonesia. In order to secure the accuracy of BAST, JICA Indonesia Office will provide the DGST with data on semester basis as follows:
   - Goods: name and price (in effective currency and Indonesian currency) per item of equipment handed over during last six months
   - Services: total expenditure (in Japanese currency and Indonesian currency) of last six months for expert, training, and mission

3. The DGST will make and sign BAST based on the data provided by JICA, and after obtaining JICA's confirmation, submit it to Ministry of Finance

Annex 1: Project Organization Chart

The Project will be implemented by the DGST in cooperation with JICA. The Project Organization Chart indicating joint implementation structure is shown below:

Joint Implementation Structure of the Project



Annex 2: Proposed Members of Joint Coordinating Committee (JCC)

The Proposed chairperson and the members of the JCC will be as follows:

1) Chairperson.
   - Secretary for Directorate General, DGST
2) Members from the GOI Side
   - Director of each directorate of DGST
   - Project Members
   - Authorities concerned to the Project
3) Members from the Japanese Side
   - JICA Indonesian Office
   - JICA Study Team
   - Personnel concerned to be decided by the Japanese Side
4) Others
   - Officials of the Embassy of Japan may attend the meeting as observers.
   - Persons who are invited by the Chairperson may attend the meeting as observers.

Japan International Cooperation Agency

Mr. Hengki Angkasawan
Director of Navigation
Directorate of Navigation, Directorate General of Sea Transportation

Dear Mr. Hengki,

Subject: Additional work for "The Project for Review of the Study for Maritime Traffic Safety System Development Plan"

We appreciate your support for "The Project for Review of the Study for Maritime Traffic Safety System Development Plan".

Since our last Joint Coordination Committee meeting held in August this year, NAVIGASI, JICA and the consultants had series of meetings and discussions about the contents and descriptions of the draft final report. Through these discussions, we noticed that each NAVIGASI, JICA and the consultants have different picture on the Masterplan and we need to clarify the activities to be covered in the Project. We have examined what we have done in the Project and what we are supposed to do, the contents of the final report, and the comments from NAVIGASI etc. which we have summarized in the attached sheets. We might be able to accept the request from NAVIGASI in some items while we cannot in others.

We kindly request you to confirm the attached sheets and send us the confirmation. We would appreciate it if you could send the comments with concrete details referring the previous Masterplan by 22th January 2021 in case that you have a different view on particular items.

Yours sincerely,

中川淳史

Atsushi Nakagawa
Director
Team 2, Transportation Group
Infrastructure Management Dept.
JICA

CC: Mr. Yoku Santo
Executive Director
Japan Aids to Navigation Association

KEMENTERIAN PERHUBUNGAN
DIREKTORAT JENDERAL PERHUBUNGAN LAUT

JL. MEDAN MERDEKA BARAT No. 8
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Twitter :@djplkemenhub151

Ref. No : AL.703/1/6/DJPL/2021 Jakarta, 8 January 2021

Director
Team 2, Transportation Group Infrastructure Management Department
Japan International Cooperation Agency

ATTN : **Mr. ATSUSHI NAKAGAWA**

Re : "The project for Review of the Study for Maritime Traffic Safety System Development Plan"

Dear Mr. Nakagawa,

First of all, we would like to extent our sincere appreciation to JICA for the support, contribution and cooperation for establishment of The Project for Review of the Study for Maritime Traffic Safety System Development Plan (MTSDP). Further, we would like to thank you for your efforts towards the completion of the Project of MTSDP.

Based on Record of Discussions on the Project for Review of the Study for Maritime Traffic Safety System Development Plan in the Republic of Indonesia Agreed Upon Between Directorate General of Sea Transportation and Japan International Cooperation Agency (JICA) (hereinafter referred as "the ROD"), which signed on 22 March 2017, the output of the said study is to review and update the MTSDP elaborated in 2002, including to update the Master Plans on navigation related aspects up to 2040.

We do hope that the result of the said study of MTSDP could develop a comprehensive Master Plans based on the current policy and related international as well as national rules and regulations, in accordance with the said ROD. Further, we expected that the said Master Plans could be utilize as a main document to develop our very own National Strategic Plan on Navigation Aspects, which we are fully aware and understand will be drafted by the Directorate General of Sea Transportation.

We appreciate the efforts of the JICA study team to develop the content of the study, however, we still have the opinion that there are several areas that needed to be developed in order to accommodate the items which agreed on ROD. According to the discussion during the last Joint Coordination Committee meeting which held in August 2020, we draw a conclusion that document for the new master plan which was prepared by consultant appointed by JICA could not be identified as comprehensive Master Plan instead it could be describes as the list of priority projects.

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We also have the opinion that if there is an urgent necessity to complete the Projects, it would be very beneficial for both parties, if JICA could conducted a follow up study after the completion of the Project, as a new project under the cooperation between Directorate General of Sea Transportation and JICA, referring to Record of Discussion, with a new Study Team/Consultant which have the expertise to develop a Master Plan which related to the Navigation Activities.

As a way forward, due to differences between the Directorate General of Sea Transportation and JICA Study Team on the interpretation on how the Master Plans should be drafted based on the ROD, and especially based on our initial expectations and requirements when we proposed the said Projects, it would be very appreciated if we could have the consultation meetings, which will be conducted based on Paragraph VII of the ROD, in order to find solutions for the completion of the Project of MTSDP.

Thank you for your kind cooperation.

Sincerely yours,
On behalf of the Director General of Sea Transportation

Ditandatangani secara elektronik
HENGKI ANGKASAWAN, IR

Director of Navigation
Directorate General of Sea Transportation

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Terms of Reference for the additional work

Scope of the Additional Work

- There are three components in the additional work (support for arrangement of an establishment plan), namely:

  Component 1 : Aids to Navigation and VTS, including "Ships Routeing"
  Component 2 : Coastal Radio Station
  Component 3 : Vessels for Aids to Navigation

- The goal of the additional work is for NAVIGASI to be able to draft a necessary Master Plan for the future with a view up to 2040 in the above 3 areas using the data collected and analyzed by DISNAV. Thus, the focus of the additional work is on the technical transfer of the necessary knowledge and skills in formulating draft Master Plans in the above 3 areas through advisory services from consultants. Cooperation between NAVIGASI and DISNAV for this purpose will be also strengthened.

- The consultants will guide the whole process including the setting up meetings and provide advices and supports such as policy inputs, advices in guidelines, advices in data compilation and analysis, suggestions of necessary questionnaires, formats, diagrams, charts, etc.

- Local Consultants will assist in coordination for setting up meetings, documentation, data compilation, interpretation in the meetings, and translation of documents. They will be selected by the Consultants following JICA's regulations on the procurement.

- As a deliverable of the technical transfer activities, the Master Plan as described above will be formulated in each component jointly. The consultants will compile them and submit them which will be added to the Draft Final Report (2) and final report. This Master Plan should be elaborated and completed as NAVIGASI's own Master Plan by NAVIGASI themselves after the due internal process.

- Charts and descriptions which NAVIGASI expects to be included in the Master Plan for each component will be summarized after the discussion between NAVIGASI and the

consultants. Those charts or similar charts which contains same level of information should be included for each component.

- Timeframe of the additional work is 1 year from its commencement.

Prerequisites

- Counterpart personnel need to be assigned at NAVIGASI and each DISNAV as below.
  - Chief who will be in charge of overall management and coordination of all components of additional work
  - Person in charge of Component 1
  - Person in charge of Component 2
  - Person in charge of Component 3
- Above 4 positions will be working closely with their counterpart consultant. It is also necessary to assign deputy for each position in order not to suspend the activities during his/her absence.
- In order to complete the additional work within the agreed timeframe, the consultants need to do overall process management with the close communication with the assigned counterpart team.

Outlines of the Necessary Activities

1. Preparation of necessary documents such as Policy, Guideline, and Questionnaire by NAVIGASI with assistance of the Consultants

   The Consultants will provide the templates of the following three documents. NAVIGASI will formulate the following documents officially for DISNAV with the advices and supports from the consultants,:

   - The Policy for fundamental approach in making the Master Plan. The Consultants will guide the points of consideration for preparing the Policy using its template.
   - The Guideline for planning and installing aids to navigation in accordance with international standards and in taking into account regional characteristics.
   - The format document including Questionnaires for collecting the draft Establishment Plan of DISNAV in line with the Policy and the Guideline and for necessary information in planning the plan.

NAVIGASI with the support from consultants will identify the necessary data and agree with the consultants on the means of data collection through the discussion. In order to facilitate the discussion, the Consultants will provide the draft list of the necessary data as a suggestion for discussions to be built upon. The format of the Questionnaires for collecting those necessary data will be also agreed and developed jointly.

The format of the Establishment Plan which will be used by DISNAV in Activity 4 below "Preparation of the Draft Establishment Plan" will be also agreed and developed jointly.

2. Guidance to DISNAV by NAVIGASI and Consultants
   - NAVIGASI will issue a letter with the Director's signature and deliver above Policy, Guidelines, Questionnaires, including Formats to all the DISNAV.
   - NAVIGASI will organize online guidance sessions with all DISNAVs using above documents.
   - Consultants will provide technical advices in the discussion especially in the Q&A sessions.

3. Data collection by each DISNAV with supports from Consultants
   - DISNAV, with the technical support from the Consultants, collect all necessary data using Questionnaire in line with the Policy and the Guidelines.
   - Consultants will facilitate the discussion for consultation as a help desk (online-base) for the work going smoothly.
   - Examples of necessary data anticipated are:

     Component 1: Nautical chart around the requested aid (Nautical chart with existing aids to navigation indicated), Access map to the requested locations (route, means of access), chart of each port, maritime information, AIS, typical ship route, hearings from maritime stakeholders

     Component 2: Data from CRS, Operating Log (Communication record) Operational hours, The total time (number of times) of received signals, The total time (number of times) of transmitted signals, Record of equipment trouble

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Component 3: Information about buoy base and vessels, etc. which are necessary for estimating work load of each buoy tender, Operation statistics] Logbook (Navigation record) [Calculation of the workload to be done by vessels] Interval of lighthouse keeper's shift, Itinerary (distance) for the transportation, Itinerary (distance) for the replacement of buoys, Type of vessels necessary

- Above necessary data will be derived from the concept of the documents in the Activity 1 above.
- Method for completing the format documents and Questionnaires will be discussed through the online meetings among the Consultants, NAVIGASI and each DISNAV, as needed.

4. Preparation of the Draft Establishment Plan by each DISNAV with the support from Consultants
   - The draft Establishment plan from DISNAV is a request to NAVIGASI regarding the DISNAV's needs in establishing Aids to Navigation System in their jurisdiction, and to improve the CRS and Vessels for AtoN.

   Component 1: The Establishment Plan from DISNAV will be the basis for installing visual aids to navigation, setting up VTS stations and considering Ships Routeing, and will be included in the short and/or long term Master Plan based on the policy, budget, etc.

   Component 2: The draft Establishment Plan from DISNAV related to CRS will be basis for considering the modernization of GMDSS and the operation of stations from now on, namely consolidation of stations, and will be reference information on planning the new system. The results of the consideration based on the information will be reflected in the Master Plan.

   Component 3: The draft Establishment Plan from DISNAV related to Vessels for AtoN will be basis for considering the renovation including scrap and build and relocation of a vessel that suits the workload. The results of the consideration based on the information will be reflected in the Master Plan.

- DISNAV, with the support from the Consultants, compiles and analyzes collected data, select the priorities, and prepare a draft Establishment plan in accordance with the Policy and the Guideline , and submit it to NAVIGASI.
- Local Consultants will also assist DISNAV in data compilation.

5. Formulation of the draft Master Plan by NAVIGASI and Consultants
   - With the technical advices and supports from the consultants, NAVIGASI will aggregate all the Establishment Plans from DISNAVs.
   - Local Consultants will also assist NAVIGASI in aggregating the Establishment Plans from DISNAVs.
   - Through above process, NAVIGASI and the Consultants will determine the order of implementation of all Establishment Plans from DISNAV. The Consultants will provide the points to be considered in determining the order of implementation.
   - The hearings will be considered to gather public comments as necessary.
   - By reflecting public comments and order of implementation, aggregated Establishment Plans will be elaborated and formulated as a draft Master Plan by NAVIGASI and the Consultants. The consultants will compile and submit the first draft and added to the Draft Final Report (2) and final report.
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TOR for the additional work

Terms of Reference for the additional work

Scope of the Additional Work

- There are three components in the additional work (support for arrangement of an establishment plan), namely:

  Component 1 : Aids to Navigation and VTS, including "Ships Routeing"
  Component 2 : Coastal Radio Station
  Component 3 : Vessels for Aids to Navigation

- The goal of the additional work is for NAVIGASI to be able to draft a necessary Master Plan for the future with a view up to 2040 in the above 3 areas using the data collected and analyzed by DISNAV. Thus, the focus of the additional work is on the technical transfer of the necessary knowledge and skills in formulating draft Master Plans in the above 3 areas through advisory services from consultants. Cooperation between NAVIGASI and DISNAV for this purpose will be also strengthened.

- The consultants will guide the whole process including the setting up meetings and provide advices and supports such as policy inputs, advices in guidelines, advices in data compilation and analysis, suggestions of necessary questionnaires, formats, diagrams, charts, etc.

- Local Consultants will assist in coordination for setting up meetings, documentation, data compilation, interpretation in the meetings, and translation of documents. They will be selected by the Consultants following JICA's regulations on the procurement.

- As a deliverable of the technical transfer activities, the Master Plan as described above will be formulated in each component jointly. The consultants will compile them and submit them which will be added to the Draft Final Report (2) and final report. This Master Plan should be elaborated and completed as NAVIGASI's own Master Plan by NAVIGASI themselves after the due internal process.

- Charts and descriptions which NAVIGASI expects to be included in the Master Plan for each component will be summarized after the discussion between NAVIGASI and the

consultants. Those charts or similar charts which contains same level of information should be included for each component.

- Timeframe of the additional work is 1 year from its commencement.

Prerequisites

- Counterpart personnel need to be assigned at NAVIGASI and each DISNAV as below.
  - Chief who will be in charge of overall management and coordination of all components of additional work
  - Person in charge of Component 1
  - Person in charge of Component 2
  - Person in charge of Component 3
- Above 4 positions will be working closely with their counterpart consultant. It is also necessary to assign deputy for each position in order not to suspend the activities during his/her absence.
- In order to complete the additional work within the agreed timeframe, the consultants need to do overall process management with the close communication with the assigned counterpart team.

Outlines of the Necessary Activities

1. Preparation of necessary documents such as Policy, Guideline, and Questionnaire by NAVIGASI with assistance of the Consultants

   The Consultants will provide the templates of the following three documents. NAVIGASI will formulate the following documents officially for DISNAV with the advices and supports from the consultants,:

   - The Policy for fundamental approach in making the Master Plan. The Consultants will guide the points of consideration for preparing the Policy using its template.
   - The Guideline for planning and installing aids to navigation in accordance with international standards and in taking into account regional characteristics.
   - The format document including Questionnaires for collecting the draft Establishment Plan of DISNAV in line with the Policy and the Guideline and for necessary information in planning the plan.

NAVIGASI with the support from consultants will identify the necessary data and agree with the consultants on the means of data collection through the discussion. In order to facilitate the discussion, the Consultants will provide the draft list of the necessary data as a suggestion for discussions to be built upon. The format of the Questionnaires for collecting those necessary data will be also agreed and developed jointly.

The format of the Establishment Plan which will be used by DISNAV in Activity 4 below "Preparation of the Draft Establishment Plan" will be also agreed and developed jointly.

2. Guidance to DISNAV by NAVIGASI and Consultants
   - NAVIGASI will issue a letter with the Director's signature and deliver above Policy, Guidelines, Questionnaires, including Formats to all the DISNAV.
   - NAVIGASI will organize online guidance sessions with all DISNAVs using above documents.
   - Consultants will provide technical advices in the discussion especially in the Q&A sessions.

3. Data collection by each DISNAV with supports from Consultants
   - DISNAV, with the technical support from the Consultants, collect all necessary data using Questionnaire in line with the Policy and the Guidelines.
   - Consultants will facilitate the discussion for consultation as a help desk (online-base) for the work going smoothly.
   - Examples of necessary data anticipated are:

     Component 1: Nautical chart around the requested aid (Nautical chart with existing aids to navigation indicated), Access map to the requested locations (route, means of access), chart of each port, maritime information, AIS, typical ship route, hearings from maritime stakeholders

     Component 2: Data from CRS, Operating Log (Communication record) Operational hours, The total time (number of times) of received signals, The total time (number of times) of transmitted signals, Record of equipment trouble

PSH

Component 3: Information about buoy base and vessels, etc. which are necessary for estimating work load of each buoy tender, Operation statistics] Logbook (Navigation record) [Calculation of the workload to be done by vessels] Interval of lighthouse keeper's shift, Itinerary (distance) for the transportation, Itinerary (distance) for the replacement of buoys, Type of vessels necessary

- Above necessary data will be derived from the concept of the documents in the Activity 1 above.
- Method for completing the format documents and Questionnaires will be discussed through the online meetings among the Consultants, NAVIGASI and each DISNAV, as needed.

4. Preparation of the Draft Establishment Plan by each DISNAV with the support from Consultants
   - The draft Establishment plan from DISNAV is a request to NAVIGASI regarding the DISNAV's needs in establishing Aids to Navigation System in their jurisdiction, and to improve the CRS and Vessels for AtoN.

   Component 1: The Establishment Plan from DISNAV will be the basis for installing visual aids to navigation, setting up VTS stations and considering Ships Routeing, and will be included in the short and/or long term Master Plan based on the policy, budget, etc.

   Component 2: The draft Establishment Plan from DISNAV related to CRS will be basis for considering the modernization of GMDSS and the operation of stations from now on, namely consolidation of stations, and will be reference information on planning the new system. The results of the consideration based on the information will be reflected in the Master Plan.

   Component 3: The draft Establishment Plan from DISNAV related to Vessels for AtoN will be basis for considering the renovation including scrap and build and relocation of a vessel that suits the workload. The results of the consideration based on the information will be reflected in the Master Plan.

- DISNAV, with the support from the Consultants, compiles and analyzes collected data, select the priorities, and prepare a draft Establishment plan in accordance with the Policy and the Guideline , and submit it to NAVIGASI.
- Local Consultants will also assist DISNAV in data compilation.

5. Formulation of the draft Master Plan by NAVIGASI and Consultants
   - With the technical advices and supports from the consultants, NAVIGASI will aggregate all the Establishment Plans from DISNAVs.
   - Local Consultants will also assist NAVIGASI in aggregating the Establishment Plans from DISNAVs.
   - Through above process, NAVIGASI and the Consultants will determine the order of implementation of all Establishment Plans from DISNAV. The Consultants will provide the points to be considered in determining the order of implementation.
   - The hearings will be considered to gather public comments as necessary.
   - By reflecting public comments and order of implementation, aggregated Establishment Plans will be elaborated and formulated as a draft Master Plan by NAVIGASI and the Consultants. The consultants will compile and submit the first draft and added to the Draft Final Report (2) and final report.
   -

Lampiran 3.3 -1

Agenda of 5th JCC

March 14, 2022

THE FIFTH JOINT COORDINATION COMMITTEE
FOR
THE PROJECT FOR REVIEW OF THE STUDY FOR MARITIME TRAFFIC SAFETY SYSTEM DEVELOPMENT PLAN

1 Date : March 14, 2022 : 1100 (JST), 0900 (WIT)

2 Meeting (app) : Zoom (The invitation is issued by JANA.)

3 Attendances : As shown in Appendix 1.

4 Agenda :

1) Opening Remark (JICA : Mr. Nakagawa)

2) Introduction of a counterpart in each field

3) Explanation of the outline and the work-flow (JANA)

a Additional work

b Schedules

c Web-meeting

4) Question-and-Answers

5) Any other business

6) Closing Address (NAVIGASI : Mr. Indra Santosa)

5 Reference : Annex 4 (TOR for the additional activities) of MOM dated on October 13, 2021

Lampiran 3.3 -2

List of Attendance for 5th JCC

Appendix 1

List of the people to whom the invitation has been sent for 5th JCC

		Name	Position	Section	Address
1		Indra Santosa	Deputy Director of Sub Directorate Maritime Telecommunication	Sub Directorate of Maritime Telecommunication	**indrasantos4@yahoo.com**
2		Pamuji Premadi	Deputy Director of Sub Directorate Fleet Navigation Base	Sub Directorate of Fleet Navigation Base	pamuji_premadi@kemenhub.go.id
3		Hendri Amir	Deputy Director of Sub Directorate Ship Routing	Sub Directorate of Ship Routing	hendri_amir@kemenhub.go.id
4		Zainal Abidin	Deputy Director of Sub Directorate Aids to Navigation	Sub Directorate of Aids to Navigation	zainal.clark66@gmail.com
5		Eddy Bakhry	Deputy Director of Sub Directorate Navigation Technical Planning	Sub Directorate of Navigation Technical Planning	eddy.luthfi@gmail.com
6		Nanditya Darma Wardhana	Head of Operations Section	Sub Directorate of Maritime Telecommunication	**nanditya_darma@dephub.go.id**
7		Mochammad Arianto Wibowo	Head of Equipment Section	Sub Directorate of Maritime Telecommunication	muhammad.arianto@gmail.com
8		Henricus Irwanto Olinger	Head of Management Section	Sub Directorate of Navigation Technical Planning	hendricusirwantoolinger@gmail.com
9		Tatang Heryana	Head of Operations Section	Sub Directorate of Aids to Navigation	t_heryan@yahoo.com
10		Faiq Kurniawan	Head of Operations Section	Sub Directorate of Fleet Navigation Base	faiqtheb35t@gmail.com
11		M. Rizki alamsyah	Head of Fleet Building Section	Sub Directorate of Fleet Navigation Base	muhammad_rizki@dephub.go.id
12		Ellenlies	Head of Equipment Section	Sub Directorate of Aids to Navigation	ellen.lies@yahoo.co.id
13		Jerry Indritanto Baka	Directorate General of Sea Transportation	Sub Directorate of Aids to Navigation	safetynav2018@gmail.com
14		Lalu Rano A	Directorate General of Sea Transportation	Sub Directorate of Aids to Navigation	ranoagiansyah@gmail.com
15		Nurma Kumala Sari	Directorate General of Sea Transportation	Sub Directorate of Aids to Navigation	nurma_karima@dephub.go.id
16		Yorry Marfyansa	Directorate General of Sea Transportation	Sub Directorate of Aids to Navigation	ymarfyansa@gmail.com
17		Caroline Veronica	Directorate General of Sea Transportation	Sub Directorate of Maritime Telecommunication	**carolinetobing@gmail.com**
18		Rizki Cahyadi	Directorate General of Sea Transportation	Sub Directorate of Maritime Telecommunication	**rizki_cahyadi@dephub.go.id**
19		Daniel Pramono	Directorate General of Sea Transportation	Sub Directorate of Maritime Telecommunication	daniel_supramono@kemenhub.go.id
20		Fajar S. Nugroho	Directorate General of Sea Transportation	Sub Directorate of Navigation Technical Planning	fajarnugroz@gmail.com
21		Edo Bimawardana	Directorate General of Sea Transportation	Sub Directorate of Ship Routing	edo_bimawardana@dephub.go.id
22		Dian Ayub Setiawan	Directorate General of Sea Transportation	Sub Directorate of Ship Routing	deansetia@yahoo.com

23		Agus Prabowo Dany Utomo	Directorate General of Sea Transportation	Sub Directorate of Ship Routing	a.prabowo50@gmail.com
24		Fransisco D'moon W	Directorate General of Sea Transportation	Sub Directorate of Navigation Technical Planning	sisco.dw@gmail.com
25		Fathan Muta'ali	Directorate General of Sea Transportation	Sub Directorate of Maritime Telecommunication	**fathan.mutaali@gmail.com**
26		Arthur L. Nendisa	Directorate General of Sea Transportation	Sub Directorate of Maritime Telecommunication	**arthurnendisa@rocketmail.com**
27		Taslimin	Directorate General of Sea Transportation	Sub Directorate of Maritime Telecommunication	**taslimnav@gmail.com**
28		Hendra Wahyudi	Directorate General of Sea Transportation	Sub Directorate of Navigation Technical Planning	ndawahyudi88@gmail.com
29		Jhonson Sitinjak	Directorate General of Sea Transportation	Sub Directorate of Fleet Navigation Base	**jhonson.tinjak45@caaip.net**
30		Wahyu Indar Joko	Directorate General of Sea Transportation	Sub Directorate of Fleet Navigation Base	wahyuditnav@gmail.com
31		Ronald Martua Napitupulu	Directorate General of Sea Transportation	Sub Directorate of Fleet Navigation Base	**ronald_martua@dephub.go.id**
32		Bekti Widanarko	Directorate General of Sea Transportation	Sub Directorate of Navigation Technical Planning	danardonk@gmail.com
33		Prayitno	Directorate General of Sea Transportation	Sub Directorate of Navigation Technical Planning	pprayitno373@gmail.com
1		Atsushi NAKAGAWA	Director	Team2 Transportation Group, Infrastructure Management Dept., JICA	**Nakagawa.Atsushi@jica.go.jp**
2		Toshitaka ISHIMA	Senior Advisor for Maritime Safety	Team2 Transportation Group,Infrastructure Management Dept., JICA	**Ishima.Toshitaka@jica.go.jp**
3		Koji TSUCHIYA	Senior Advisor for Maritime Safety	Team2 Transportation Group,Infrastructure ManagementDept., JICA	**Tsuchiya.Koji@jica.go.jp**
4		Hiroyuki FUKUSHIMA	Deputy Assistant Director	Team2 Transportation Group, Infrastructure Management Dept., JICA	**Fukushima.Hiroyuki@jica.go.jp**
5		Shigeo HONZU	Senior Representative	JICA Indonesia	**Honzu.Shigeo@jica.go.jp**
6		Naoya KUBOSHIMA	Project Formulation Advisor	JICA Indonesia	**Kuboshima.Naoya2@jica.go.jp**
7		Winia Yogawati	Senior Program Officer	JICA Indonesia	WiniaYogawati.IN@jica.go.jp
8		Yu Hanzawa	First Secretary	Embassy of Japan	yu.hanzawa@mofa.go.jp
1		Takeshi KISHIDA	Director	International Affairs office, Maritime Traffic Department, Japan Coast Guard	**jcghkokugikaihatsu-9s8t@mlit.go.jp**
2		Shunsuke YUKIMATSU	Special Assistant to Director	International Affairs office, Maritime Traffic Department, Japan Coast Guard	**jcghkokugikaihatsu-9s8t@mlit.go.jp**
1		Yoku SANTO	Aids to Navigation	JANA	**santo@jana.or.jp**
2		Goro TUKAKOSHI	Coastal Radio Station	JANA	**goro@jana.or.jp**

3		Hajime KOGA	Vessels for AtoN	JANA	**koga@jana.or.jp**
4		Masami NODO	Assistant	JANA	**noda@jana.or.jp;**
5		Dhana Mulyana	Local staff	JANA	**dhana.jananet@gmail.com**
6		Apsari Amanda Putri	Assistant	JANA	**apsari@jana.or.jp**

Lampiran 3.3 -3

Note of Minutes for 5th JCC

March 15, 2022

Minutes of 5th JCC

1 Name of Meeting	5th JCC for the Study for Maritime Traffic Safety System Development Plan
2 Date	March 14, 2022 1100 ~ 1215 (JST)
3 Meeting Style	Zoom Meeting
4 Attendance	Appendix 1 (Invitation Mailing List)
5 Subject	Appendix 2 (Meeting Agenda)

6 Note

1) The meeting was moderated by Mr. Fukushima, JICA and started according to the Meeting Agenda.
2) The opening remarks of Mr. Nakagawa, JICA were read by Mr. Fukushima.
3) Attendees were introduced by the representative of the participating groups.
4) The outline of the Additional Work was explained by Mr. Santo, Consultant with the attached paper 1.
   It is emphasized that as soon as the counterparts on the NAVIGASI side are determined, and the meeting divided into each component would be started.
5) Mr. Nanditya, NAVIGASI stated that NAVIGASI has already established a task force for this work and the counterparts for each component have also decided as shown in the attached paper 2.
6) In the Q&A, there were the following statements:
   - would like to know the details of the schedule, the implementation work, the style of a Web-meeting, and so on.
   - would like to know about the survey points and what should be prepared by DISNAV.
   - would like the consultant to provide comprehensive support.
   - would like the interpreter for each meeting.
   - wonder if the work will focus on equipment.

   In response to these statements, JANA answered that a small meeting for each component will be able to address and respond to them.
7) Since the counterpart for each component has been decided, it is understood that a small group meeting with Zoom System will be held form the next day.
8) As a closing address, Mr. Indra Santosa, Head of Sub Directorate of Maritime Telecommunication, made the following remarks;

   Reminded that some Sub-Directorate are conducting their own study, and wished that their own study could synergize with JICA study which will be conducted by the consultant.

Lampiran 3.3 -4

Outline of Additional Work

THE *FIFTH* JOINT COORDINATION COMMITTEE

FOR

THE PROJECT FOR REVIEW OF THE STUDY FOR MARITIME TRAFFIC SAFETY SYSTEM DEVELOPMENT PLAN

March 14, 2022

Table of Contents for Today's Presentations

Additional Work

for

“The Project for Review of the Study for Maritime Traffic Safety System Development Plan”

Recalling that the “**Minutes of Meetings** between JICA and DGST for amendment of the Record of Discussions on the Project for Review of the Study for Maritime Traffic Safety System Development Plan” was agreed on October 13th, 2021.

Recalling also that **Annex 4 (TOR for the additional activities)** is attached with the MoM above.

Scope of the Additional Work

- There are **three components** in the additional work (support for arrangement of an ***establishment plan***), namely :

  - ***Component 1*** : Aids to Navigation and VTS, including “Ships Routing”
  - ***Component 2*** : Coastal Radio Station
  - ***Component 3*** : Vessels for Aids to Navigation

Excerpt from Annex 4 (TOR for the additional activities)

Scope of the Additional Work

- There are three components in the additional work (support for arrangement of an establishment plan), namely:

  Component 1 : Aids to Navigation and VTS, including "Ships Routeing"
  Component 2 : Coastal Radio Station
  Component 3 : Vessels for Aids to Navigation

- The goal of the additional work is for NAVIGASI to be able to draft a necessary Master Plan for the future with a view up to 2040 in the above 3 areas using the data collected and analyzed by DISNAV. Thus, the focus of the additional work is on the technical transfer of the necessary knowledge and skills in formulating draft Master Plans in the above 3 areas through advisory services from consultants. Cooperation between NAVIGASI and DISNAV for this purpose will be also strengthened.

- The consultants will guide the whole process including the setting up meetings and provide advices and supports such as policy inputs, advices in guidelines, advices in data compilation and analysis, suggestions of necessary questionnaires, formats, diagrams, charts, etc.

“establishment plan”

1. *Summarized annual plan / Outline of Plan*
2. *Area, Location for an implementation place*
3. *Budget at a rough estimate*
4. *Information for an implementation plan*

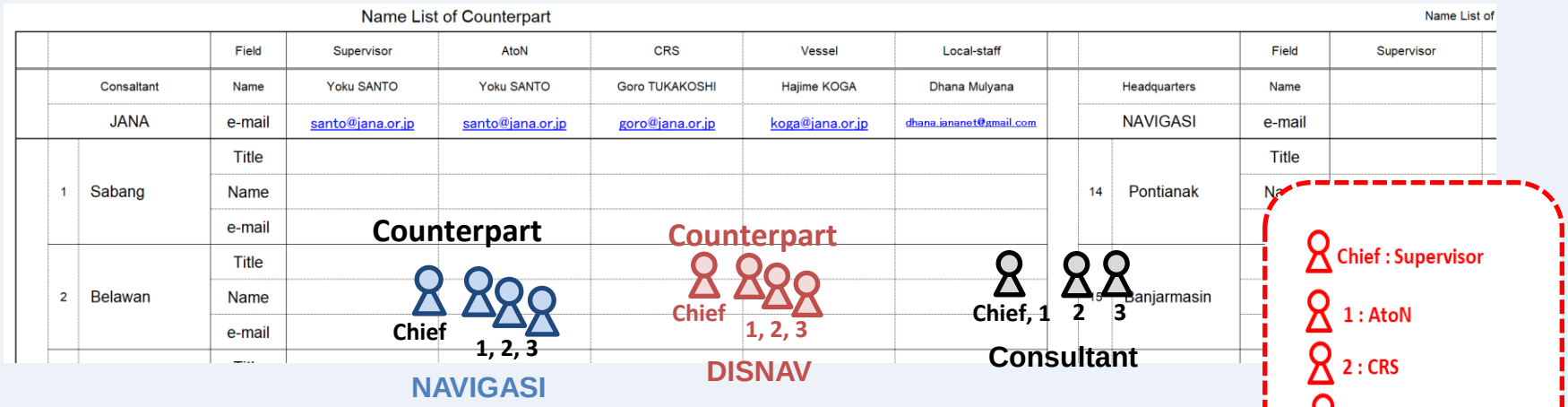
Pre-requisite

- Designation of Counterpart

  A counterpart for each component is assigned at NAVIGASI and DISNAV.

Name List of Counterpart

		Field	Supervisor	AtoN	CRS	Vessel	Local-staff			Field	Supervisor
Consaltant		Name	Yoku SANTO	Yoku SANTO	Goro TUKAKOSHI	Hajime KOGA	Dhana Mulyana		Headquarters	Name	
JANA		e-mail	santo@jana.or.jp	santo@jana.or.jp	goro@jana.or.jp	koga@jana.or.jp	dhana.jananet@gmail.com		NAVIGASI	e-mail	
		Title								Title	
1	Sabang	Name							14 Pontianak	Na	
		e-mail									
		Title									
2	Belawan	Name							5 Banjarmasin		
		e-mail									



Excerpt from Annex 4 (TOR for the additional activities)

Prerequisites

- Counterpart personnel need to be assigned at NAVIGASI and each DISNAV as below.
  - Chief who will be in charge of overall management and coordination of all components of additional work
  - Person in charge of Component 1
  - Person in charge of Component 2
  - Person in charge of Component 3

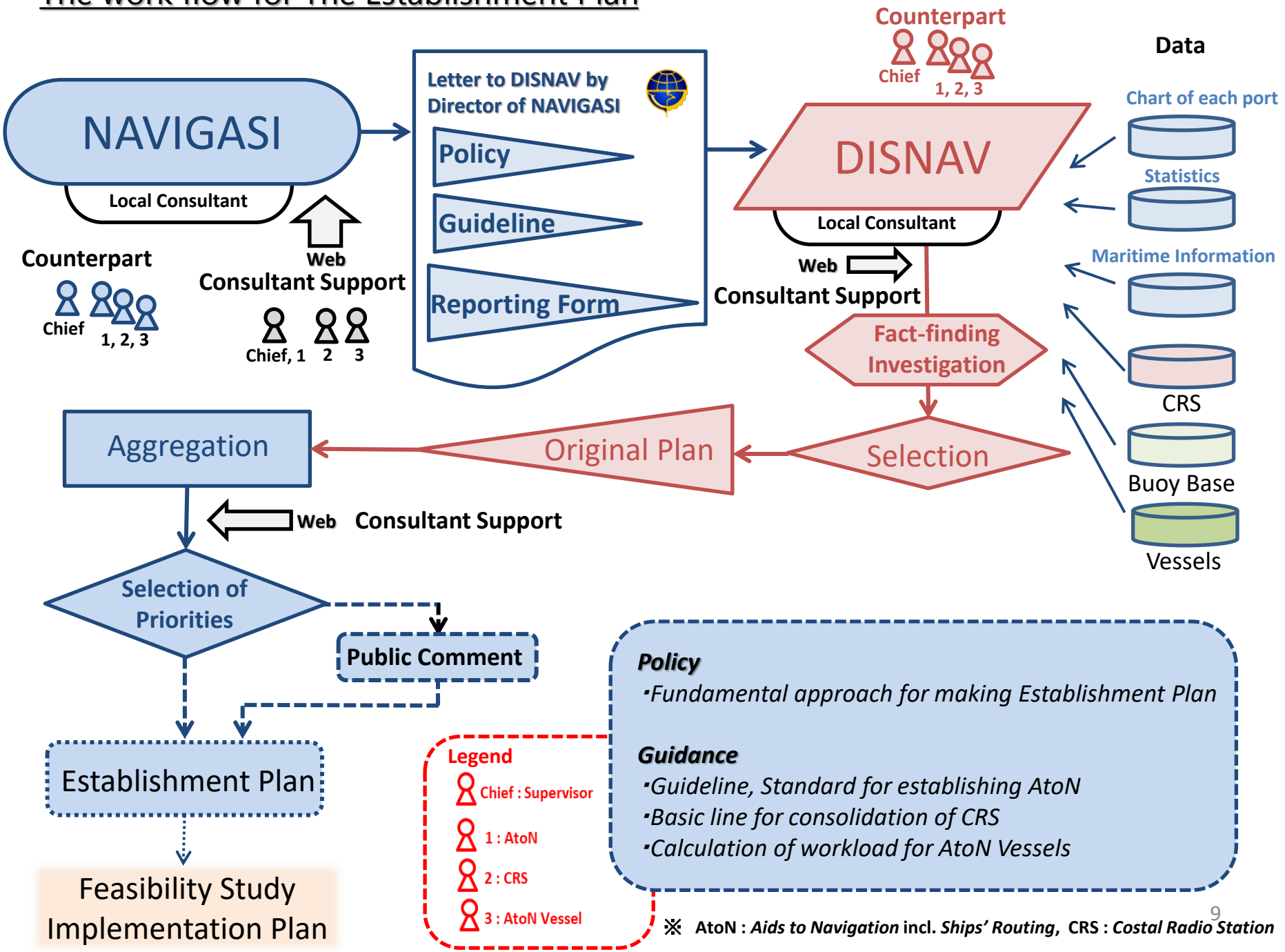
Outlines of Activities

Excerpt from Annex 4 (TOR for the additional activities)

1. Preparation of necessary documents such as Policy, Guideline, and Questionnaire by NAVIGASI with assistance of the Consultants
2. Guidance to DISNAV by NAVIGASI and Consultants
3. Data collection by each DISNAV with supports from Consultants
4. Preparation of the Draft Establishment Plan by each DISNAV with the support from Consultants
5. Formulation of the draft Master Plan by NAVIGASI and Consultants

- **Preparation of documents and Reporting forms**
- **Collection and Summarization of data and information**
- **Compilation of summarized plan**

The work flow for The Establishment Plan



※ AtoN : *Aids to Navigation* incl. *Ships' Routing*, CRS : *Costal Radio Station*

Documents prepared by NAVIGASI

A — Establishment Policy

B — Guideline

C — Reporting Format

A : Policy of Establishment Plan for providing Aids to Navigation

1 Preface

For our country, which is an archipelago nation, the oceans are a place for
transporting go
country, and ve
are responsible
In promoting t
the marine traf
mariners to har
provision of ma
In order to do
and operated
according to th

2 Specific Initiatives (Reference example)

a. Eliminating unlit bays and harbors

Navigation at night is very dangerous to approach a coastal area and / or a harbor without marine lighted aids to navigation, even though with the advantage of local knowledge.

b. Transformation into a port where vessels can enter more safely

Regional ports are expected to increase in vessel traffic progressively, and further safety of their navigation must be ensured.

In order to mitigate navigation risks caused by in traffic volume, it is necessary to properly and more effectively arrange marine aids to assist navigators with determining their position, a safe course and to warn them of dangers and obstructions.

c. A goal is the port that vessels can navigate safely and efficiently at any time

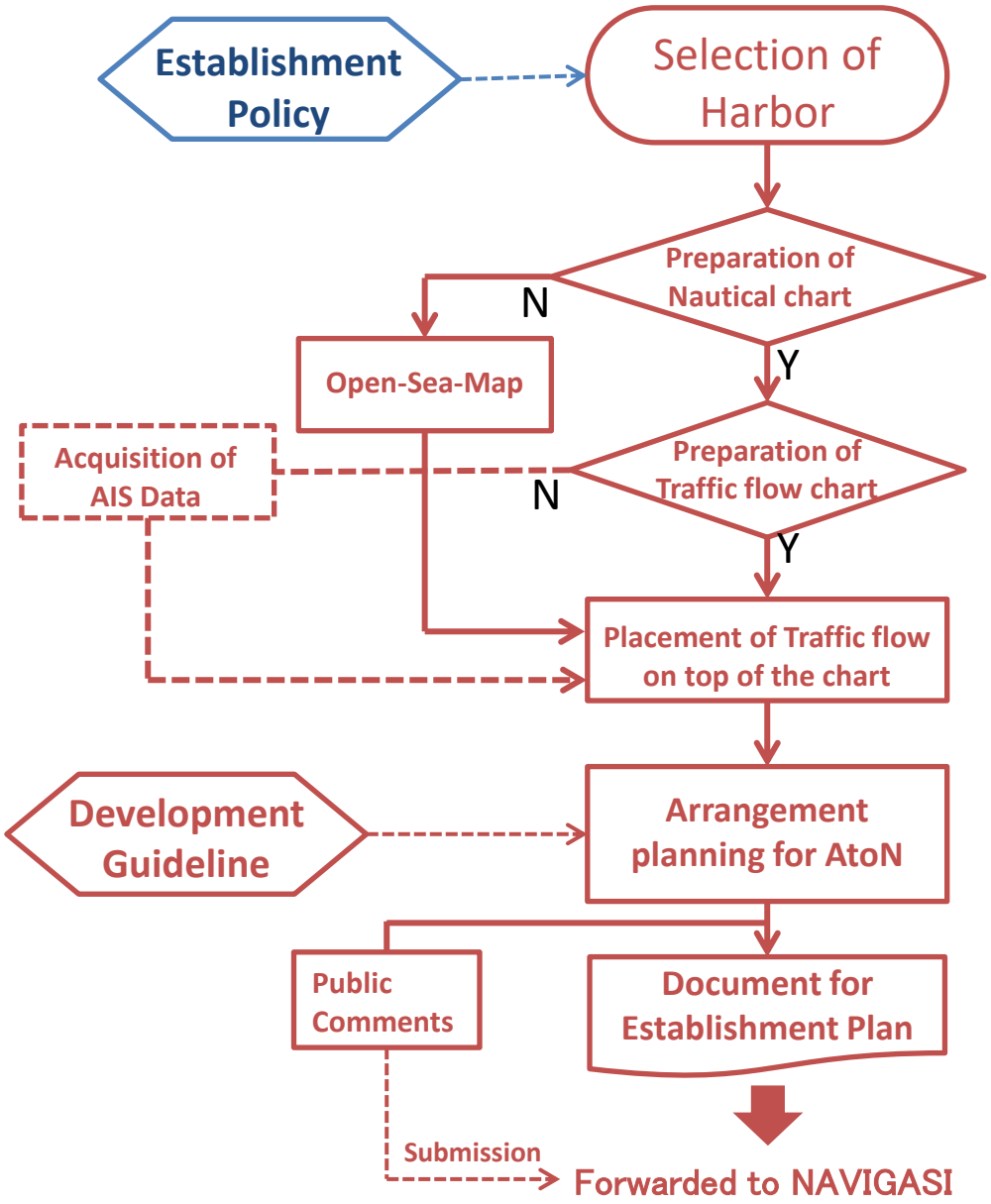
For the prosperity of the region and the nation, it goes without saying that safe and stable marine traffic is secured, but for further prosperity a port that is always open is required.

To achieve this goal, it is indispensable to establish aids to navigation suitable for the purpose and to provide appropriate and reliable maritime information.

NAVIGASI

DISNAV

1) Establishment of AtoN (incl. VTS System) and Ships Routing



Selection of high-priority harbors (ports) in line with the establishment policy

AIS Density map
Conventional traffic route (waterway)
Users' passage (Hearing)

Marine Accident Data
Ports and Harbors Development Plan

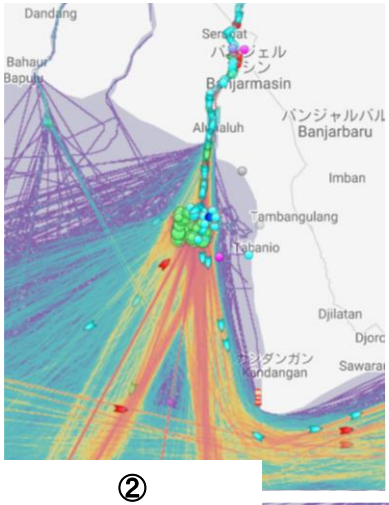
Lighthouse, Light Beacon, Buoy
Leading Lights, Sector Light
Ships Routing (Channel, Waterway)
Radio Aids (VTS, Radar Beacon)

Chart, Traffic Flow Map, Arrangement Map
List of AtoN
Data on maritime facilities (Port, Berth, Warehouse)
Ships' data (Type, Number of vessels)
Organization of port
Other information (Marine Accident, Development Plan)

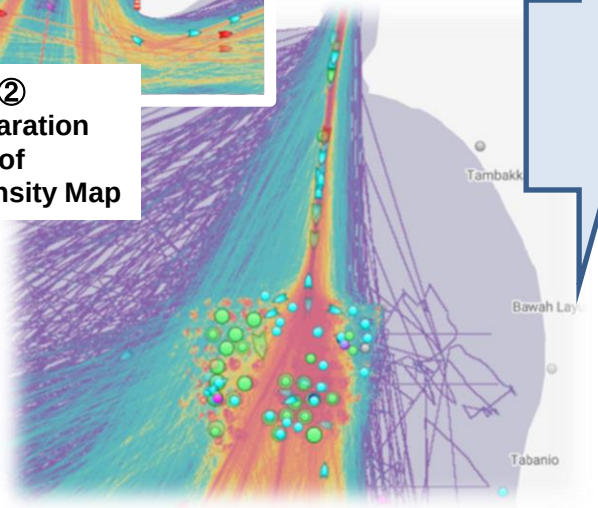
South Kalimantan

① Preparation of Marine Chart

Banjarmashin

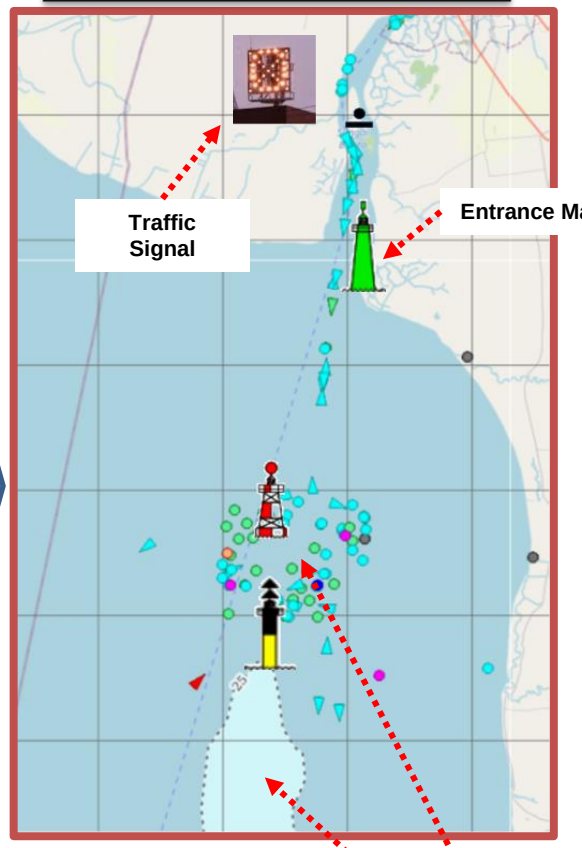


② Preparation of AIS Density Map



③ Arrangement of Aids to Navigation

Example of Installation

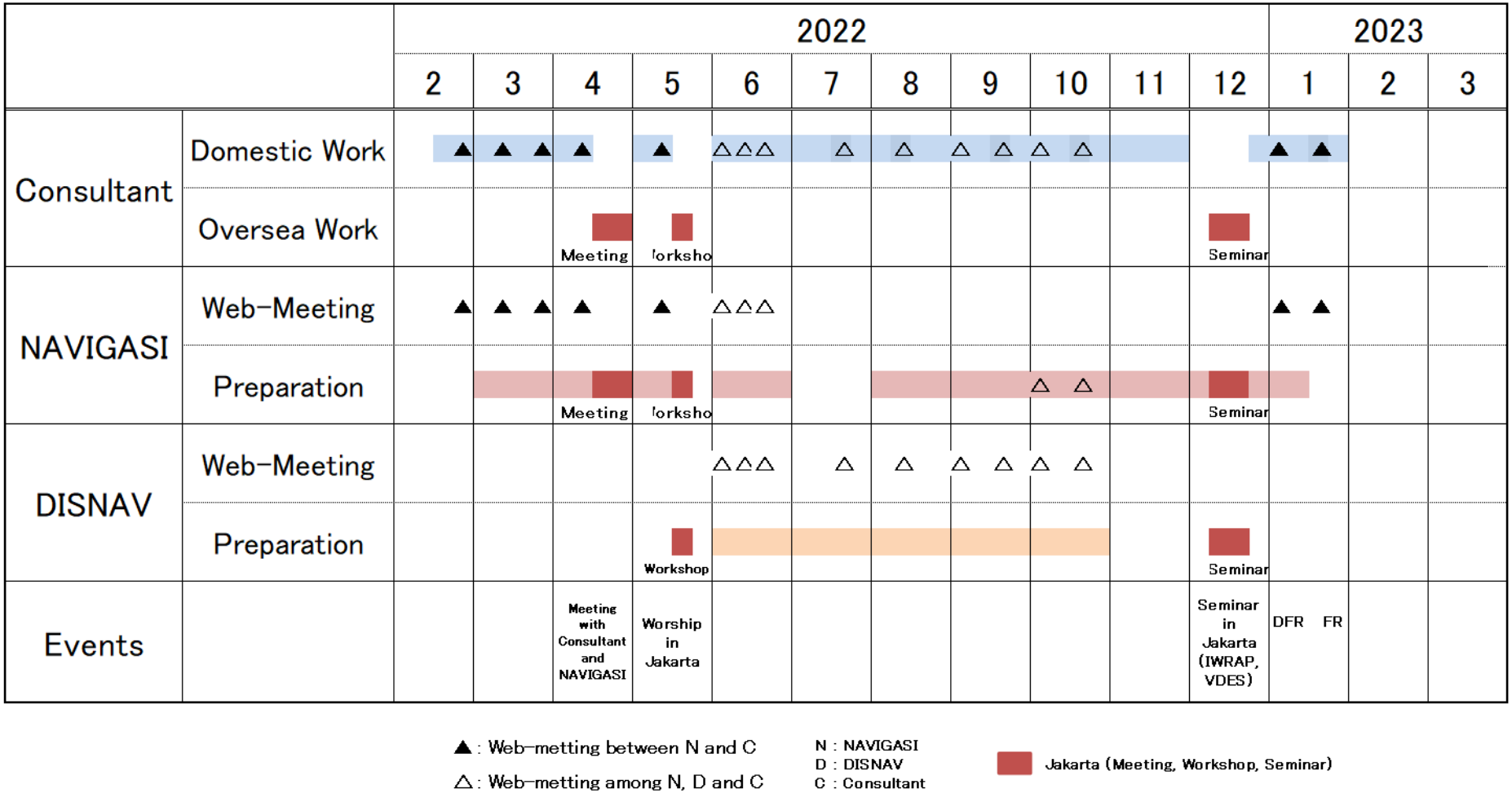


Selection of Area → Gather of data

Chart → AIS Density Map → Planning

5 Schedule

Schedule for Activities



6 Meeting Style

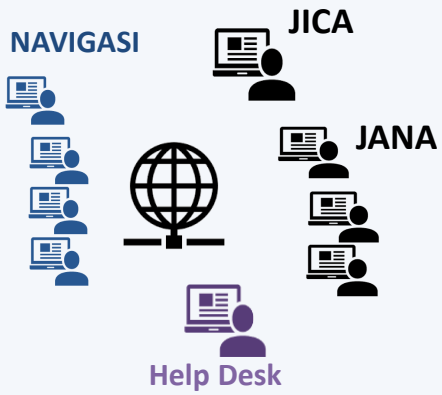
Meeting Style to be supposed

Joint Meeting

Case 1

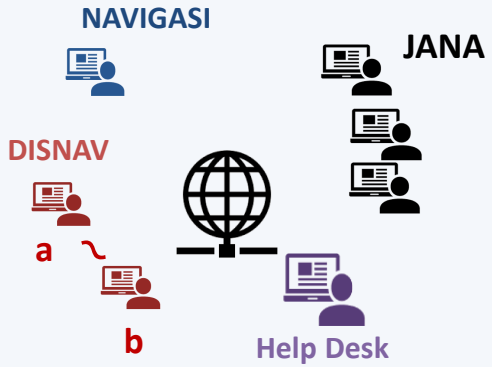
Group Meeting

Case 2



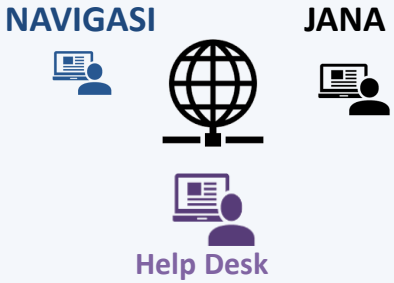
Group Meeting

Case 3



Individual Meeting

Case 4



Individual Meeting

Case 5

Schedule for Activities

2022											2023		
2	3	4	5	6	7	8	9	10	11	12	1	2	3
		Meeting ▲ Workshop								Seminar ▲			
		NAVIGASI			DISNAV					NAVIGASI			
		Preparation			Data Collection					Data Compilation			
▲ Web	▲ Web	▲ Web	▲ Web	△ Web	△ Web	△ Web	△ Web	▲ Web		▲ Web	▲ Web		
C-2	C-4	C-2 C-4	C-2 C-4	C-1 C-3	C-3 C-5	C-3 C-5	C-5	C-3 C-4		C-2 C-4	C-2		

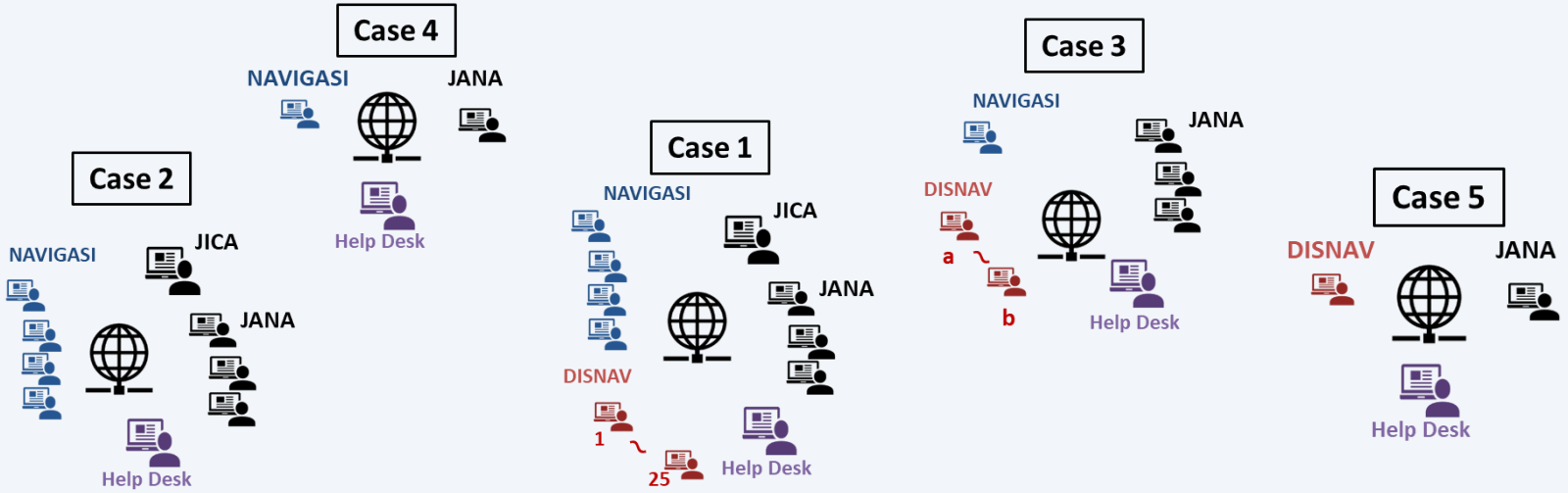
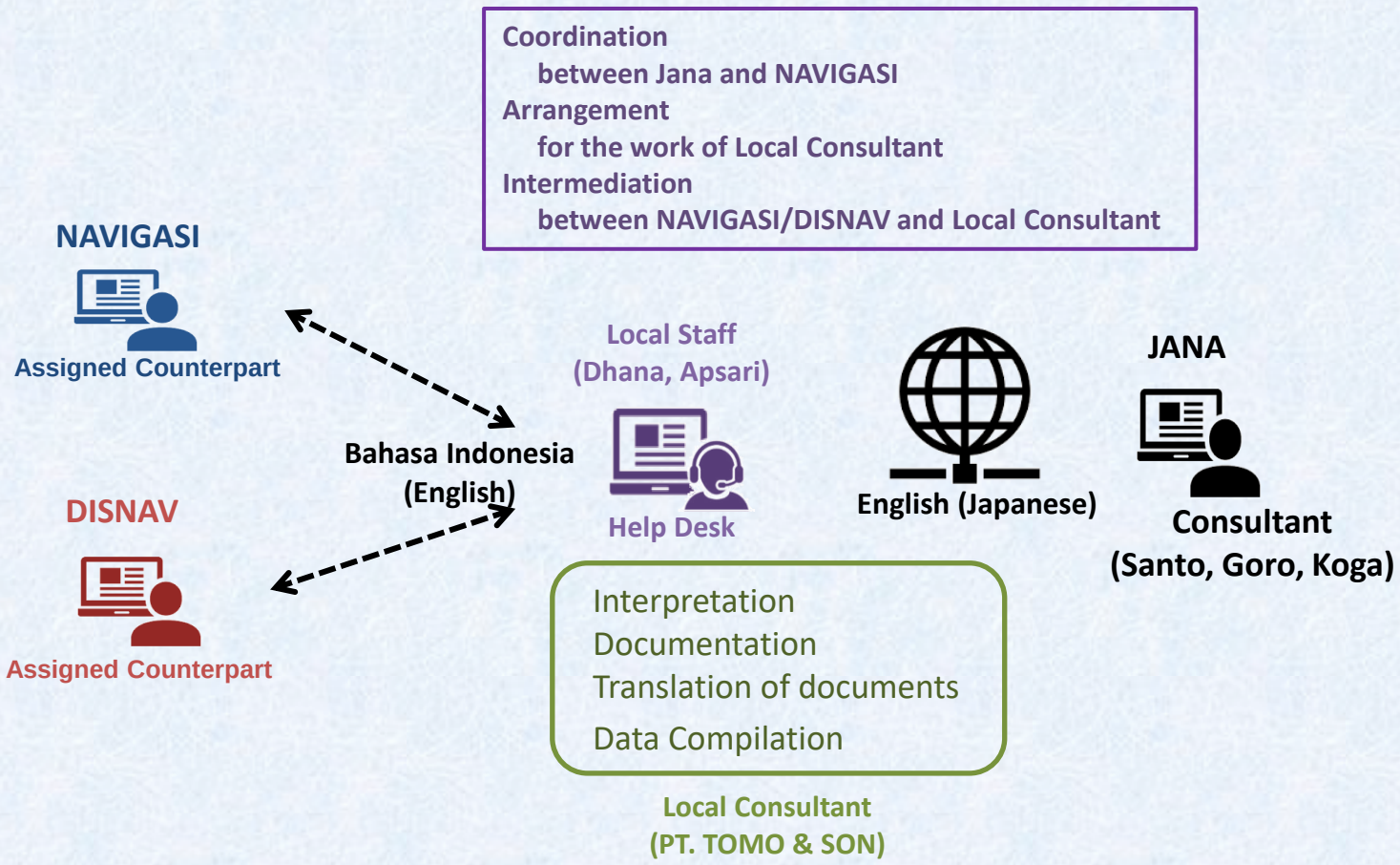


Image of Work Structure for Help Desk



Name List of Counterpart

			Field	Supervisor	AtoN	CRS	Vessel	Local-staff
	Consaltant		Name	Yoku SANTO	Yoku SANTO	oro TUKAKOSH	Hajime KOGA	Dhana Mulyana
	JANA		e-mail	santo@jana.or.jp	santo@jana.or.jp	goro@jana.or.jp	koga@jana.or.jp	dhana.jananet@gmail.com
DISNAV	1	Sabang	Title					
			Name					
			e-mail					
	2	Belawan	Title					
			Name					
			e-mail					
	3	Sibolga	Title					
			Name					
			e-mail					
	4	Dumai	Title					
			Name					
			e-mail					
	5	Tanjung Pinang	Title					
			Name					
			e-mail					
	6	Teluk Bayur	Title					
			Name					
			e-mail					
	7	Palembang	Title					
			Name					
			e-mail					
	8	Tanjung Priok	Title					
			Name					
			e-mail					
	9	Semarang	Title					
			Name					
			e-mail					
	10	Cilacap	Title					
			Name					
			e-mail					
	11	Surabaya	Title					
			Name					
			e-mail					
	12	Benoa	Title					
			Name					
			e-mail					
	13	Kupang	Title					
			Name					
			e-mail					

Name List of Counterpart

			Field	Supervisor	AtoN	CRS	Vessel
	Headquarters		Name				
	NAVIGASI		e-mail				
DISNAV	14	Pontianak	Title				
			Name				
			e-mail				
	15	Banjarmasin	Title				
			Name				
			e-mail				
	16	Samarinda	Title				
			Name				
			e-mail				
	17	Tarakan	Title				
			Name				
			e-mail				
	18	Makassar	Title				
			Name				
			e-mail				
	19	Kendar	Title				
			Name				
			e-mail				
	20	Bitung	Title				
			Name				
			e-mail				
	21	Ambon	Title				
			Name				
			e-mail				
	22	Tual	Title				
			Name				
			e-mail				
	23	Sorong	Title				
			Name				
			e-mail				
	24	Jayapura	Title				
			Name				
			e-mail				
	25	Merauke	Title				
			Name				
			e-mail				

Flowchart
of
How to procced with the additional support project
on
the Establishment Plan of Aids to Navigation

1/4

Start

- Preparation of information materials for the Web-meeting
- Discussion between NAVIGASI and Consultant

NAVIGASI — Web-meeting — Consultant

- *Negotiation of the way of proceeding*
- *Confirmation of each counterpart for each field*
- *Exchange of views for the next meeting*

Preparation

- Relevant information material on each field
- Draft of a proposed Policy, Guideline for the Establishment Plan and Format for reporting the requirement plan from DISNAV
- Discussion between NAVIGASI and Consultant

NAVIGASI — Web-meeting — Consultant

- *Coordination of the policy, the guideline, the format*

Pre-Meeting in Jakarta

- **Confirmation of the way of proceeding for the project**
- **Explanation and Preparation of the draft policy, the draft guideline, the draft format**
- **Arrangement of Work-shop**

NAVIGASI
Counterpart for each field

Consultant
Expert for each field

2/4

Work

- Discussion between NAVIGASI and Consultant

NAVIGASI — Web-meeting — Consultant

- *Finalization and Formulation of the policy, the guideline, the format for reporting the requirement plan from DISNAV*
- *Preparation for the Work-ship which invites project representatives from DISNAV*

Workshop in Jakarta

- **Presentation of the project**
- **Explanation of how the requirement plan is made for the establishment of maritime safety measures**

NAVIGASI, DISNAV, Consultant

NAVIGASI Work

- Official Action for the dispatch of papers regarding the DISNAV Requirement Plan for the establishment of Aids to Navigation

Work

- Advisement for filling up the required format for the requirement plan

DISNAV — Web-meeting — Consultant

- *Exchange of information on the present situation*
- *Advice to Q&A*

NAVIGASI, DISNAV, Consultant
(Meeting with 2 to 3 DISNAVs each field)

DISNAV Work

- Arrangement of necessary information and data
- Preparation of filling out the questionnaire
- Summarizing of the request from the related parties
- Preparation of the draft for DISNAV Establishing Plan

Work

- Advisement for arranging the requirement plan

DISNAV — Web-meeting — Consultant

- *Exchange of information on the DISNAV draft plan*
- *Advice to Q&A*

NAVIGASI, DISNAV, Consultant
(Meeting with 2 to 3 DISNAVs each field)

DISNAV Work

- Finalization of filling in the required format
- Dispatch of the documents and relevant information on the Establishment Plan to NAVIGASI

NAVIGASI Work

- Study of the DISNAV plan regarding the establishment requirement
- Sorting-out and Compilation of the DISNAV request
- Preparation of Establishment Plan for each field

Work

- Discussion between NAVIGASI and Consultant

NAVIGASI — Web-meeting — Consultant

- *Exchange of information on the final Establishment Plan*
- *Advice to the finalization processing*
- *Preparation of Seminar*

Seminar in Jakarta

- **Presentation of the Establishment Plan**
- **Seminar on IWRAP**
- **Seminar on VDES**

NAVIGASI, DISNAV, Consultant

Consultant

- **Preparation of Final Report for the Project**

Web-meeting

Flowchart
of
How to procced with the additional support project
on
the Establishment Plan of Aids to Navigation

1/4

Start
- Preparation of information materials for the Web-meeting
- Discussion between NAVIGASI and Consultant

NAVIGASI — Web-meeting — Consultant
- *Negotiation of the way of proceeding*
- *Confirmation of each counterpart for each field*
- *Exchange of views for the next meeting*

Preparation
- Relevant information material on each field
- Draft of a proposed Policy, Guideline for the Establishment Plan and Format for reporting the requirement plan from DISNAV
- Discussion between NAVIGASI and Consultant

NAVIGASI — Web-meeting — Consultant
- *Coordination of the policy, the guideline, the format*

Pre-Meeting in Jakarta
- **Confirmation of the way of proceeding for the project**
- **Explanation and Preparation of the draft policy, the draft guideline, the draft format**
- **Arrangement of Work-shop**

NAVIGASI Counterpart for each field — Consultant Expert for each field

Work
- Discussion between NAVIGASI and Consultant

NAVIGASI — Web-meeting — Consultant
- *Finalization and Formulation of the policy, the guideline, the format for reporting the requirement plan from DISNAV*
- *Preparation for the Work-ship which invites project representatives from DISNAV*

Workshop in Jakarta
- **Presentation of the project**
- **Explanation of how the requirement plan is made for the establishment of maritime safety measures**

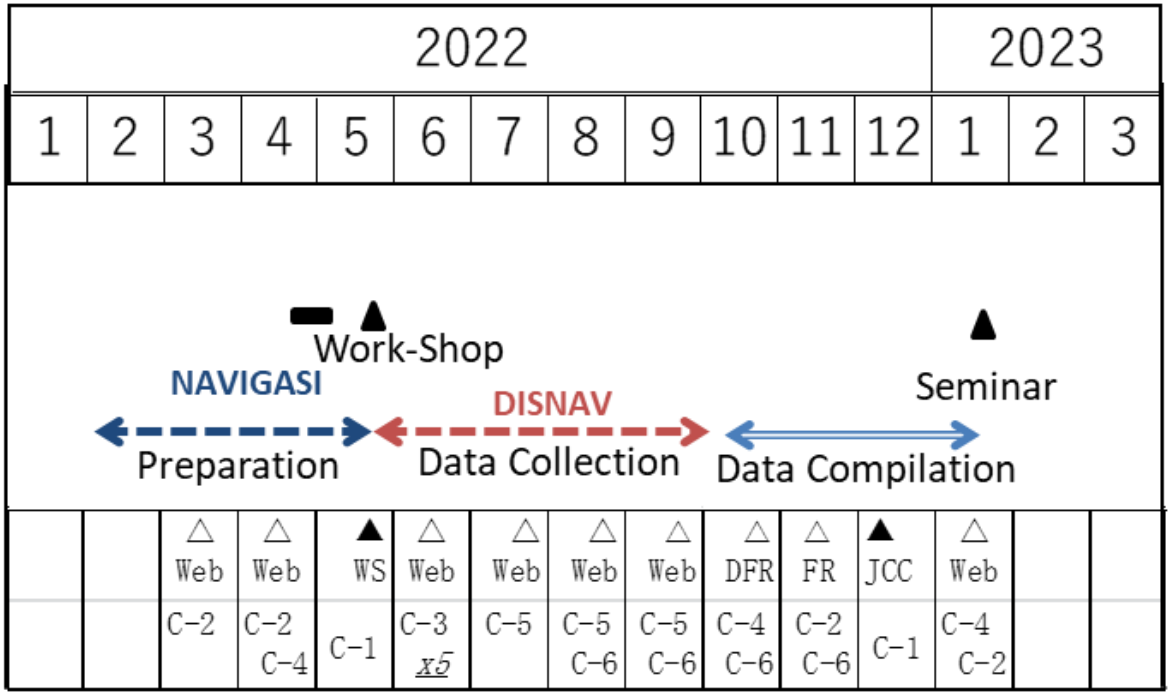
NAVIGASI, DISNAV, Consultant

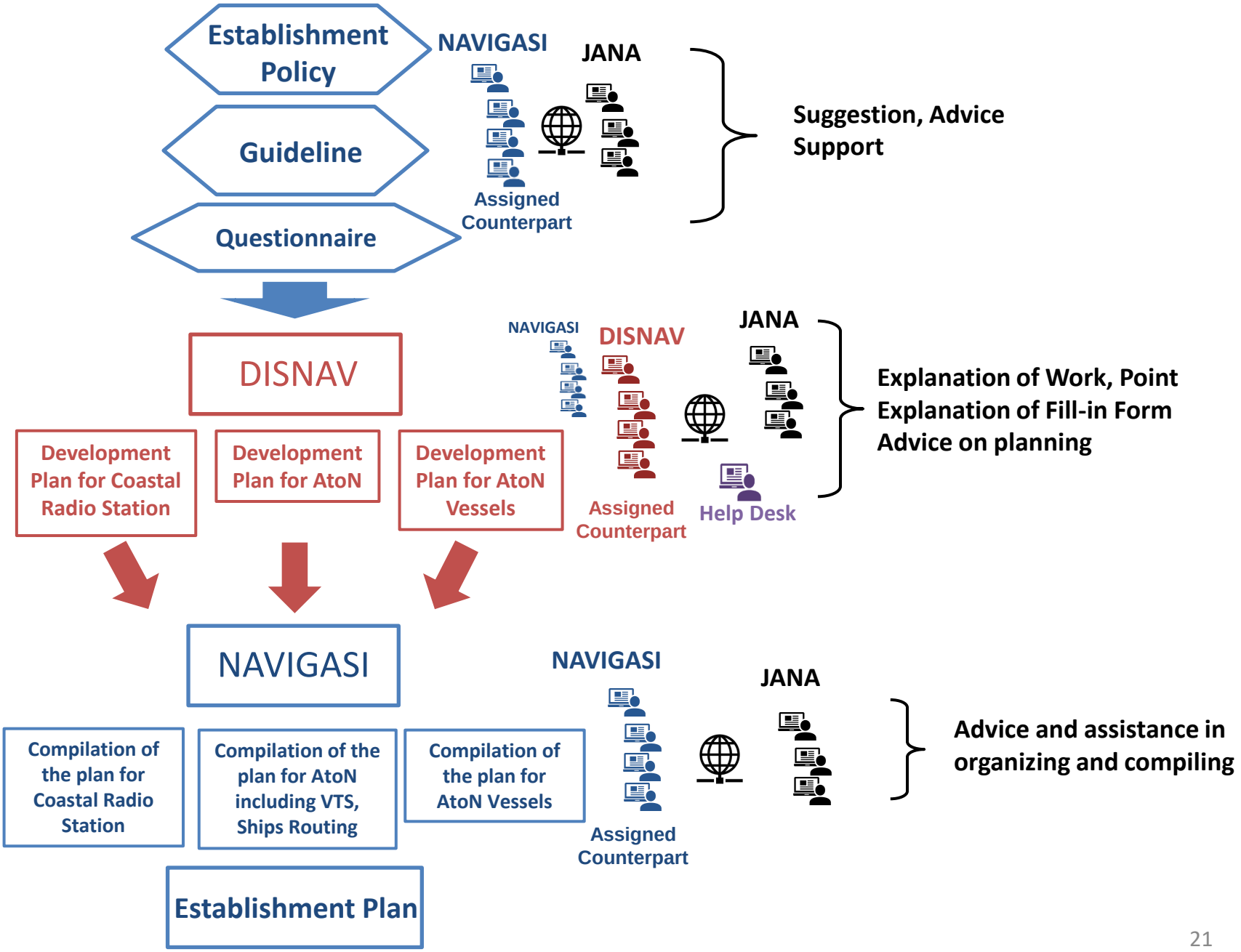
NAVIGASI Work
- Official Action for the dispatch of papers regarding the DISNAV Requirement Plan for the establishment of Aids to Navigation

Work
- Advisement for filling up the required format for the requirement plan

DISNAV — Web-meeting — Consultant
- *Exchange of information on the present situation*
- *Advice to Q&A*

NAVIGASI, DISNAV, Consultant
(Meeting with 2 to 3 DISNAVs each field)




Establishment Policy
Guideline
Questionnaire
NAVIGASI
JANA
Assigned Counterpart
Suggestion, Advice
Support
DISNAV
NAVIGASI
DISNAV
JANA
Development Plan for Coastal Radio Station
Development Plan for AtoN
Development Plan for AtoN Vessels
Assigned Counterpart
Help Desk
Explanation of Work, Point
Explanation of Fill-in Form
Advice on planning
NAVIGASI
NAVIGASI
JANA
Compilation of the plan for Coastal Radio Station
Compilation of the plan for AtoN including VTS, Ships Routing
Compilation of the plan for AtoN Vessels
Assigned Counterpart
Advice and assistance in organizing and compiling
Establishment Plan

Counterpart (Consultant)

- **Component 1** (Aids to Navigation and VTS, including “Ships Routing)
  Yoku SANTO (JANA)

- **Component 2** (Coastal Radio Station)
  Goro TSUKAKOSHI (JANA)

- **Component 3 (**Vessels for Aids to Navigation)
  Hajime KOGA (JANA)

Local Staff

- **Mr. Dhana Mulyana**
- **Ms. Apsari Putri**

Local Consultant

PT. TOMO & SON

Local Consultant

Scope of Work for Local Consultant

- Coordination for setting up a meeting (web-meeting) with NAVIGASI/DISNAV
- Assistance to DISNAV in understanding the points (meaning) of the survey
- Preparation for a copy of reference papers (Questionnaire)
- Tabulation of the questionnaire
- Translation of reference papers into Indonesian/English
- Interpreter at the meeting (Indonesian – English : Japanese)

Category of Work

- Aids to Navigation (AtoN)
- Coastal Radio Station
- Vessels for AtoN

Term of Works

- March 14, 2022 to February 13, 2023

Lampiran 3.3 -5

Taskforce of NAVIGASI

Indonesia G20 Presidency
Recover Together
Recover Stronger

KEMENTERIAN PERHUBUNGAN REPUBLIK INDONESIA
DIREKTORAT JENDERAL PERHUBUNGAN LAUT
DIREKTORAT KENAVIGASIAN

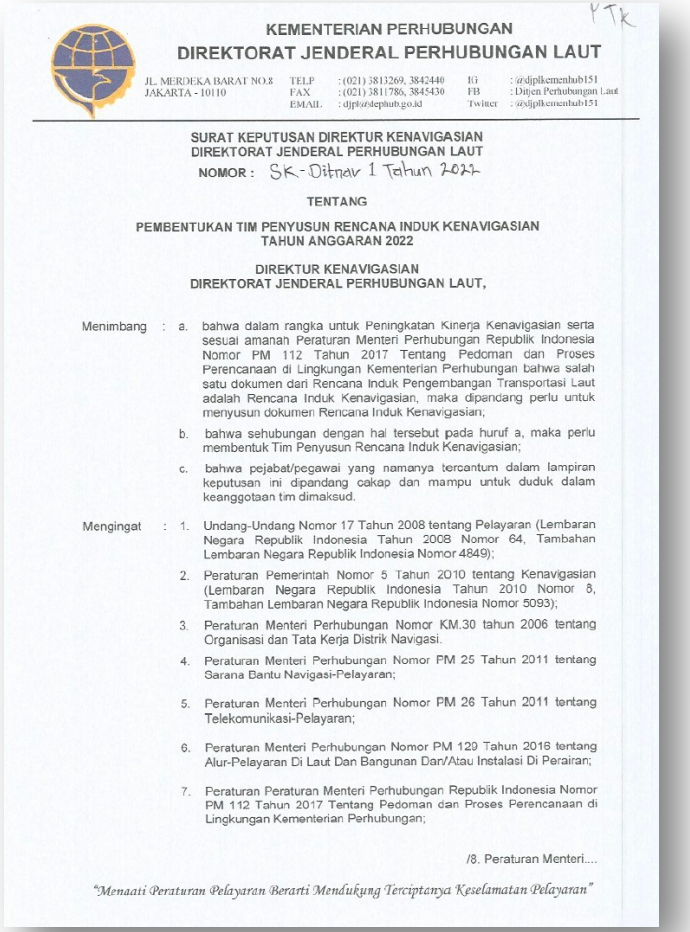
THE 5th JOINT COORDINATION COMMITTEE MEETING (JCC)

THE STUDY FOR MARITIME TRAFFIC SAFETY SYSTEM DEVELOPMENT PLAN

JAKARTA, , MARCH 14 2022

FEEDBACK

1. Directorate of Navigation will support the implementation of the agreed scope of additional work;
2. JANA and the local consultant are expected to draft more in depth/detail work programme;
3. There are needs to conduct regular meeting (Monthly/weekly/as necessary) between Ditnav, JANA, Disnav, and local consultant to ensure that the work could be conducted comprehensively;
4. Directorate of Navigation already establish a task force for each components which requested by JICA / JANA.
5. Coordination and communication would be the key for the successful implementation of the work.
6. Dream big → To provide an excellent/worldclass navigation services based on the international regulations.



KEMENTERIAN PERHUBUNGAN
DIREKTORAT JENDERAL PERHUBUNGAN LAUT

JL. MERDEKA BARAT NO.8 JAKARTA - 10110
TELP : (021) 3813269, 3842440
FAX : (021) 3811786, 3845430
EMAIL : djpl@dephub.go.id
IG : @djplkemenhub151
FB : Ditjen Perhubungan Laut
Twitter : @djplkemenhub151

SURAT KEPUTUSAN DIREKTUR KENAVIGASIAN
DIREKTORAT JENDERAL PERHUBUNGAN LAUT
NOMOR : SK-Ditnav 1 Tahun 2022

TENTANG

PEMBENTUKAN TIM PENYUSUN RENCANA INDUK KENAVIGASIAN
TAHUN ANGGARAN 2022

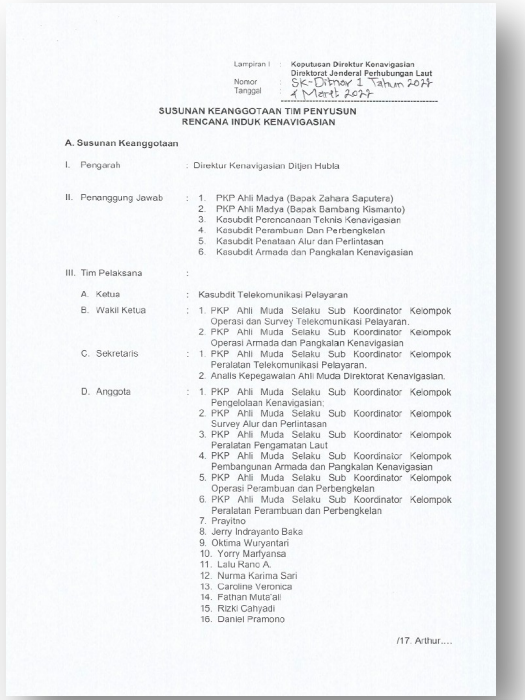
DIREKTUR KENAVIGASIAN
DIREKTORAT JENDERAL PERHUBUNGAN LAUT,

Menimbang :
a. bahwa dalam rangka untuk Peningkatan Kinerja Kenavigasian serta sesuai amanah Peraturan Menteri Perhubungan Republik Indonesia Nomor PM 112 Tahun 2017 Tentang Pedoman dan Proses Perencanaan di Lingkungan Kementerian Perhubungan bahwa salah satu dokumen dari Rencana Induk Pengembangan Transportasi Laut adalah Rencana Induk Kenavigasian, maka dipandang perlu untuk menyusun dokumen Rencana Induk Kenavigasian;
b. bahwa sehubungan dengan hal tersebut pada huruf a, maka perlu membentuk Tim Penyusun Rencana Induk Kenavigasian;
c. bahwa pejabat/pegawai yang namanya tercantum dalam lampiran keputusan ini dipandang cakap dan mampu untuk duduk dalam keanggotaan tim dimaksud.

Mengingat :
1. Undang-Undang Nomor 17 Tahun 2008 tentang Pelayaran (Lembaran Negara Republik Indonesia Tahun 2008 Nomor 64, Tambahan Lembaran Negara Republik Indonesia Nomor 4849);
2. Peraturan Pemerintah Nomor 5 Tahun 2010 tentang Kenavigasian (Lembaran Negara Republik Indonesia Tahun 2010 Nomor 8, Tambahan Lembaran Negara Republik Indonesia Nomor 5093);
3. Peraturan Menteri Perhubungan Nomor KM.30 tahun 2006 tentang Organisasi dan Tata Kerja Distrik Navigasi.
4. Peraturan Menteri Perhubungan Nomor PM 25 Tahun 2011 tentang Sarana Bantu Navigasi-Pelayaran;
5. Peraturan Menteri Perhubungan Nomor PM 26 Tahun 2011 tentang Telekomunikasi-Pelayaran;
6. Peraturan Menteri Perhubungan Nomor PM 129 Tahun 2016 tentang Alur-Pelayaran Di Laut Dan Bangunan Dan/Atau Instalasi Di Perairan;
7. Peraturan Peraturan Menteri Perhubungan Republik Indonesia Nomor PM 112 Tahun 2017 Tentang Pedoman dan Proses Perencanaan di Lingkungan Kementerian Perhubungan;

/8. Peraturan Menteri....

"Menaati Peraturan Pelayaran Berarti Mendukung Terciptanya Keselamatan Pelayaran"



Lampiran I : Keputusan Direktur Kenavigasian Direktorat Jenderal Perhubungan Laut
Nomor : SK-Ditnav 1 Tahun 2022
Tanggal : 1 Maret 2022

SUSUNAN KEANGGOTAAN TIM PENYUSUN
RENCANA INDUK KENAVIGASIAN

A. Susunan Keanggotaan

I. Pengarah : Direktur Kenavigasian Ditjen Hubla

II. Penanggung Jawab :
1. PKP Ahli Madya (Bapak Zahara Saputera)
2. PKP Ahli Madya (Bapak Bambang Kismanto)
3. Kasubdit Perencanaan Teknis Kenavigasian
4. Kasubdit Perambuan Dan Perbengkelan
5. Kasubdit Penataan Alur dan Perlintasan
6. Kasubdit Armada dan Pangkalan Kenavigasian

III. Tim Pelaksana :

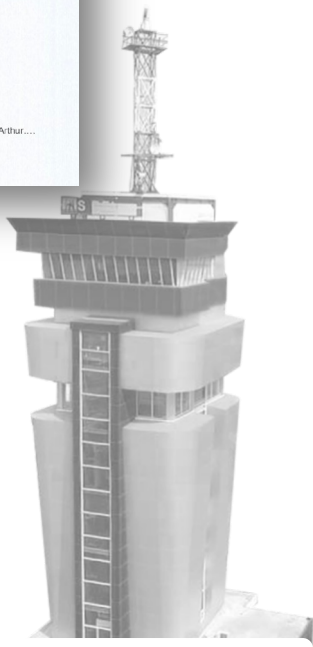
A. Ketua : Kasubdit Telekomunikasi Pelayaran

B. Wakil Ketua :
1. PKP Ahli Muda Selaku Sub Koordinator Kelompok Operasi dan Survey Telekomunikasi Pelayaran.
2. PKP Ahli Muda Selaku Sub Koordinator Kelompok Operasi Armada dan Pangkalan Kenavigasian

C. Sekretaris :
1. PKP Ahli Muda Selaku Sub Koordinator Kelompok Peralatan Telekomunikasi Pelayaran.
2. Analis Kepegawaian Ahli Muda Direktorat Kenavigasian.

D. Anggota :
1. PKP Ahli Muda Selaku Sub Koordinator Kelompok Pengelolaan Kenavigasian;
2. PKP Ahli Muda Selaku Sub Koordinator Kelompok Survey Alur dan Perlintasan
3. PKP Ahli Muda Selaku Sub Koordinator Kelompok Peralatan Pengamatan Laut
4. PKP Ahli Muda Selaku Sub Koordinator Kelompok Pembangunan Armada dan Pangkalan Kenavigasian
5. PKP Ahli Muda Selaku Sub Koordinator Kelompok Operasi Perambuan dan Perbengkelan
6. PKP Ahli Muda Selaku Sub Koordinator Kelompok Peralatan Perambuan dan Perbengkelan
7. Prayitno
8. Jerry Indrayanto Baka
9. Oktima Wuryantari
10. Yorry Mariyansa
11. Lalu Ranc A.
12. Nurma Karima Sari
13. Caroline Veronica
14. Fathan Mutaali
15. Rizki Cahyadi
16. Daniel Pramono

/17. Arthur....



LOs for the 3 Components

1. Component 1 (Aids to Navigation, Vessel Traffic Services and Ship Routeing) ;
   - Sub Division on Aids to Navigation
     - Jerry Indrayanto Baka (coordinator)
     - Lalu Rano A
     - Nurma Karima Sari
     - Yorry Marfyansa
   - Sub Division on Vessel Traffic Services (VTS)
     - Caroline Veronica (coordinator)
     - Rizki Cahyadi
     - Daniel Pramono
     - Fajar S. Nugroho
   - Sub Division on Ship Routeing
     - Edo Bimawardana (coordinator)
     - Dian Ayub Setiawan
     - Agus Prabowo Dany Utomo
     - Fransisco D'moon W

2. Component 2 (Coastal Radio Station) ;
   - Fathan Muta'ali (coordinator)
   - Arthur Nendisa
   - Taslimin
   - Hendra Wahyudi

3. Component 3 (vessel for aids to navigation) ;
   - Wahyu Indar Joko (coordinator)
   - Jhonson Sitanjak
   - Ronald Martua Napitupulu
   - Bekti Widanarko

TERIMA KASIH

وَسَلَامُ عَلَيْكُمْ وَرَحْمَةُ اللهِ وَبَرَكَاتُهُ

Direktorat Kenavigasian
Direktorat Jenderal Perhubungan Laut
Kementerian Perhubungan

Subdirektorat Telekomunikasi Pelayaran
Direktorat Kenavigasian

Gedung Karya Lantai 21
Kementerian Perhubungan
Jl. Medan Merdeka Barat no. 8
Jakarta Pusat 10110

https://i-motion.dephub.go.id/
http://hubla.dephub.go.id:82/e-licensing
telkompel.ditnav@kemenhub.go.id
subdit.telkompel_ditnav
Telekomunikasi Pelayaran - Direktorat Kenavigasian

Lampiran 3.6 -1

Agenda of Meeting and Workshop

Meeting and Seminar
for making
the Establishment Plan
of AtoN including VTS and Ship-Routing, CRS and Navigation Vessels

1. Date and Time : Jun 16, 2022, 1000 ~

2. Place : Millennium Hotel Sirih Jakarta

3. Agenda

Session 1 : Meeting on the Establishment Plan (Moderator by NAVIGASI)

(1) Opening Address by NAVIGASI
(2) Main issues of the work by the consultant
(3) Procedure for DISNAV's collecting information by NAVIGASI
  a AtoN including VTS and Ship-Routing Group
  b. CRS (Coastal Radio Stations) Group
  c. Navigation Vessels Group
(4) Q and A
(5) Closing Address by JICA

= (Lunch Break) =

Session 2 : Seminar on IWRAP

(1) Goal of Risk Management Toolbox for Maritime traffic by the consultant
(2) Examples of utilization in Indonesia by NAVIGASI
(3) Operational demonstration of the software by the consultant
(4) Q and A

Lampiran Undangan *Workshop* dan Seminar
The Establishment Plan of Aids to Navigation, Coastal Radio Station and Navigation Vessels

Nomor :

Tanggal :

RUNDOWN WORKSHOP* DAN SEMINAR *THE ESTABLISHMENT PLAN OF AIDS TO NAVIGATION, COASTAL RADIO STATION AND NAVIGATION VESSELS
JAKARTA, 16 JUNI 2022

Hari/ Tanggal	Jam (Local Time)	Kegiatan	Keterangan
Kamis, 16 Juni 2022	**Sesi I**		
	08.30 – 09.00	Registrasi Peserta	
	09.00 – 09.15	Menyanyikan Lagu Indonesia Raya	
		Opening Address	Direktur Kenavigasian (Hengki Angkasawan)
	09.15 – 12.00	Main Issues of The Work	
		Procedure for Distrik Navigasi Collecting Information by Navigasi : a. Aids To Navigation Group (Including VTS and Ship Routing); b. Coastal Radio Station Group; c. Navigation Vessel Group.	Ditnav dan JANA
		Question and Answer	
		Clossing Address	JICA
	12.00 – 13.00	ISHOMA	
	Sesi II		
	13.00 – 15.00	Seminar on IWRAP 1. Goal of Risk Management Tool Box for Maritime Traffic by Consultant; 2. Examples of Utilization in Indonesia by Directorat of Navigation; 3. Operasional Demonstration of The Software (Consultant).	Ditnav dan JANA
		Question and Answer	

Lampiran 3.6 -2

Minutes of Meeting

Minutes of record

Workshop and Seminar “The Establishment Plan of Aids to Navigation (AtoN), Coastal Radio Station (CRS) and Navigation Vessel”

Date: 16th June 2022
Venue: Millennium Hotel Sirih Jakarta
Attendance List (Offline)

A.	Mr. Director and Staff	8	persons
B.	DISNAV Office	20	persons
1)	Belawan		
2)	Tg Priok		
3)	Samarinda		
4)	Makassar		
5)	Ambon		
6)	Benoa		
7)	Jayapura		
8)	Cilacap		
C.	Sub- Directorate AtoN	1	persons
D.	Sub- Directorate Maritime Telecom	9	persons
E.	Sub- Directorate Ship Routing	1	persons
F.	Sub- Directorate Technical Planning	2	persons
G.	Planning Bureau	2	persons
H.	Planning Section DGST	2	persons
I.	JICA Indonesia Office	2	persons
J.	Guests (unknown)	5	persons
K.	JANA (Co-Host)	9	persons
L.	Tomo and Son (Local consultant)	5	persons
Total		66	persons

M. Online (Zoom) attendant approx 50 (including duplicate of offline attendant)

1. Opening remarks
   Mr. Hengki Angkasawan, Director, Dit-Navigation

2. Speech by moderator
   Mr. Nanditiya Wardhana, Head of Sub Directorate, Technical Planning, Dit-Navigation

3. Presentation of component 1 AtoN, VTS, Ship routing and overall
   “Main Issue of Work (June 16)”
   Mr. Yoku Santo, Team Leader of JANA
   Refer to attached sheet

4. Presentation of component 1 (AtoN, VTS, Ship routing)
   “The project for review of the study for Maritime Traffic Safety System Development Plan”
   Ms Caroline Tobing, Maritime Telecommunication, Dit-Navigation

5. Presentation of component 2 (Coastal Radio Station)
"Innovation and re-establishment of Coastal Radio Station"
Mr. Fathan Muta' Ali, Maritime Telecommunication, Dit-Navigation
Mr. Goro Tsukakoshi, JANA
Refer to attached sheet

6. Presentation of component 3 (Navigation vessels)
"Policy for appropriate management of Navigation Vessels"
Mr. Hajime Koga, JANA (Translated in Indonesia by Ms Apsari, JANA)
Refer to attached sheet

7. Summary of comment from attendants (Translated into English by Mr. Dhana Mulyana, JANA)

- Mr. Indra Santosa
Head of Sub Directorate Maritime Telecommunication

  Basically, we are making this Master Plan related to future navigation, on this occasion we are reviewing previous studies so that the expected results can be produced.

  The Navigation Party itself needs to explore and review the Navigation Strategy Plan because currently there have been many changes adapted to current conditions.

  The Master Plan itself is an input document in the context of compiling a more complete Navigation Master Plan.

- Mr. Nusul R
DISNAV Ambon Chief of Operational Division

  Proposed efficiency and effectiveness of the budget based on the challenges of the state's financial situation in the future.

  1) AtoN needs to be increased considering that there are still many shipping lanes not equipped with AtoN.

  2) In order to support the safety of shipping during the day throughout Indonesia, it is necessary to consider the Light Beacon so that it is more elevated and enlarged.

  3) Using new technology to monitor and operate Lighthouses to address the diminishing labor shortage barriers.

  4) The integration of CRS and VTS to facilitate monitoring of the movement of ships entering and leaving the port area and also to overcome the shortage of labor in the future.

  5) The current condition of CRS is not functioning, considering that communication between the ship and the agent usually uses a cell phone,

but if the agent or owner requires information on the position of the ship, they contact CRS.

6) Meanwhile, the current VTS function is sufficient if it is needed to be improved.

7) For ship efficiency currently used only Navigation Vessel and Inspection Vessel.

8) Port development plans including ship routing must coordinate with the Port Operator.

- Mr. Ketut Aries
  DISNAV Benoa
  1) The current AtoN calculation has reached 87% but the condition in Benoa itself has now reached more than 90%.

  2) There is a need for a study related to the installation distance of the signs which is currently 12NM in order to improve shipping safety.

  3) He strongly agrees with the discourse on CRS consolidation; however, it is necessary to study the data communication or internet connection in each area which is very different, in remote areas there tends to be no internet facilities and if available the connection is not good.

  4) Further studies are needed regarding the function of the ship.

  5) Regarding the questionnaire, it is necessary to study more accurately from each DISNAV and always be reviewed, including please provide time to coordinate using technology including using Zoom meetings so that the results can be effective and as expected.

  6) Today's Navigation Development is not only in the field of infrastructure but more on services.

- Mr. Raymond Ivan (Online)
  Head of DISNAV Tg Priok
  1) Understanding of characteristics in each water way and sea channels is very important for studying the purpose of maritime safety.

  2) IWARP is the effective tools to study for locating AtoN as well as CRS and VTS.

  3) Knowing demand of service is able to provide appropriate CRS, VTS planning in future as well as newly coming tools such as VDES and NAVDAT resolution.

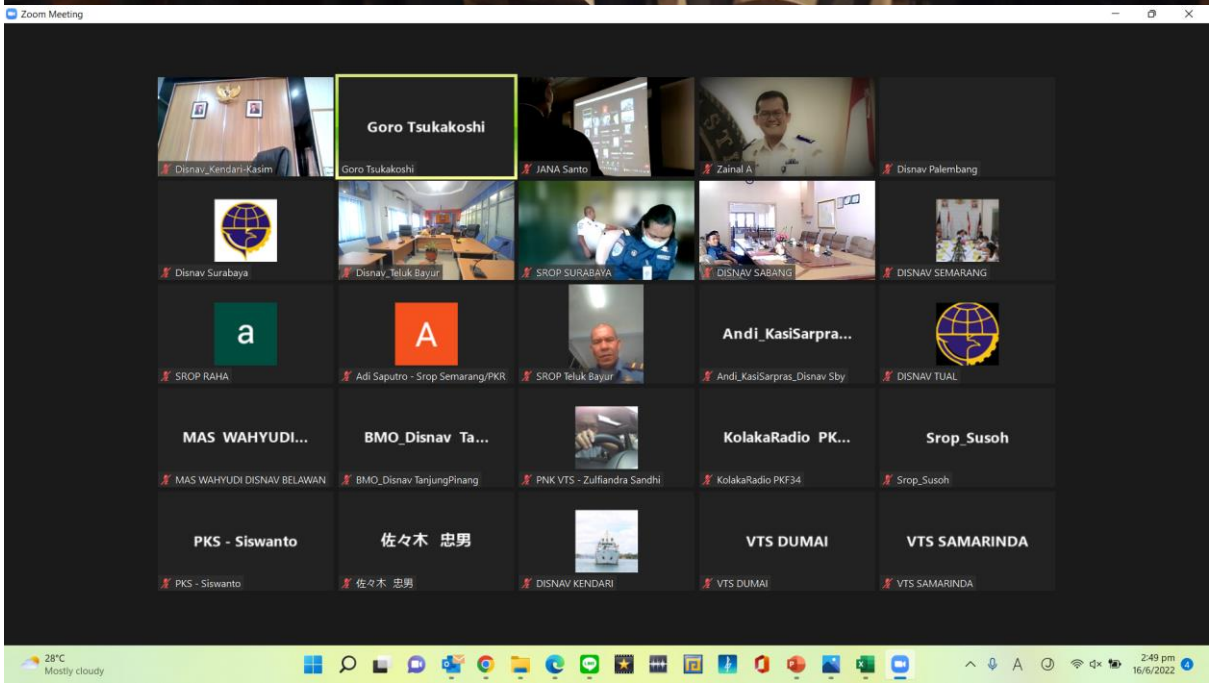
  4) Introduction of IT technology enables CRS and VTS for better and effective solution.

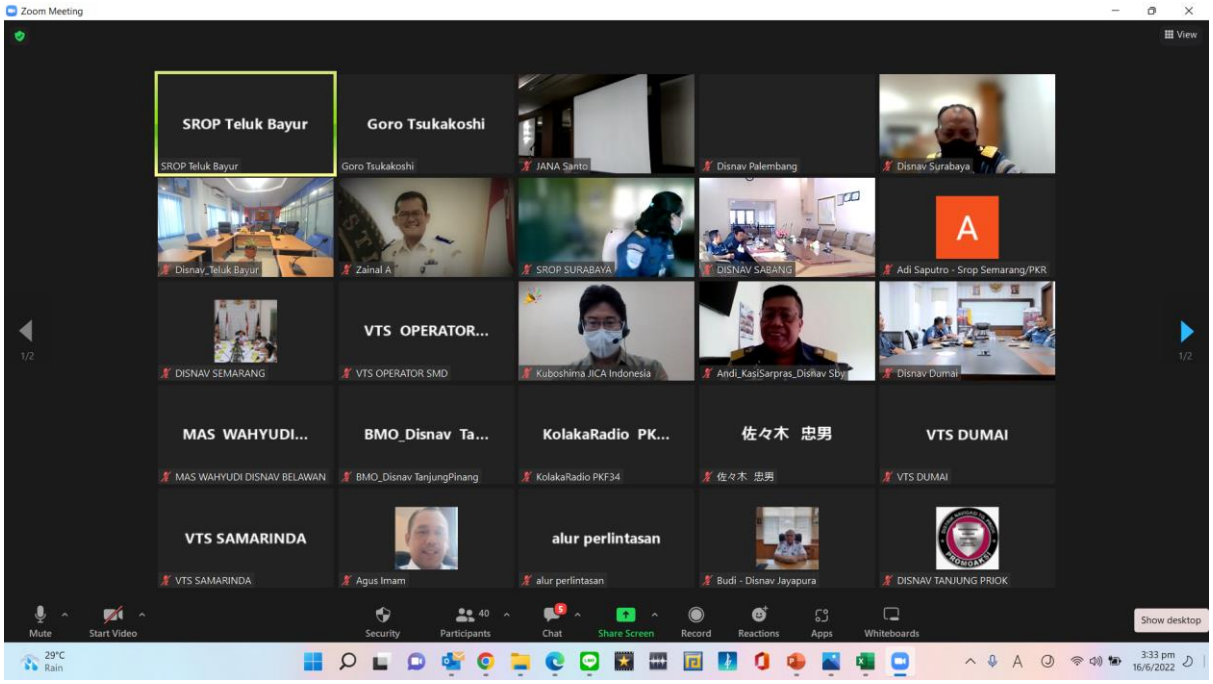
5) Numbers, qualification, training content of Human Resources (HR) based on actual demand of required service is important factor for each DISNAV.

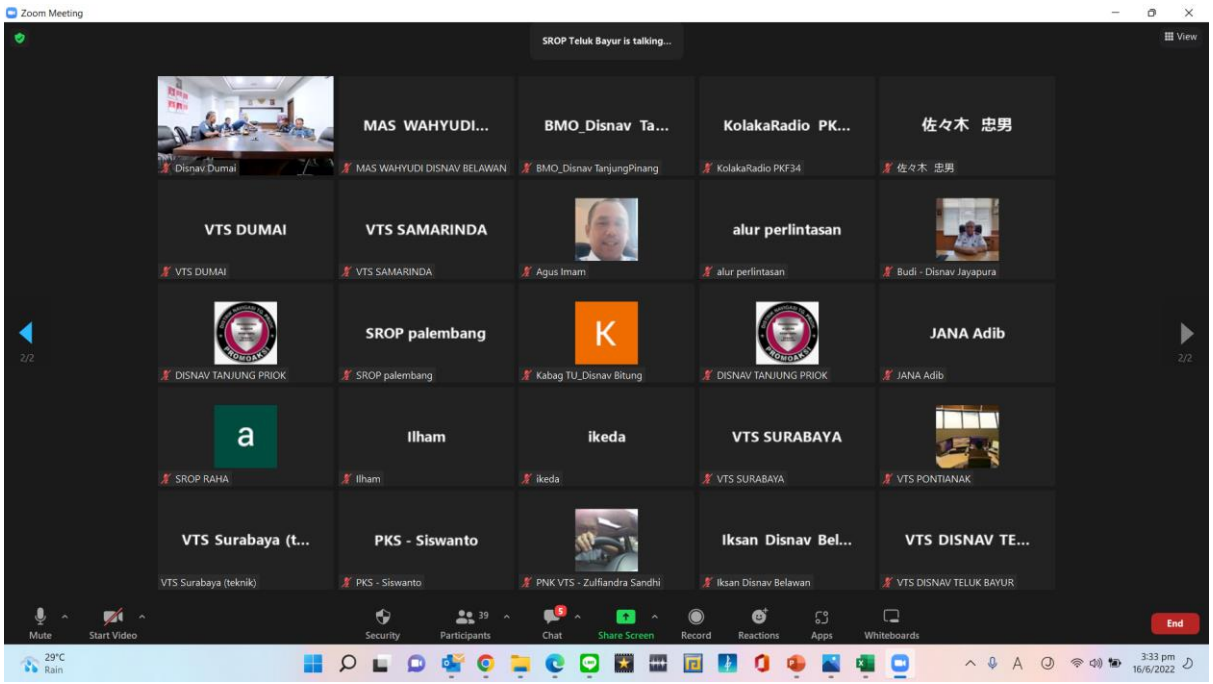
6) Questionary of this project to each DISNAV is suggested to consultant having dialogue with them who is really facing actual problem.

8. IWRAP seminar
Presentation by Mr. Yoku Santo, JANA
Mr. Edo Bimawardhana, Sub Directorate Ship routing Dit-Navigation
Demonstration by Mr. Ilham Gumanti, JRCSI

9. Closing remarks
Mr. Naoya, Kuboshima, JICA Indonesia Office




Zoom Meeting
View
SROP Teluk Bayur
Goro Tsukakoshi
JANA Santo
Disnav Palembang
Disnav Surabaya
Disnav_Teluk Bayur
Zainal A
SROP SURABAYA
DISNAV SABANG
Adi Saputro - Srop Semarang/PKR
DISNAV SEMARANG
VTS OPERATOR...
VTS OPERATOR SMD
Kuboshima JICA Indonesia
Andi_KasiSarpras_Disnav Sby
Disnav Dumai
MAS WAHYUDI...
MAS WAHYUDI DISNAV BELAWAN
BMO_Disnav Ta...
BMO_Disnav TanjungPinang
KolakaRadio PK...
KolakaRadio PKF34
佐々木 忠男
VTS DUMAI
VTS SAMARINDA
Agus Imam
alur perlintasan
Budi - Disnav Jayapura
DISNAV TANJUNG PRIOK
1/2
Mute
Start Video
Security
Participants
40
Chat
Share Screen
Record
Reactions
Apps
Whiteboards
Show desktop
29°C
Rain
3:33 pm
16/6/2022


Zoom Meeting
SROP Teluk Bayur is talking...
View
Disnav Dumai
MAS WAHYUDI...
MAS WAHYUDI DISNAV BELAWAN
BMO_Disnav Ta...
BMO_Disnav TanjungPinang
KolakaRadio PK...
KolakaRadio PKF34
佐々木 忠男
VTS DUMAI
VTS SAMARINDA
Agus Imam
alur perlintasan
Budi - Disnav Jayapura
DISNAV TANJUNG PRIOK
SROP palembang
SROP palembang
Kabag TU_Disnav Bitung
DISNAV TANJUNG PRIOK
JANA Adib
JANA Adib
SROP RAHA
Ilham
Ilham
ikeda
ikeda
VTS SURABAYA
VTS SURABAYA
VTS PONTIANAK
VTS Surabaya (t...
VTS Surabaya (teknik)
PKS - Siswanto
PKS - Siswanto
PNK VTS - Zulfiandra Sandhi
Iksan Disnav Bel...
Iksan Disnav Belawan
VTS DISNAV TE...
VTS DISNAV TELUK BAYUR
2/2
Mute
Start Video
Security
Participants
39
Chat
Share Screen
Record
Reactions
Apps
Whiteboards
End
29°C
Rain
3:33 pm
16/6/2022

Meeting & Seminar for making the Establishment Plan of AtoN including VTS and Ship-Routing, CRS and navigation Vessels	Sheet 2/4

Photo-1	Opening Address by Mr. Hengki Angkasawan (Director of Navigation)

Photo-2	Opening Ceremony

Photo-3	Workshop also attended online by Disnav from another city.

Photo-4	Explanation from Aids to Navigation Group(1)

Photo-5	Explanation from Aids to Navigation Group (2)

Photo-6	Explanation from Aids to Navigation Group (3)

Meeting & Seminar for making the Establishment Plan of AtoN including VTS and Ship-Routing, CRS and navigation Vessels	Sheet 3/4

Photo-7	Explanation from Coastal Radio Station Group

Photo-8	Explanation from Navigational Vessel Group

Photo-9	Question and Answer 1st session(1)

Photo-10	Question and Answer 1st session(2)

Photo-11	Question and Answer 1st session(3)

Photo-12	Question and Answer 1st session(4)

Meeting & Seminar for making the Establishment Plan of AtoN including VTS and Ship-Routing, CRS and navigation Vessels	Sheet 4/4

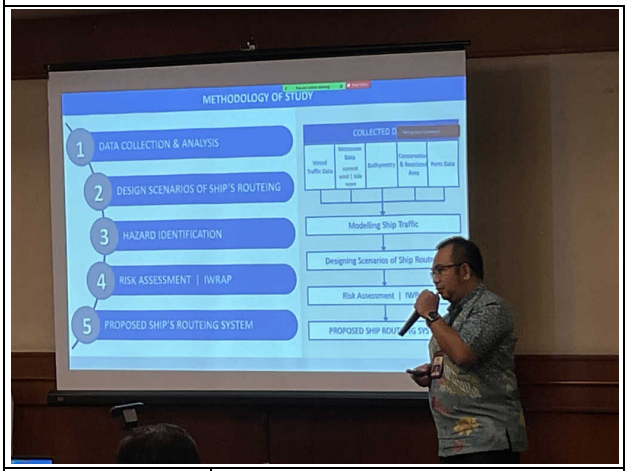


Photo-11	Explanation about Risk Management Tool Box for Maritime Traffic

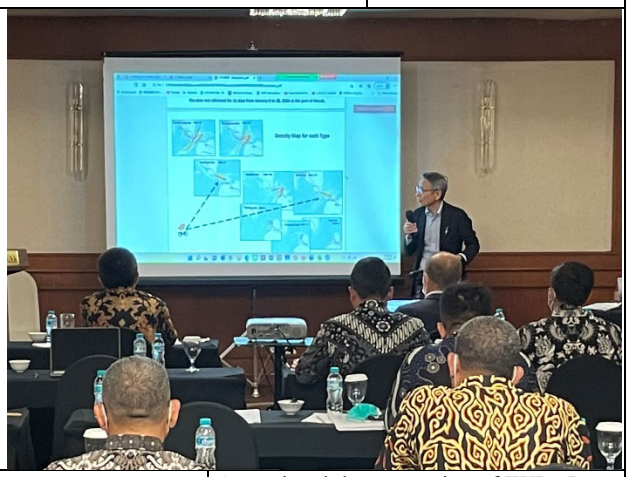


Photo-12	Operational demonstration of IWRAP Software(1)

Photo-13	Operational demonstration of IWRAP Software(2)

Photo-14	Question and Answer 2nd Session(1)

Photo-15	Question and Answer 2nd Session(2)

Photo-16	Closing Statement from JICA

ATTENDEES LIST

The Establishment Plan to AtoN, VTS, Ship Routing, SROP, and Navigation Vessel

Millenium Sirih Hotel, 16 June 2022

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5		Staff	NAVIGASI		
6		Staff	NAVIGASI		
7		Staff	NAVIGASI		
8		Staff	NAVIGASI		
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61	M. Adib Visoka		JRCSI	adib@japanradio.co.id	
62	Guest				
63	Guest				
64	Guest				
65	Guest				
66	Guest				

Lampiran 3.6 -3

Main Issues of Work

Meeting and Seminar
for making the Establishment Plan
of AtoN including VTS and Ship-Routing, CRS and Navigation Vessels

Main Issues of Work

THE PROJECT FOR REVIEW OF THE STUDY FOR MARITIME TRAFFIC SAFETY SYSTEM DEVELOPMENT PLAN

June 16, 2022

Table of Contents

Additional Work

for

“The Project for Review of the Study for Maritime Traffic Safety System Development Plan”

Recalling that the “**Minutes of Meetings** between JICA and DGST for amendment of the Record of Discussions on the Project for Review of the Study for Maritime Traffic Safety System Development Plan” was agreed on October 13th, 2021.

Recalling also that **Annex 4 (TOR for the additional activities)** is attached with the MoM above.

Scope of the Additional Work

- There are **three components** in the additional work (support for arrangement of an ***establishment plan***), namely :

  - ***Component 1*** : Aids to Navigation and VTS, including “Ships Routing”
  - ***Component 2*** : Coastal Radio Station
  - ***Component 3*** : Vessels for Aids to Navigation

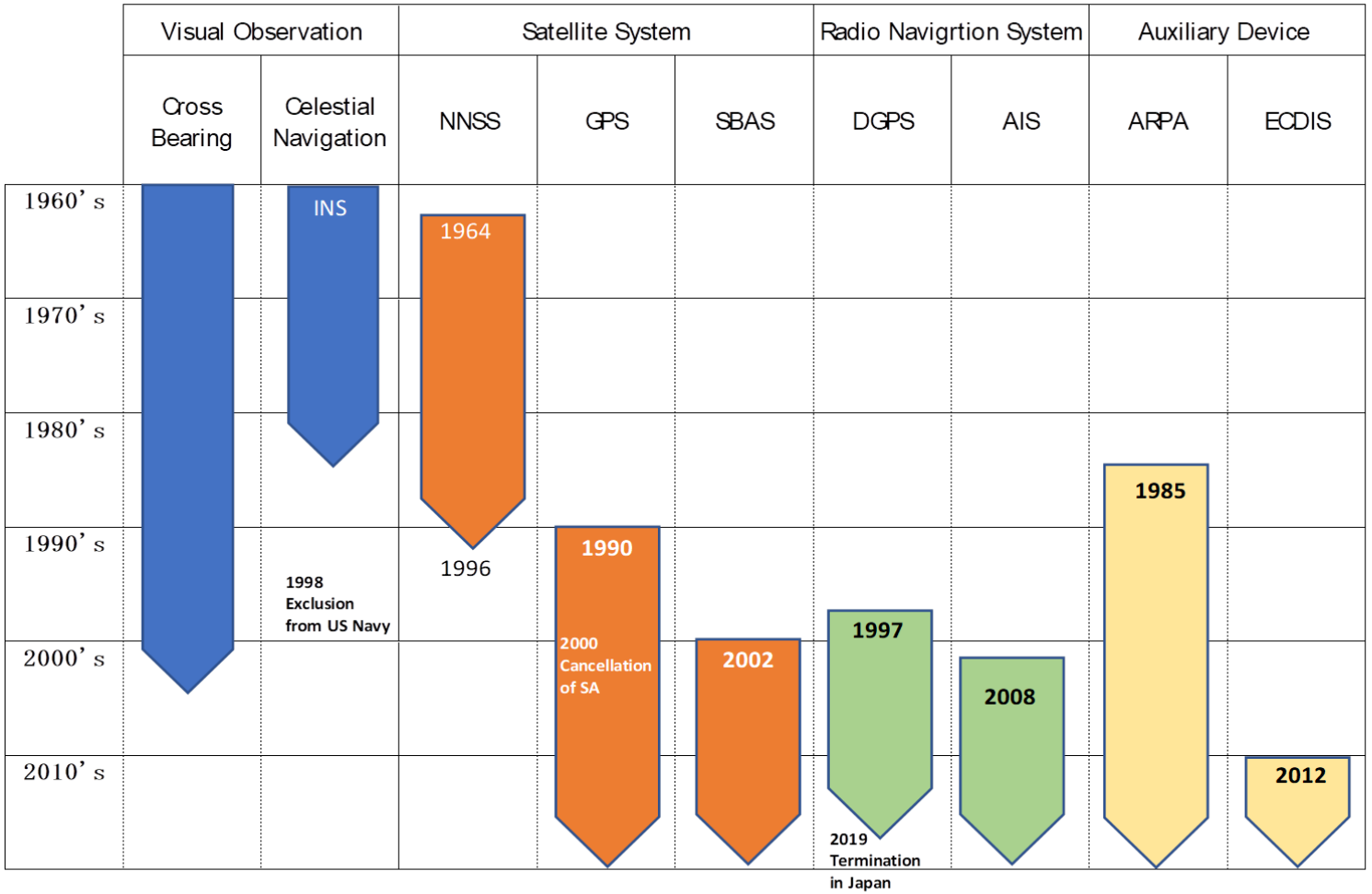
“establishment plan”

1. *Summarized annual plan / Outline of Plan*
2. *Area, Location for an implementation place*
3. *Budget at a rough estimate*
4. *Information for an implementation plan*

3 Background of Additional Work

Drastic Change in Navigation

Fixing Position of a Huge Vessel at Sea



※ Reference

Hyperbolic Radio Navigation System

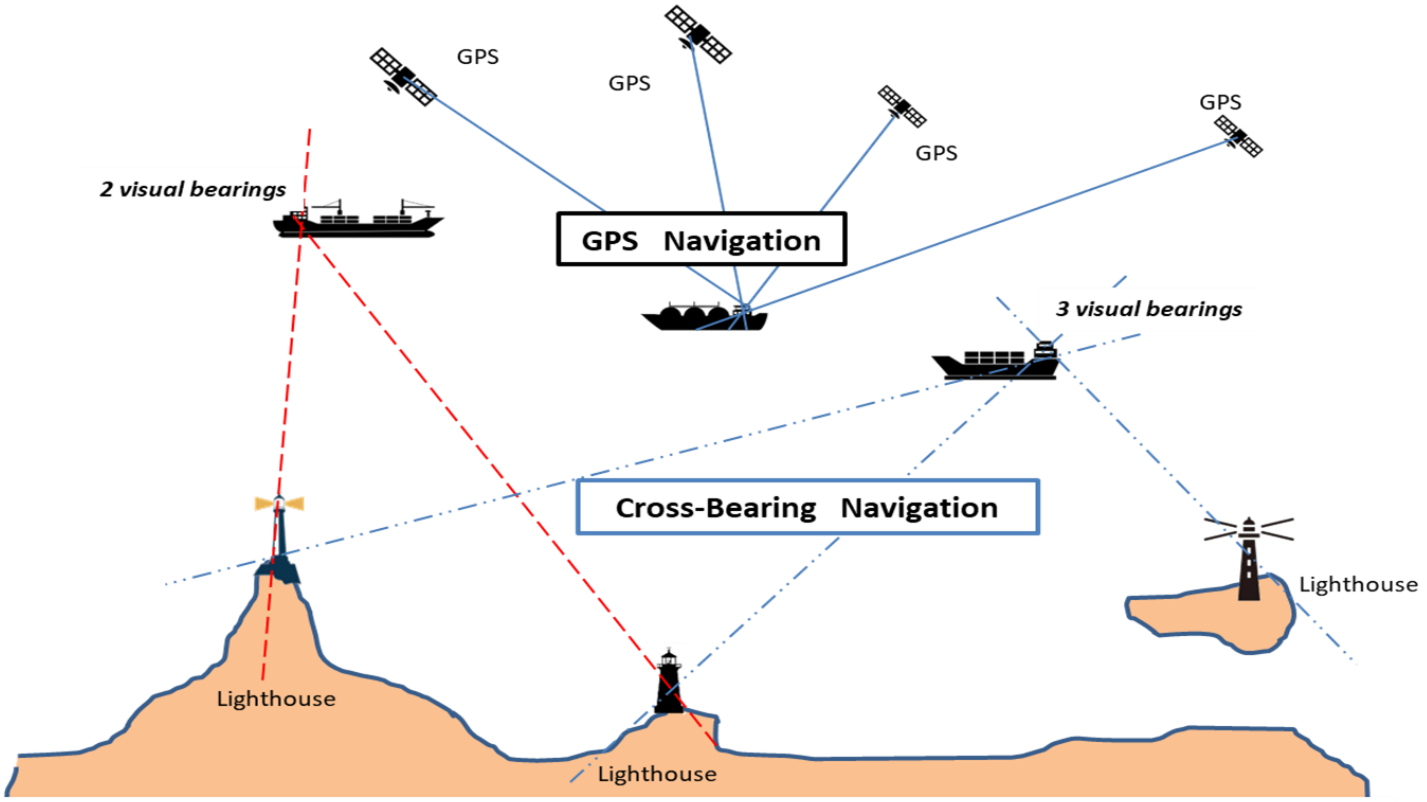
- Loran-A 1958 - 1997
- Loran-C 1959 - 2010 (1940's)
- Decca 1965 - 2001
- Omega 1975 - 1997

Turning Point (Appearance of GPS)

※ SBAS (Satellite Based Augmentation System)
※ DGPS (Medium-Frequency Wave)

1940's : Practical installation of Marine Radar

The way of Navigation has been changed by the advent of GPS.



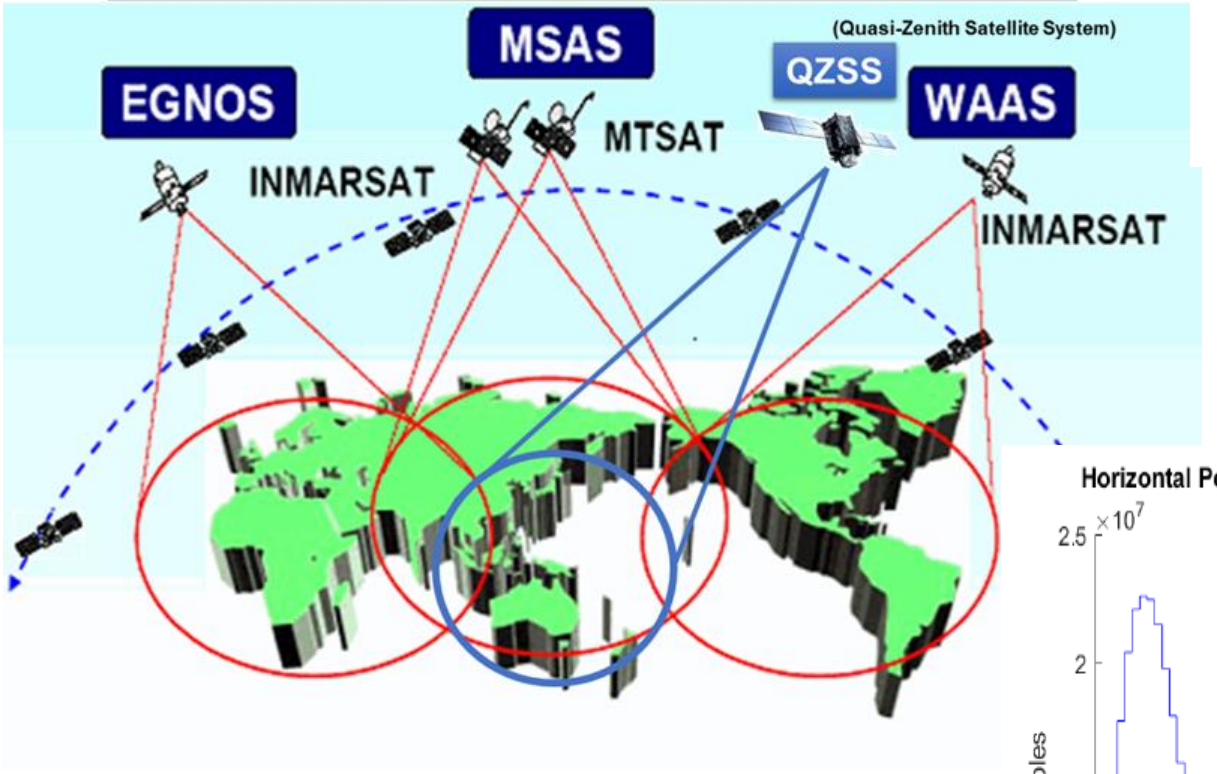
Issues Proposed

It may not be necessary for all vessels to see the lighthouse always when navigating in coastal area like before.

Today, the "Adequacy" reached almost 90%.

It's not just a matter of increasing the number of Lighthouse and Light-Beacon.

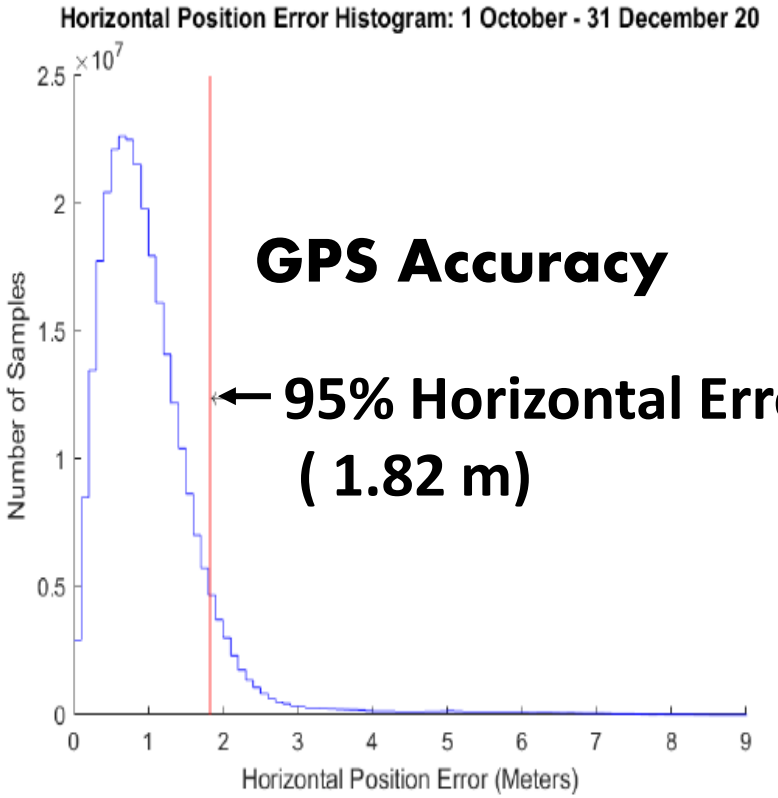
SBAS (Satellite-based Augmentation System)



Official U.S. government information about the Global Position

GLOBAL POSITIONING SYSTEM
STANDARD POSITIONING SERVICE
PERFORMANCE ANALYSIS REPORT

January 2021



GPS Accuracy

← 95% Horizontal Error
(1.82 m)

Accuracy of fixing positon with Smartphone

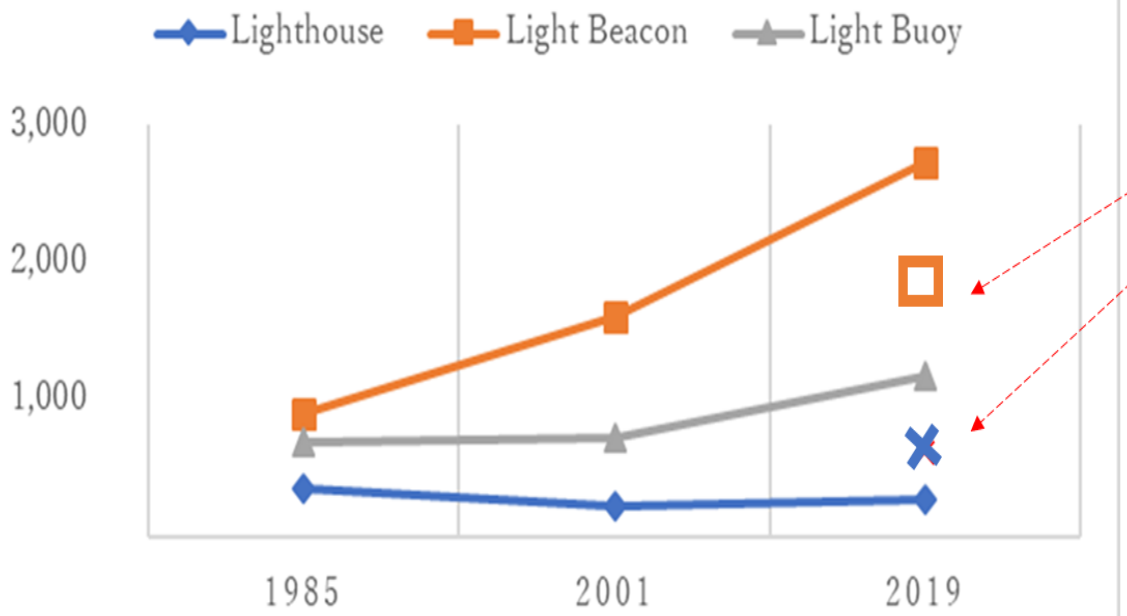
GPS-enabled smartphones are typically accurate to within a 4.9 m (16 ft.) radius under open sky

Aids to Navigation

Component 1

Aids to Navigation

Trend in the establishment for Visual Aids to Navigation



Proposed number in 2020 at the time of Previous MP

Light-Beacon : 1,490

Lighthouse : 326

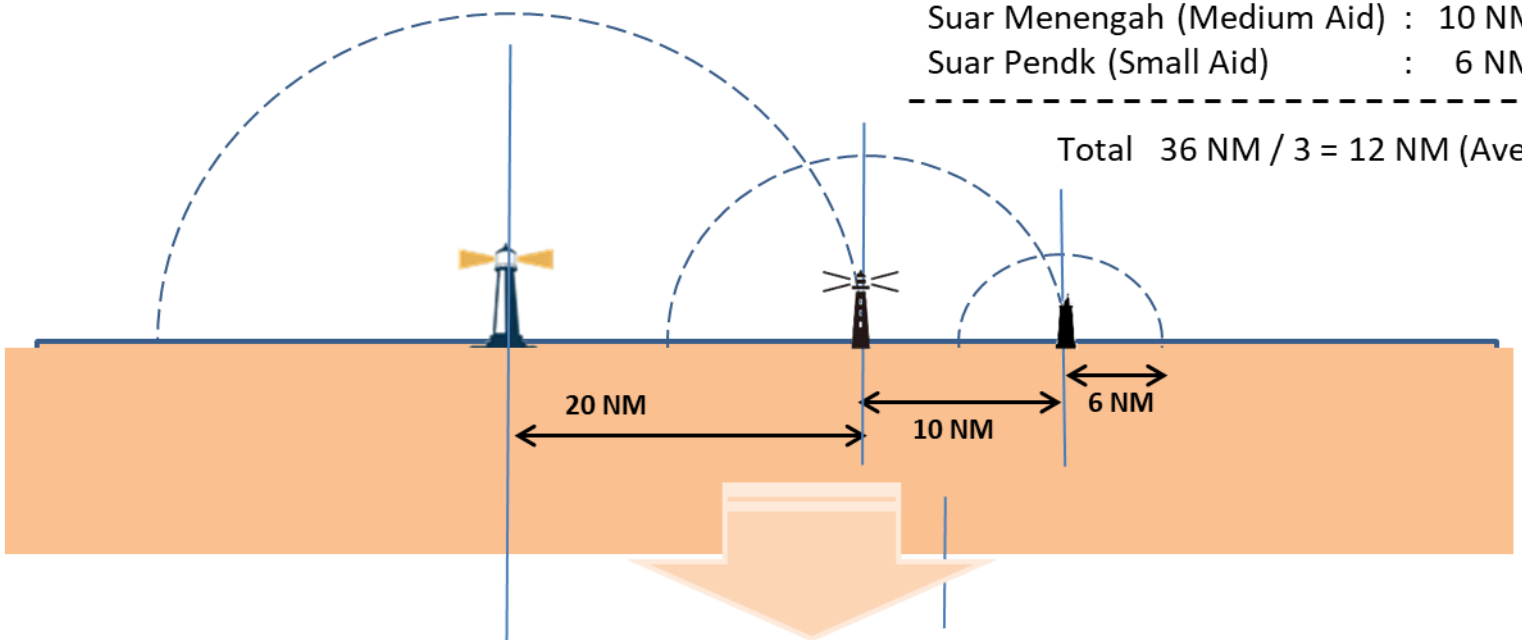
Development/Establishment Status		2002	2016		2019	
		Existing	Five-Year Plan	Existing	Five-Year Plan	Existing
Lighthouse		235	286	282	306	284
Light Beacon	DGST	1,168	1,756	1,557	2,281	1,877
	Non-DGST	437		743		843
Total		1,840	(2,042)	2,582	(2,587)	3,004
Adequacy (%)		**53 %**		**74 %**		**87 %**

Caluculated Adequacy Number of SBNP **3,469 Units / 41,628 Mile, as of 2015**

Concept of Adequacy

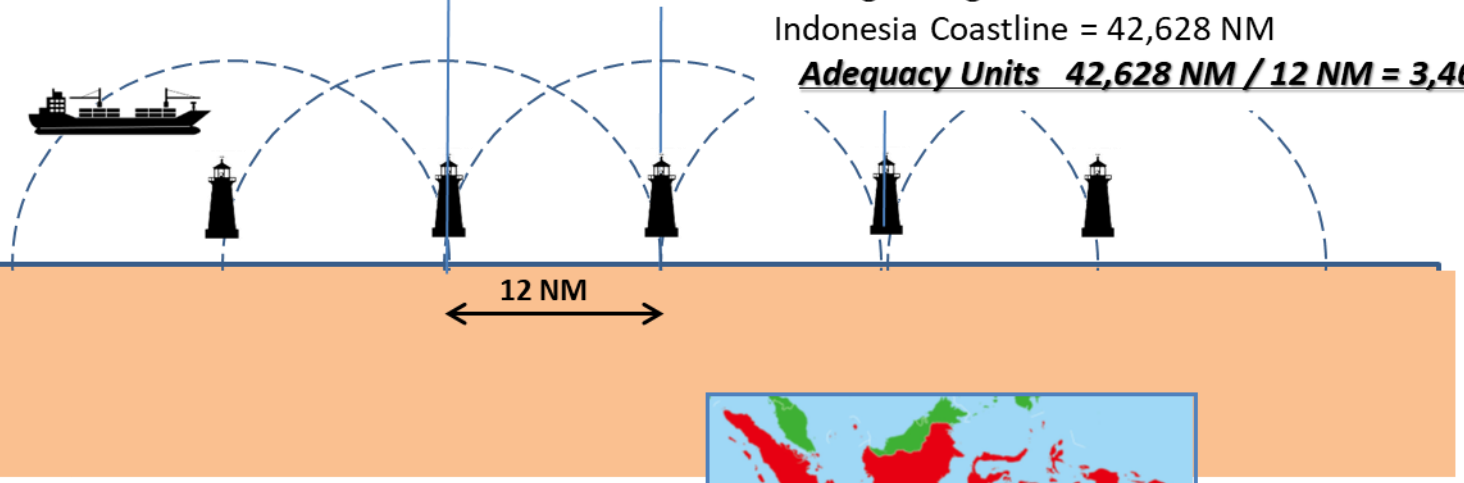
Suar Utama (Large Aid) : 20 NM
Suar Menengah (Medium Aid) : 10 NM
Suar Pendk (Small Aid) : 6 NM

Total 36 NM / 3 = 12 NM (Average)



Average Range oa a Visual Aids : 12 NM
Indonesia Coastline = 42,628 NM

Adequacy Units 42,628 NM / 12 NM = 3,469 Units



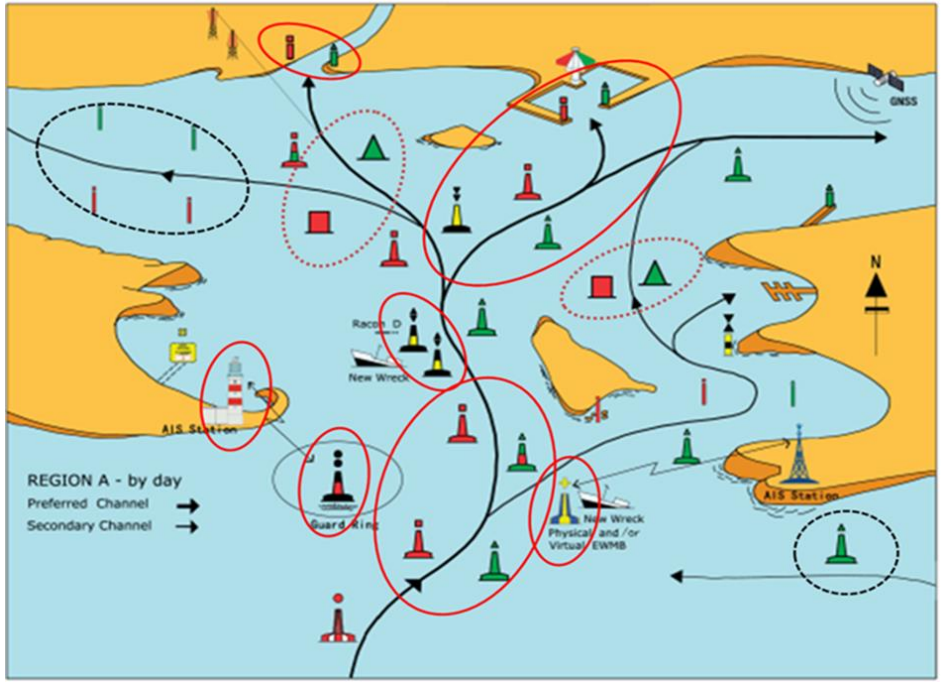
Coastline of Indonesia = 42,628 NM

Development status of the port as of 1993

(according to the Decree of MOT No.35 of 1993)

Lokasi Pelabuhan Yang Tidak di Usahakan (Undeveloped Ports)

Explanatory Figure for Classification of significance for the installation

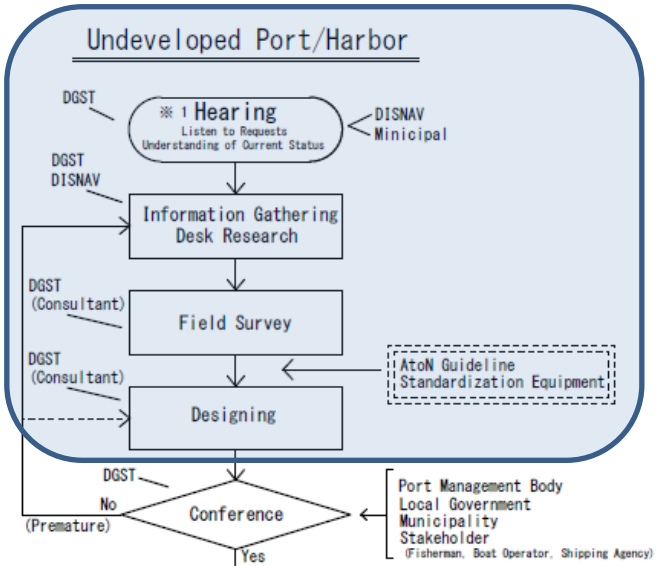


Category 1
Vital
- Landfalls
- Primary routes
- Dangers

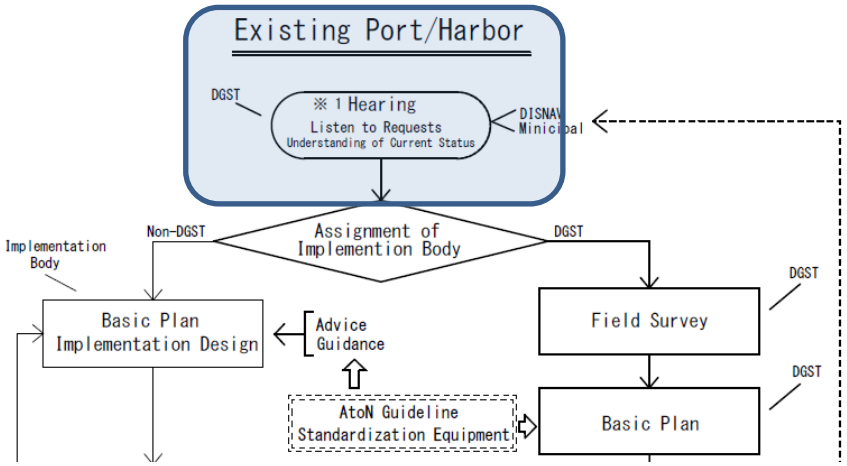
Category 2
Important
- Secondary routes
- Supplemental marks of primary routes

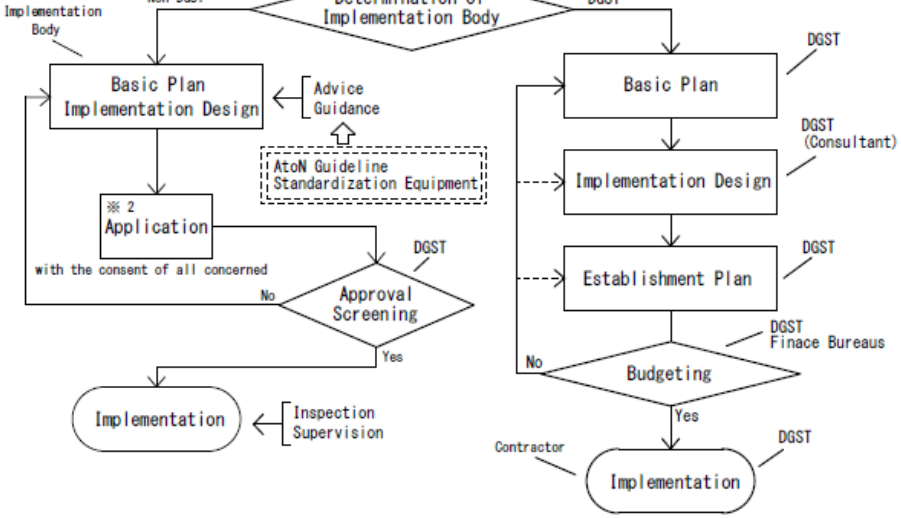
Category 3
Necessary
- Helpful/useful to navigation

Maritime Traffic Safety Measures – establishing Process



Maritime Traffic Safety Measures – establishing Process



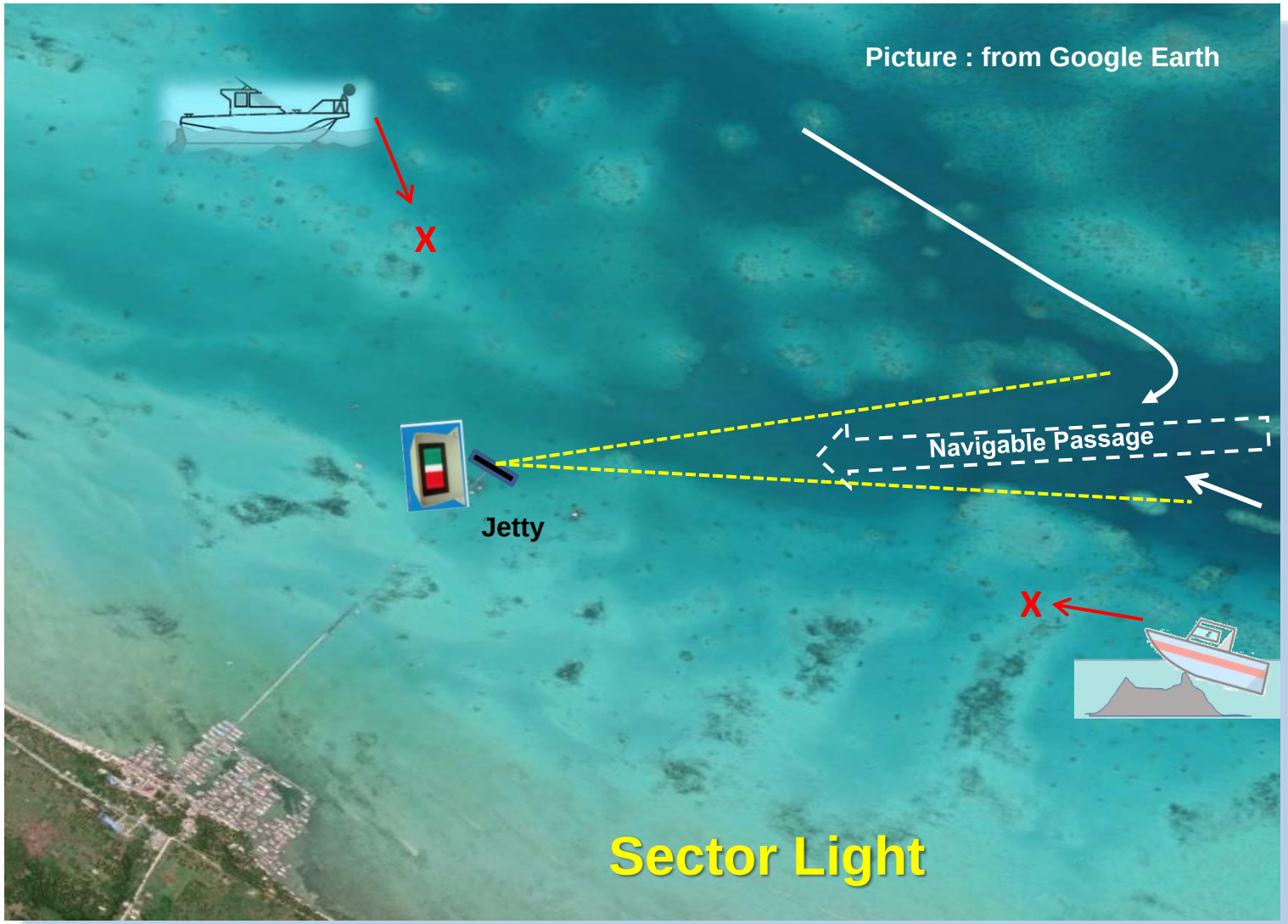


※ 1 Hearing will be held as needed (as necessity requires).
※ 2 The application is made under the appropriate laws or regulations.

Unlit Jetty

Vessels can't approach the jetty in the dark world at night

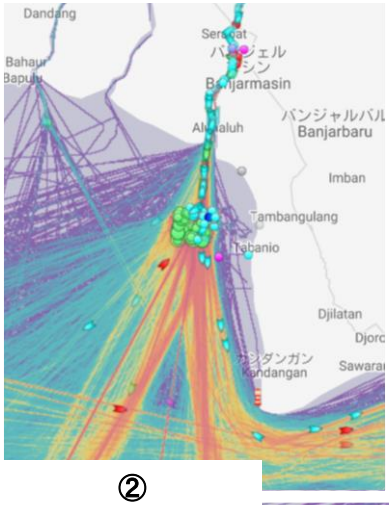
Why don't you consider establishing sector lights?



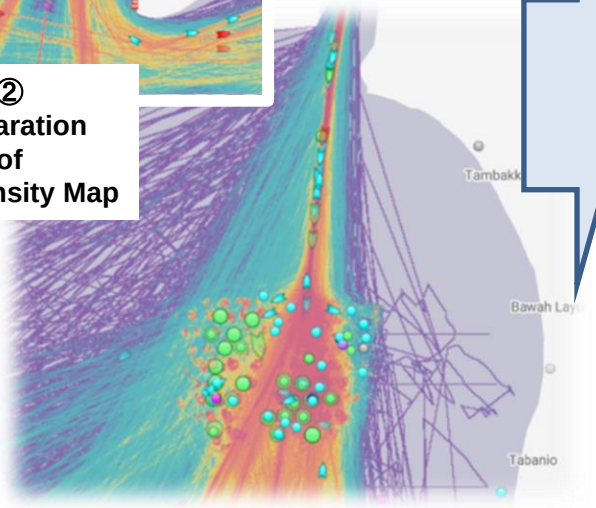
South Kalimantan

① Preparation of Marine Chart

Banjarmashin

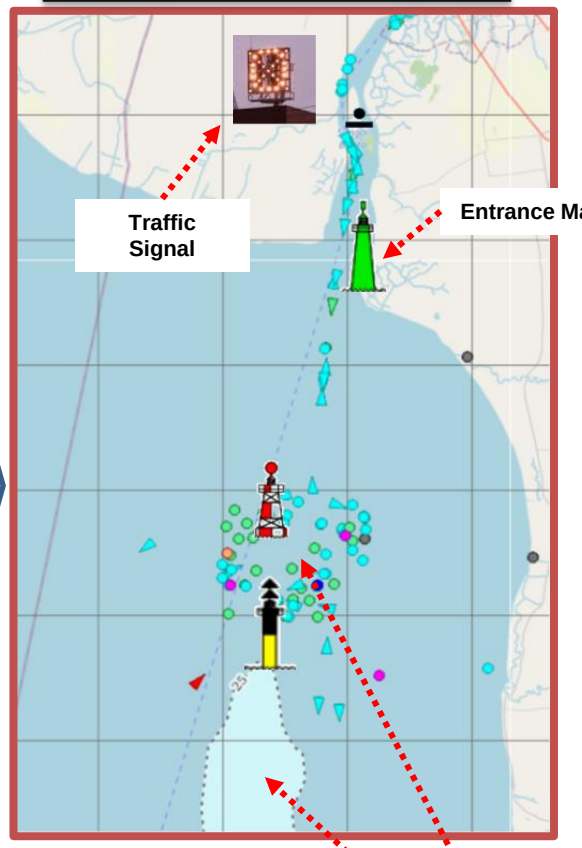


② Preparation of AIS Density Map



③ Arrangement of Aids to Navigation

Example of Installation



Listen to requests

Selection of Area → Gather of data

Listen to requests
According to Policy, Guideline

Chart → AIS Density Map → Planning

Reporting Form of Original Establishment Plan for DISNAV

List of Planned Aids to Navigation

Referwnce Number	Location			Name of Aid		Catetory		Type of Marks				Remarks
	Regional Names	Position		Type (*1)	Specification (*2)	Sea Area (*3)	Significance (*4)	Lateral (*5)	Cardinal (*6)	Special (*7)	Light Color *8)	Name of Aid
		Longtitude	Latitude									
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

No	Name of Aid	Items
1	Type (*1)	Lithhouse
		Breakwater Light
		Harbor Light
		Lighted Beacon
		Lighted Buoy
		Leading Lihgts
		Sector Lihgt
		Beacon (Unlighted)
		Buoy (Unlighted)
		Landmark

No	Name of Aid	Items
2	Specification (*2)	Landfall Light
		Long-range Light
		Medium-range Light
		Short-range Light
		Channel Light
		Leading Lihgts

No	Category	Items
3	Sea Area (*3)	Offshore waters
		Coastal waters
		Congested area
		Harbor/Port (Restricted area)
		Inland waters (River)

No	Category	Items
4	Significance	Category 1 (Vital)
		Category 2 (Important)
		Category 3 (Necessary)

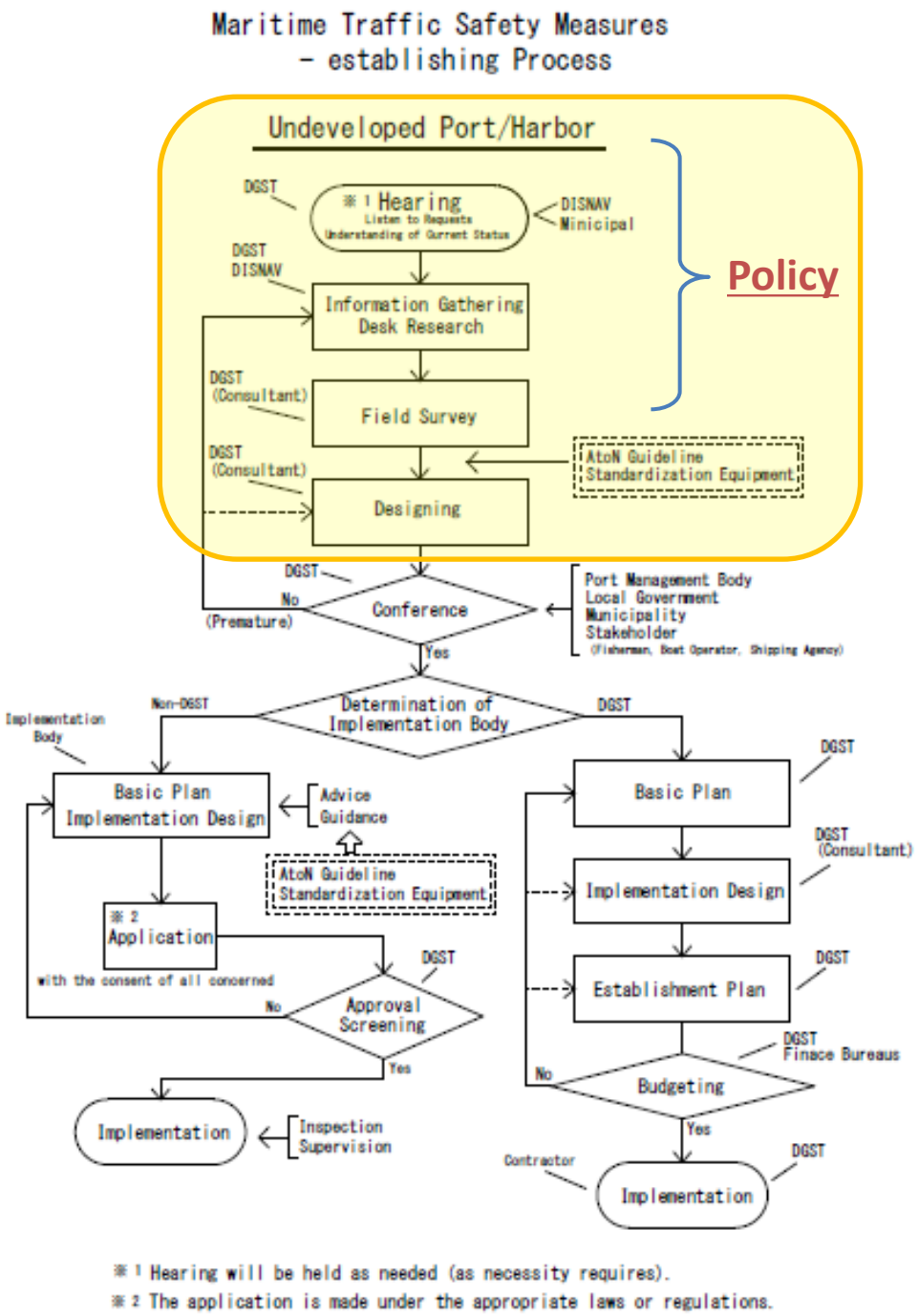
No	Type of Marks	Items
5	Lateral (*5)	Starboard
		Port
		Preferred Channel of Starboard
		Preferred Channel of Port

No	Type of Marks	Items
6	Cardinal (*6)	North
		East
		South
		West

No	Type of Marks	Items
8	Light Color (*8)	White
		Red
		Yellow
		Green

"establishment plan"

1. ***Summarized annual plan / Outline of Plan***
2. ***Area, Location for an implementation place***
3. ***Budget at a rough estimate***
4. ***Information for an implementation plan***



Example of Policy for AtoN

a. Eliminating unlit bays and harbors

Navigation at night is very dangerous to approach a coastal area and / or a harbor without marine lighted aids to navigation, even though with the advantage of local knowledge.

b. Transformation into a port where vessels can enter more safely

Regional ports are expected to increase in vessel traffic progressively, and further safety of their navigation must be ensured.

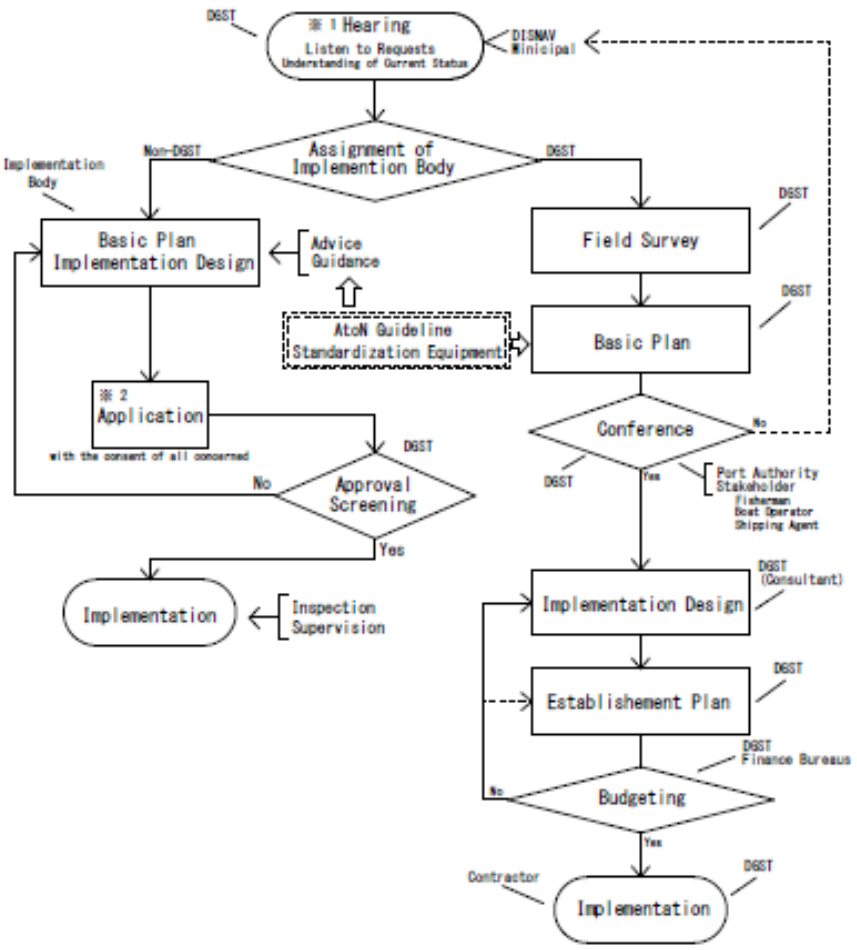
---

c. A goal is the port that vessels can navigate safely and efficiently at any time

For the prosperity of the region and the nation, it goes without saying that safe and stable marine traffic is secured, but for further prosperity a port that is always open is required.

Maritime Traffic Safety Measures
- establishing Process

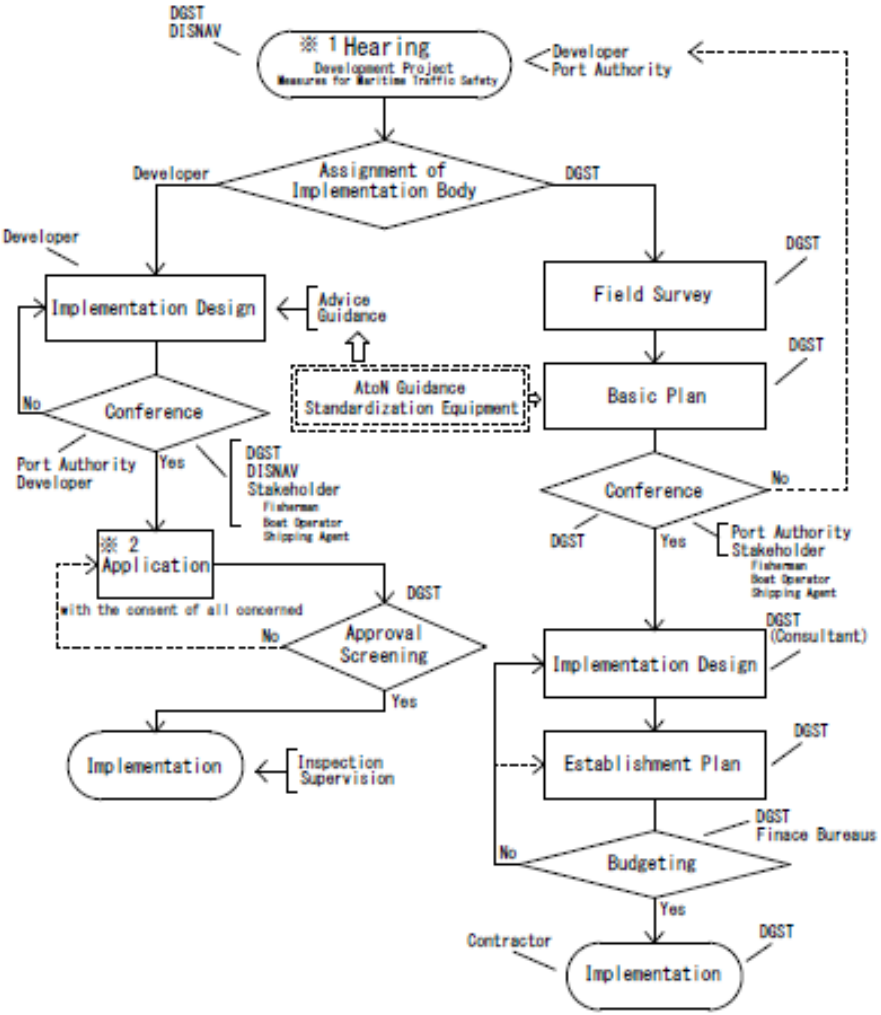
Existing Port/Harbor



※1 Hearing will be held once a year at DISNAV.
※2 The application is made under the appropriate laws or regulations.

Maritime Traffic Safety Measures
- establishing Process

New Port/Harbor

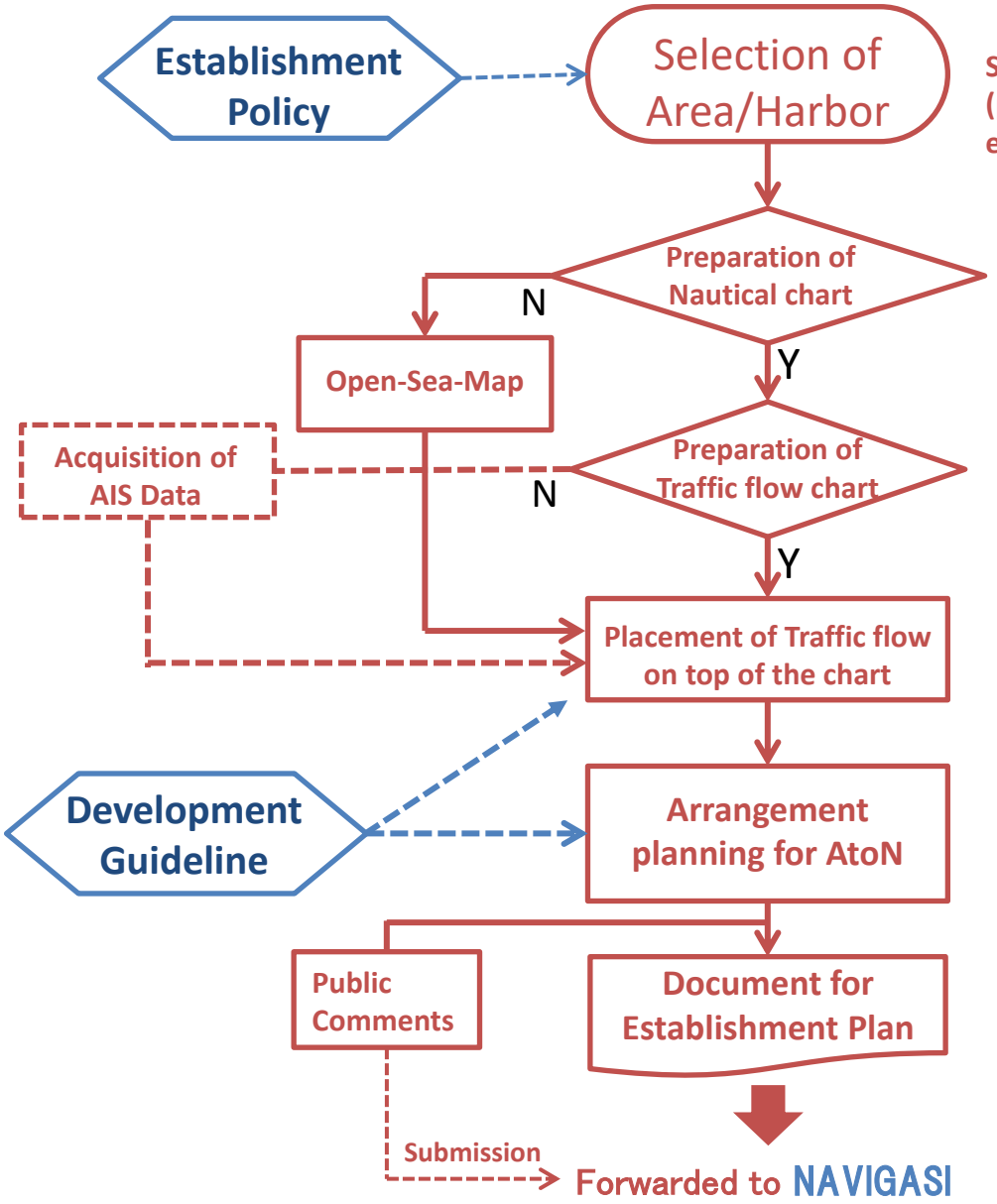


※1 Hearing will be held when development plans for the most part have been made.
※2 The application is made under the appropriate laws or regulations.

Establishment of Aids to Navigation

NAVIGASI

DISNAV (NAVIGASI)



Selection of high-priority harbors (ports) in line with the establishment policy

AIS Density map
Conventional traffic route (waterway)
Users' passage (Hearing)

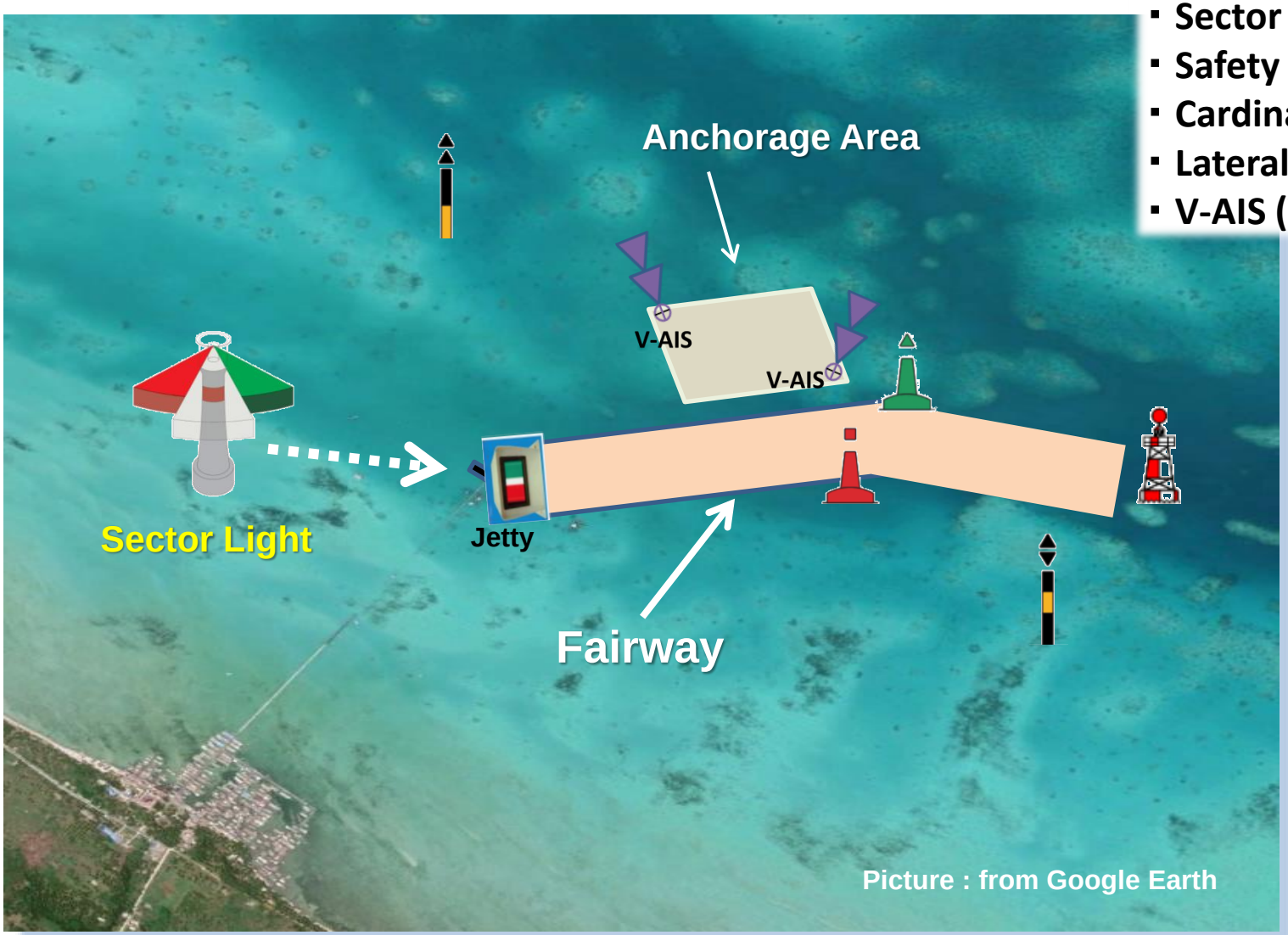
Marine Accident Data
Ports and Harbors Development Plan

Lighthouse, Light Beacon, Buoy
Leading Lights, Sector Light
Ships Routing (Channel, Waterway)
Radio Aids (VTS, Radar Beacon)

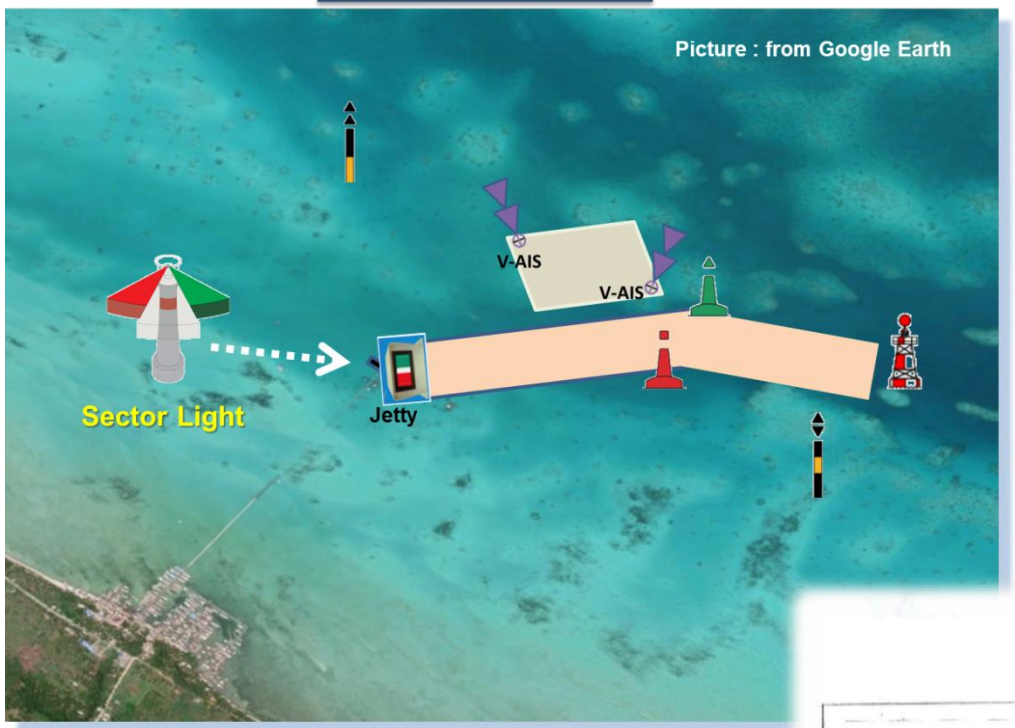
Chart, Traffic Flow Map, Arrangement Map
List of AtoN
Data on maritime facilities (Port, Berth, Warehouse)
Ships' data (Type, Number of vessels)
Organization of port
Other information (Marine Accident, Development Plan)

One of the examples and ideas for making the establishment plan of the Ship-Routing

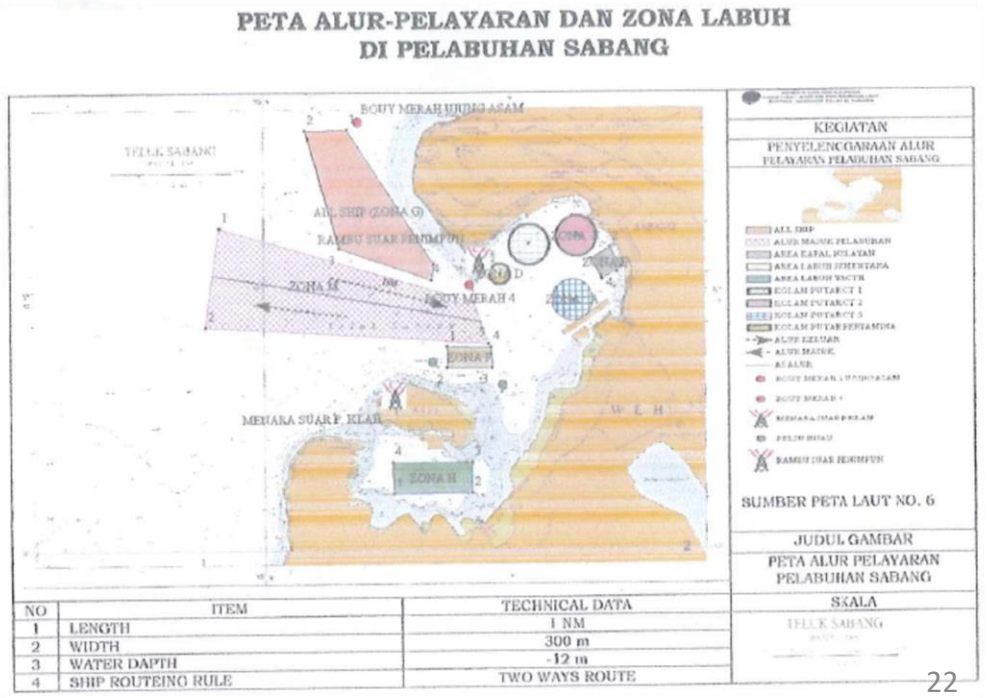
- Sector Light
- Safety Water Marks
- Cardinal Marks
- Lateral Marks
- V-AIS (Virtual)



Ship-Routing



This is the form of the final outcome.



Coastal Radio Station

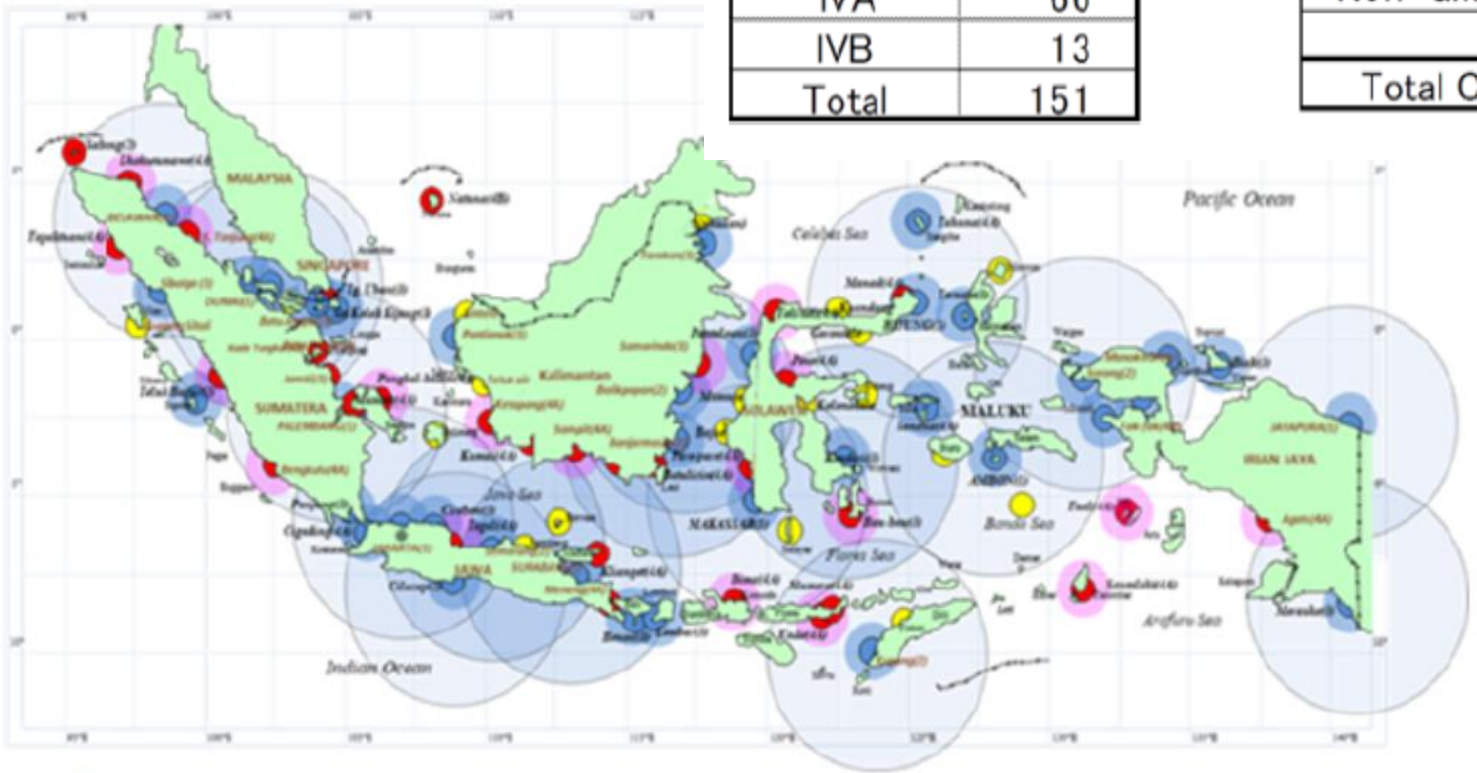
Component 2

Coastal Radio Stations

Arrangement of Coastal Radio Stations

Class	Station
I	12
II	6
IIIA	48
IIIB	6
IVA	66
IVB	13
Total	151

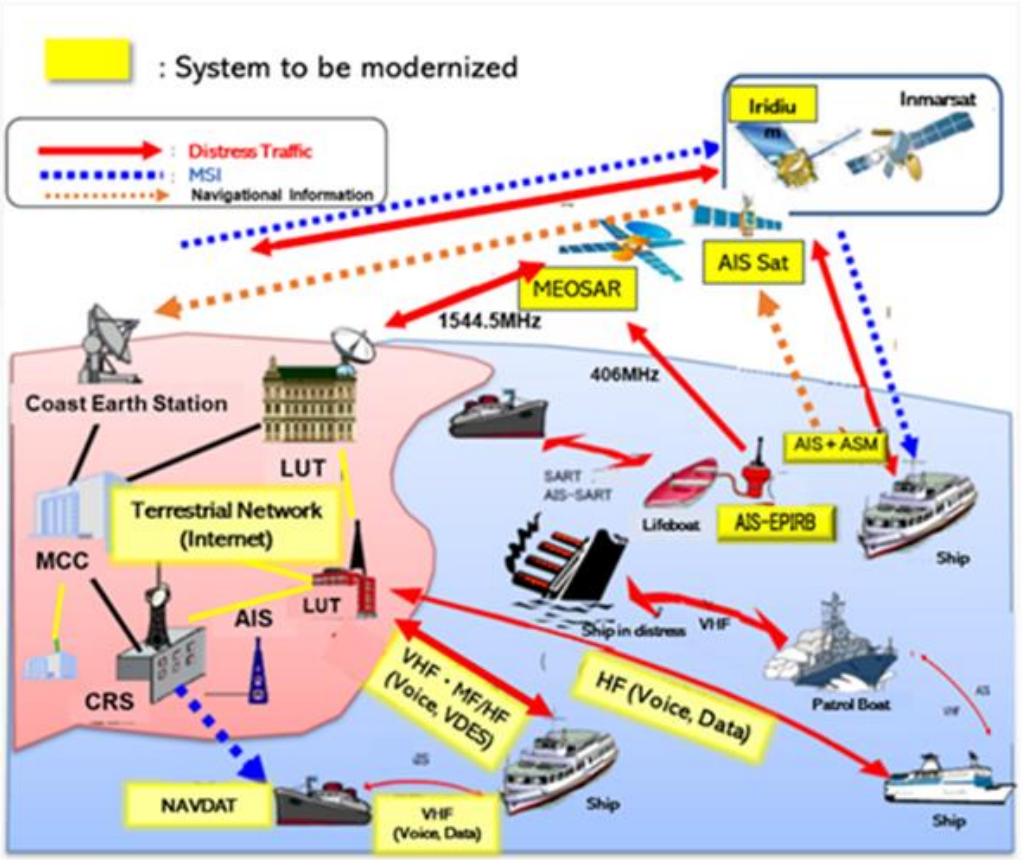
GMDSS Area	Station
A2	94
A3	18
Total	112
Non-GMDSS	39
Total CRS	151



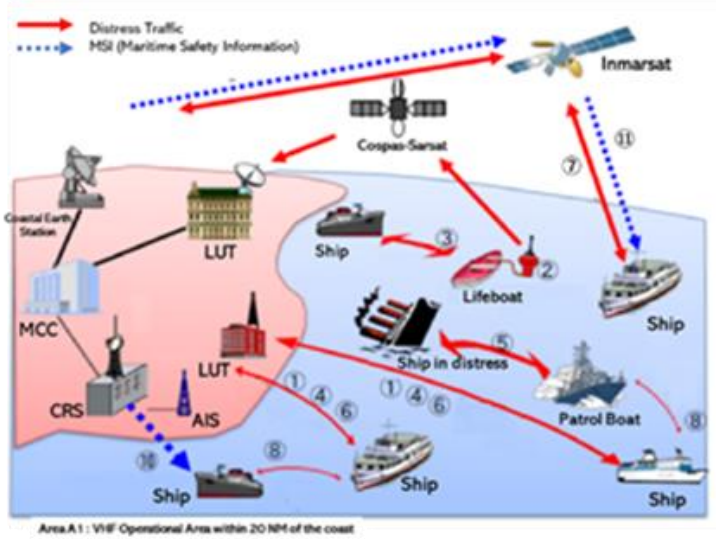
CRS GMDSS 112 Stations including 40 CRSs equipped with AIS Base station

CRS non-GMDSS 39 Stations

Modernizing System of GMDSS



Existing System of GMDSS



MEOSAR : Cospas-Sarsat
Medium-altitude Earth Orbit Search and Rescue System

LUT : Local User Terminal
RCC : Rescue Coordination Center
MCC : Mission Coordination Center

Reference : Modernization of GMDSS

The functions are almost the same as the current ones.

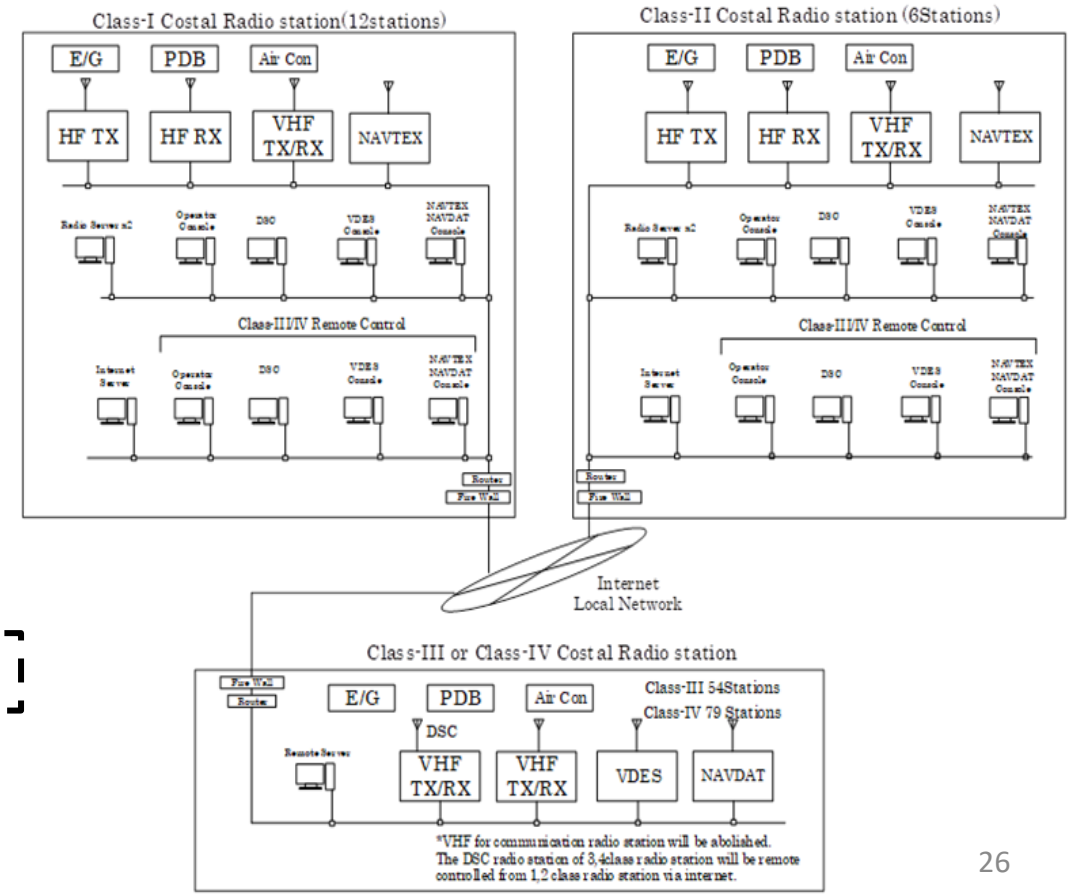
Satellite utilization and adoption of VDES (VHF Data Exchange System) are being considered, as additional functions.

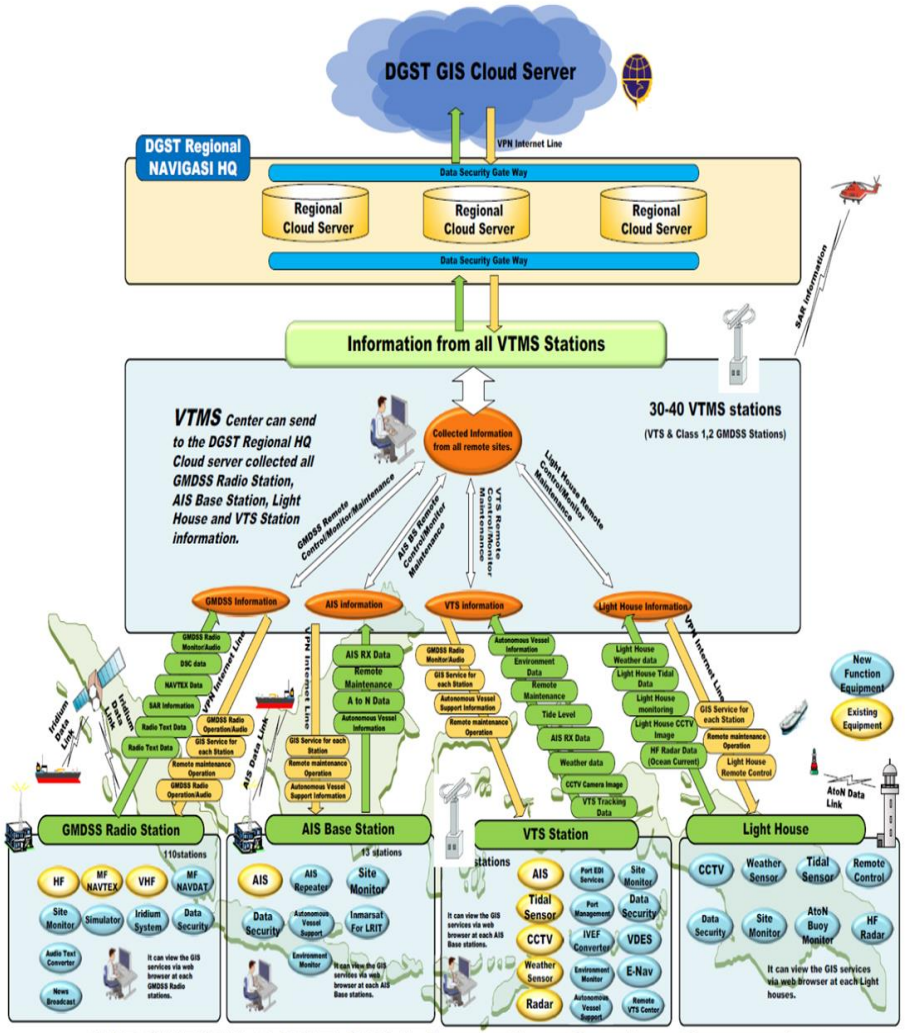
Consolidation of Coastal Radio Station

The radio-station equipment installed at present was manufactured before 2015 and has not been adapted to IP (Internet Protocol), so most of them needs to be replaced or modified for consolidation of the stations.

Class-Ⅰ 12 **Class-Ⅱ 6**

Class-Ⅲ 54 **Class-Ⅳ 79**





INDONESIA DGST GIS Information Service Concept

List of Coastal Radio Station

No	Name of DisNav Location of Radio		Class	GMDSS	Area	Non-GMDSS
1	Sabang					
	1	Sabang	II	GMDSS (JRC)	A3	
	2	Ulee Lheue	IIIA	GMDSS (SAILOR)	A2	
	3	Tapak Tuan	IVA	GMDSS (JRC)	A2	
	4	Meulaboh	IVA	GMDSS (KENTA)	A2	
	5	Sinabang	IVA			○
	6	Susoh	IVA			○
2	Belawan					
	1	Belawan	I	GMDSS (SAILOR)	A3	
	2	Kuala Tanjung	IIIA	GMDSS (JRC)	A2	
	3	Tg. Balai Asahan	IIIA	GMDSS (SAILOR)	A2	
	4	Lhokseumawe	IIIA	GMDSS (JRC)	A2	
	5	Kuala Langsa	IVA	GMDSS (SAILOR)	A2	
	6	Pangkalan Susu	IVB	GMDSS (SAILOR)	A2	
	7	Tanjung Sarang Elang	IVB			○
3	Sibolga					
	1	Sibolga	IIIA	GMDSS (SAILOR)	A2	
	2	Gunung Sitoli	IVA	GMDSS (SAILOR)	A2	
	3	Pulau Tello	IVA	GMDSS (KENTA)	A2	
	4	Lahewa	IVA	GMDSS (SAILOR)	A2	
	5	Teluk Dalam	IVB	GMDSS (SAILOR)	A2	
	6	Sirombu	IVB			○
	7	Sikara Kara	IVB			○
4	Dumai					
	1	Dumai	I	GMDSS (SAILOR)	A3	
	2	Bengkalis	IIIA	GMDSS (SAILOR)	A2	
	3	Tembilahan	IVA	GMDSS (SAILOR)	A2	
	4	Bagan Siapi – api	IVA			○
	5	Selat Panjang	IVA	GMDSS (SAILOR)	A2	
	6	Pekanbaru	IVA			○
	7	Rengat	IVA	GMDSS (SAILOR)	A2	
5	Tanjung Pinang					
	1	Tanjung Pinang	IIIA	GMDSS (SAILOR)	A2	
	2	Tanjung Uban	IIIA	GMDSS (JRC)	A2	
	3	Sei Kolak Kijang	IIIA	GMDSS (SAILOR)	A2	
	4	Natuna	IIIA	GMDSS (JRC)	A2	
	5	Tarempa	IIIA			○
	6	Batu Ampar	IIIA	GMDSS (SAILOR)	A2	
	7	Tanjung Balai Karimun	IVA	GMDSS (KENTA)	A2	
	8	Pulau Sambu	IVA			○
	9	Dabo Singkep	IVA	GMDSS (SAILOR)	A2	
6	Teluk Bayur					
	1	Teluk Bayur	II	GMDSS (JRC)	A3	
	2	Sipora	IIIA	GMDSS (SAILOR)	A2	
	3	Air Bangis	IVA	GMDSS (SAILOR)	A2	
	4	Sikakap	IVB			○
7	Palembang					
	1	Palembang	I	GMDSS (JRC)	A3	
	2	Jambi	IIIA	GMDSS (JRC)	A2	
	3	Pangkal Balam	IIIA	GMDSS (SAILOR)	A2	
	4	Kuala Tungkal	IIIA	GMDSS (SAILOR)	A2	
	5	Muntok	IIIB	GMDSS (SAILOR)	A2	
	6	Muara Sabak	IVA	GMDSS (SAILOR)	A2	
	7	Ranjung Pandan	IVB	GMDSS (SAILOR)	A2	

List of Coastal Radio Station

No		Name of DisNav Location of Radio	Class	GMDSS	Area	Non-GMDSS
8		Tanjung Priok				
	1	Jakarta	I	GMDSS (JRC)	A3	
	2	Panjang	IIIA	GMDSS (SAILOR)	A2	
	3	Cigading	IIIA	GMDSS (SAILOR)	A2	
	4	Cirebon	IIIA	GMDSS (SAILOR)	A2	
	5	Bengkulu	IIIA	GMDSS (JRC)	A2	
9		Semarang				
	1	Semarang	I	GMDSS (JRC)	A3	
	2	Tegal	IIIA	GMDSS (JRC)	A2	
	3	Pekalongan	IIIA			○
	4	Karimun Jawa	IVA			○
	5	Jepara	IVA	GMDSS (SAILOR)	A2	
	6	Juwana	IVA			○
	7	Rembang	IVA	GMDSS (KENTA)	A2	
10		Cilacap				
	1	Cilacap	I	GMDSS (JRC)	I	
11		Surabaya				
	1	Surabaya	I	GMDSS (JRC)	A3	
	2	Kali Anget	IIIA	GMDSS (JRC)	A2	
	3	Meneng (Banyuwangi)	IIIA	GMDSS (JRC)	A2	
	4	Panarukan	IVA			○
	5	Gresik	IVA			○
	6	Probolinggo	IVA	GMDSS (SAILOR)	A2	
	7	Bawean	IVA			○
	8	Pasuruan	IVA			○
	9	Masalembo	IVA			○
12		Benoa				
	1	Benoa	II	GMDSS (JRC)	A3	
	2	Lembar	IIIA	GMDSS (SAILOR)	A2	
	3	Bima	IIIA	GMDSS (JRC)	A2	
	4	Padang Bai	IVA	GMDSS (SAILOR)	A2	
	5	Celukan Bawang	IVA	GMDSS (SAILOR)	A2	
	6	Badas	IVA			○
	7	Gilimanuk	IVA	GMDSS (SAILOR)	A2	
	8	Kabuhan Lombok	IVA	GMDSS (KENTA)	A2	
13		Kupang				
	1	Kupang	II	GMDSS (SAILOR)	A3	
	2	Ende	IIIA	GMDSS (JRC)	A2	
	3	Maumere	IIIB	GMDSS (JRC)	A2	
	4	Waingapu	IVA	GMDSS (SAILOR)	A2	
	5	Kalabahi	IVA			○
	6	Larantuka	IVA			○
	7	Atapupu	IVA	GMDSS(INVELCO)	A2	
	8	Reo	IVA			○
	9	Seba	IVA			○
14		Pontianak				
	1	Pontianak	IIIA	GMDSS (SAILOR)	A2	
	2	Ketapang	IIIA	GMDSS (JRC)	A2	
	3	Sintete	IVA	GMDSS (SAILOR)	A2	
15		Banjarmasin				
	1	Banjarmasin	II	GMDSS (JRC)	A3	
	2	Sampit	IIIA	GMDSS (JRC)	A2	
	3	Kumai	IIIB	GMDSS (SAILOR)	A2	
	4	Batulicin	IIIB	GMDSS (JRC)	A2	
	5	Kotabaru	IIIB			○
16		Samarinda				
	1	Samarinda	IIIA	GMDSS (SAILOR)	A3	
	2	Balikpapan	I	GMDSS (JRC)	A3	
	3	Tanjung Santan	IVA	GMDSS (SAILOR)	A2	

List of Coastal Radio Station

No		Name of DisNav Location of Radio	Class	GMDSS	Area	Non-GMDSS
17		Tarakan				
	1	Tarakan	IIIA	GMDSS (SAILOR)	A2	
	2	Nunukan	IVA			○
	3	Tg. Selor	IVA			○
	4	Tg. Redep	IVA			○
18		Makassar				
	1	Makassar	I	GMDSS (JRC)	A3	
	2	Pare-Pare	IIIB	GMDSS (JRC)	A2	
	3	Mamuju	IVA			○
	4	Palopo	IVA	GMDSS(INVELCO)	A2	
	5	Selayar	IVB	GMDSS(INVELCO)	A2	
19		Kendari				
	1	Kendari	IIIA	GMDSS (SAILOR)	A2	
	2	Bau-bau	IIIA	GMDSS (JRC)	A2	
	3	Raha	IVA	GMDSS (SAILOR)	A2	
	4	Kolaka	IVA	GMDSS (SAILOR)	A2	
	5	Pomalaa	IVA	GMDSS (SAILOR)	A2	
	6	Banabungi	IVB			○
20		Bitung				
	1	Bitung	I	GMDSS (JRC)	A3	
	2	Pantoloan	IIIA	GMDSS (SAILOR)	A2	
	3	Poso	IIIA	GMDSS (JRC)	A2	
	4	Toli-Toli	IIIA	GMDSS (JRC)	A2	
	5	Donggala	IVA	GMDSS (KENTA)	A2	
	6	Gorontalo	IVA			○
	7	Luwuk	IVA	GMDSS (SAILOR)	A2	
	8	Siau	IVA			○
	9	Manado	IVA	GMDSS (JRC)	A2	
	10	Tahuna	IVA	GMDSS (KENTA)	A2	
	11	Parigi	IVA	GMDSS (SAILOR)	A2	
	12	Kolonedale	IVA			○
	13	Kwandang	IVA	GMDSS (SAILOR)	A2	
	14	Banggai	IVB			○
	15	Ampana	IVB			○
21		Ambon				
	1	Ambon	I	GMDSS (JRC)	A3	
	2	Ternate	IIIA	GMDSS (SAILOR)	A2	
	3	Namlea	IIIA	GMDSS (SAILOR)	A2	
	4	Sanana	IIIA	GMDSS (SAILOR)	A2	
	5	Tobelo	IVA			○
	6	Banda	IVA	GMDSS(INVELCO)	A2	
	7	Amahai	IVB			○
22		Tual				
	1	Tual	IIIA	GMDSS (JRC)	A2	
	2	Saumlaki	IIIA	GMDSS (JRC)	A2	
	3	Dobo	IVA	GMDSS (SAILOR)	A2	
23		Sorong				
	1	Sorong	II	GMDSS (JRC)	A3	
	2	Manokwari	IIIA	GMDSS (SAILOR)	A2	
	3	Fak-Fak	IIIA	GMDSS(INVELCO)	A2	
	4	Kaimana	IVA	GMDSS(INVELCO)	A2	
	5	Bintuni	IIIA	GMDSS(INVELCO)	A2	
	6	Amamapare	IVB			○
24		Jayapura				
	1	Jayapura	I	GMDSS (JRC)	A3	
	2	Biak	IIIA	GMDSS (SAILOR)	A2	
	3	Serui	IVA	GMDSS (SAILOR)	A2	
	4	Sarmi	IVA	GMDSS (KENTA)	A2	
	5	Nabire	IVA			○
25		Merauke				
	1	Merauke	IIIA	GMDSS (SAILOR)	A2	
	2	Agats	IIIA	GMDSS (JRC)	A2	
	3	Bade	IVA			○

Coastal Radio Station

Component 3

Navigation Vessels

Navigation Vessels

● **Supporting Facilities and Vessels for Aids to Navigation**

Office, Work-shop, Buoy-base, Storehouse, Jetty

	2002		2019
・Office	10,148 ㎡	⇒	11,545 ㎡
・Work-shop	6,831 ㎡	⇒	7,429 ㎡
・Buoy-base	5,038 ㎡	⇒	19,186 ㎡
・Storehouse	3,452 ㎡	⇒	4,426 ㎡
・Jetty	383 m	⇒	3,146 m

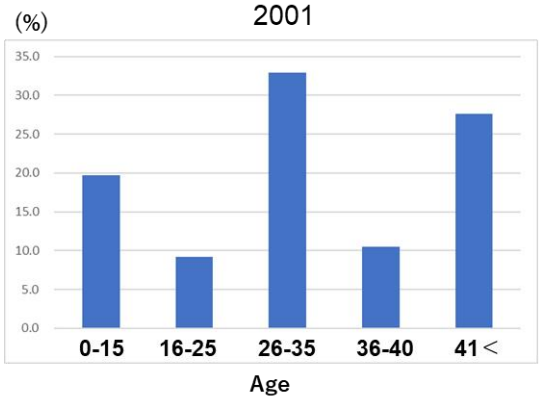
Comparing only DISNAVs that responded to the Questionnaire Survey

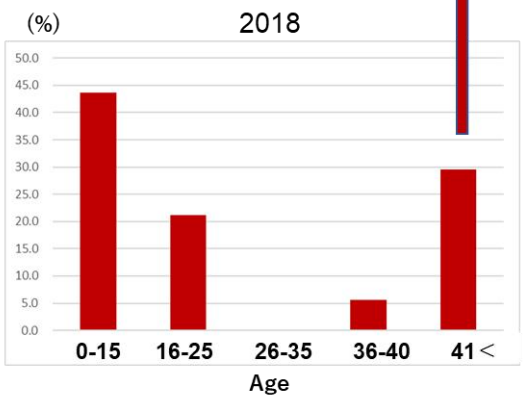
Vessels for Aids to Navigation

	2002		2019
・Buoy-tender	6	⇒	23
・Aids-tender	56	⇒	30
・Inspection Boat	12	⇒	18

Age of Vessels

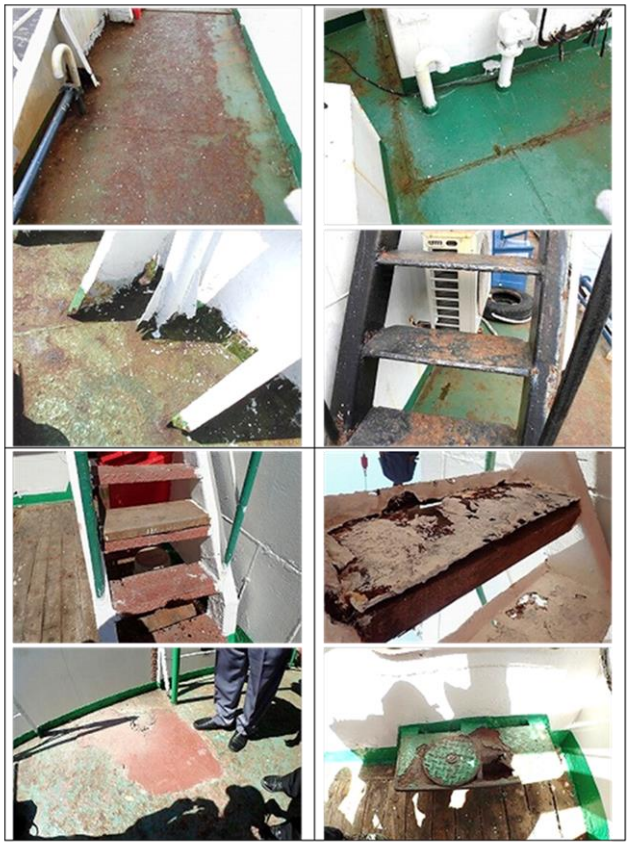
Range of Age	As of May, 2001		As of Oct., 2018	
	Units	Percentage (%)	Units	Percentage (%)
0 - 15	15	19.7	31	43.7
16 - 25	7	9.2	15	21.1
26 - 35	25	32.9	0	0
36 - 40	8	10.5	4	5.6
41＞	21	27.6	21	29.6
	76		71	





※ 15 Buoy Tenders were built in 2016 and 2017.

Floor and Step of Aids Tender



- Mission -

a. Installation and replacement of buoys

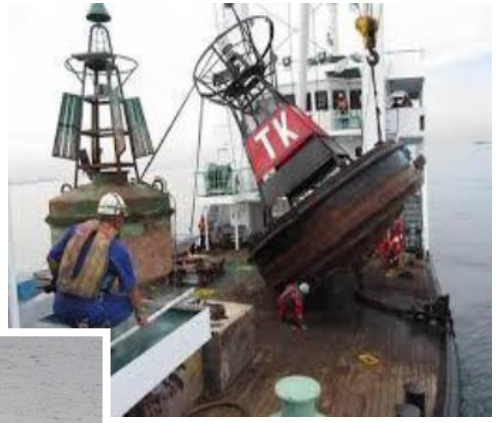
b. Inspection for the equipment

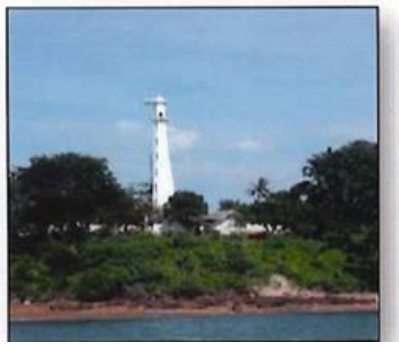
c. Maintenance of AtoN

d. Supply of ***fuel and goods*** for maintenance to the sites

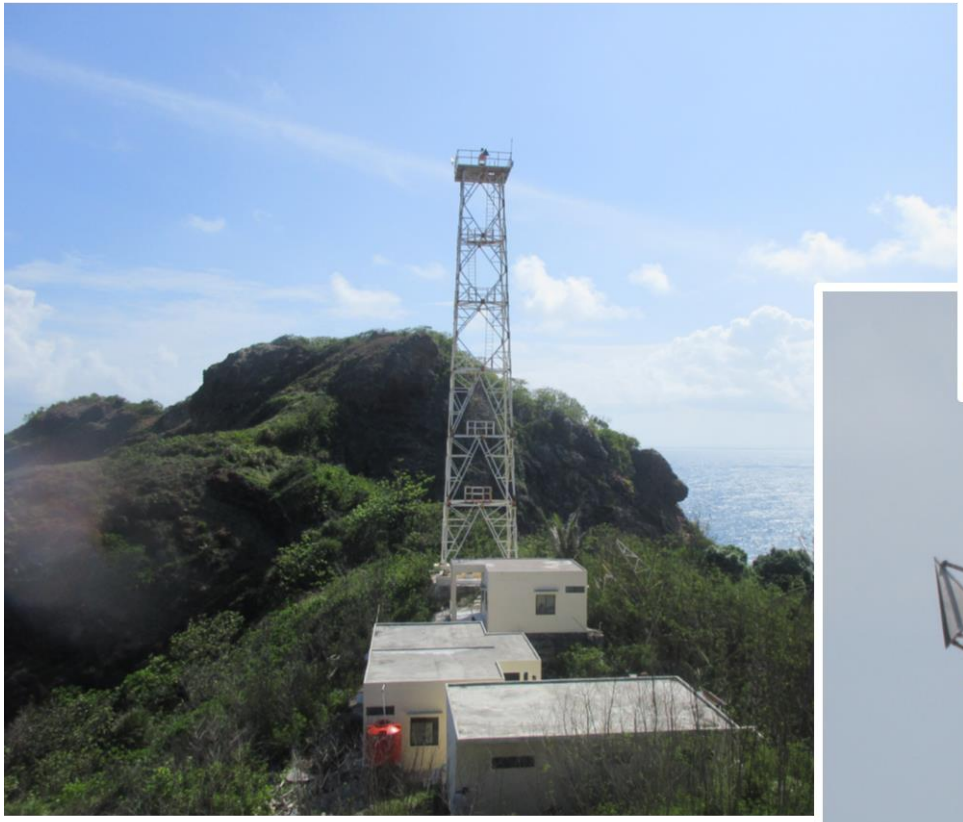
e. ***Transportation*** for the staff to the sites

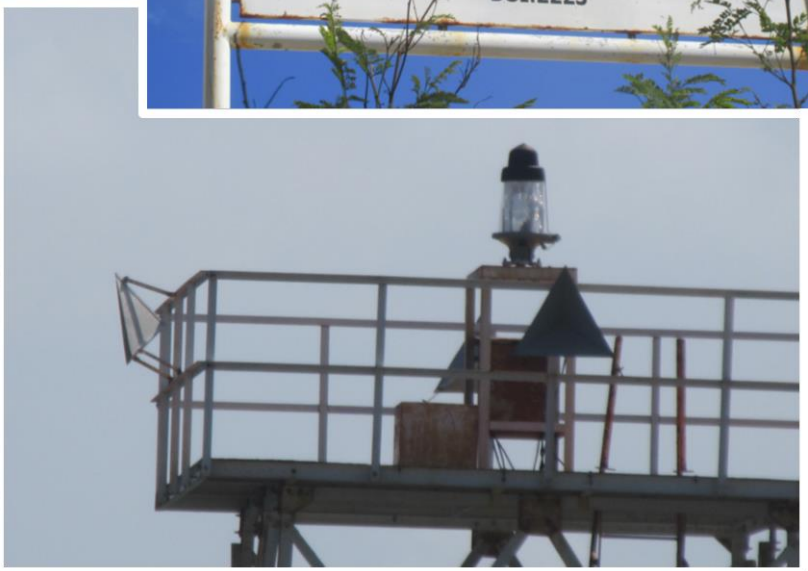
f. Search and Rescue (SAR) operation





Sekatung Lighthouse in Natuna

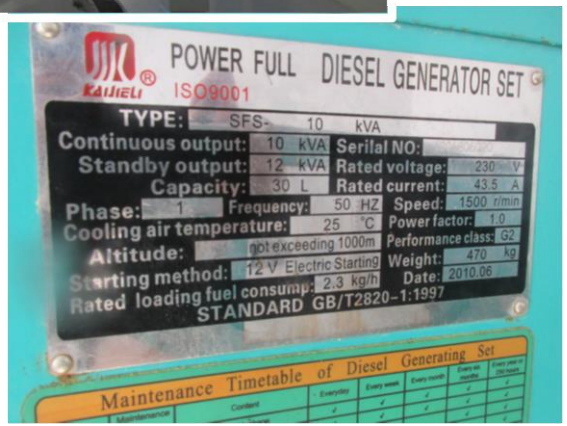




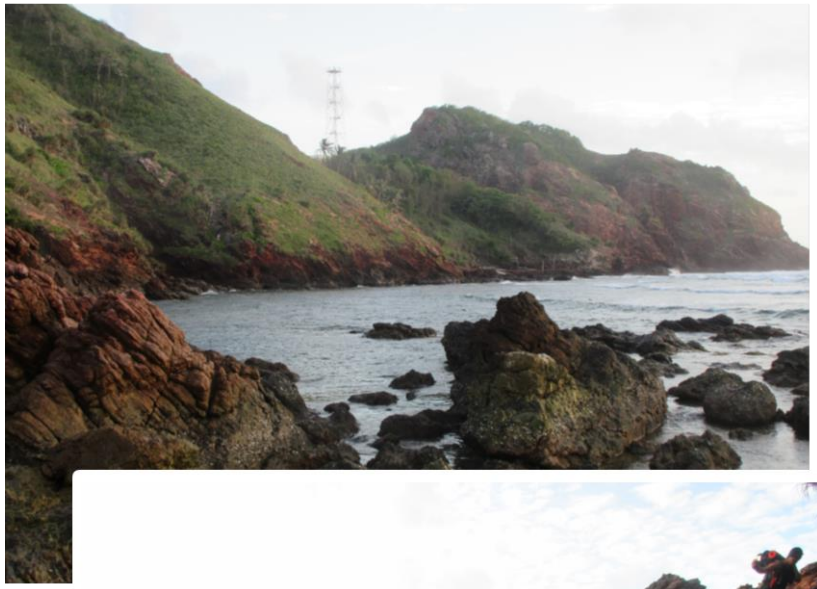
LED Lantern with Solar system

Unmanned Lighthouse

Empty inside



Unused Engine Generator



Ruined a landing place ((old wharf)

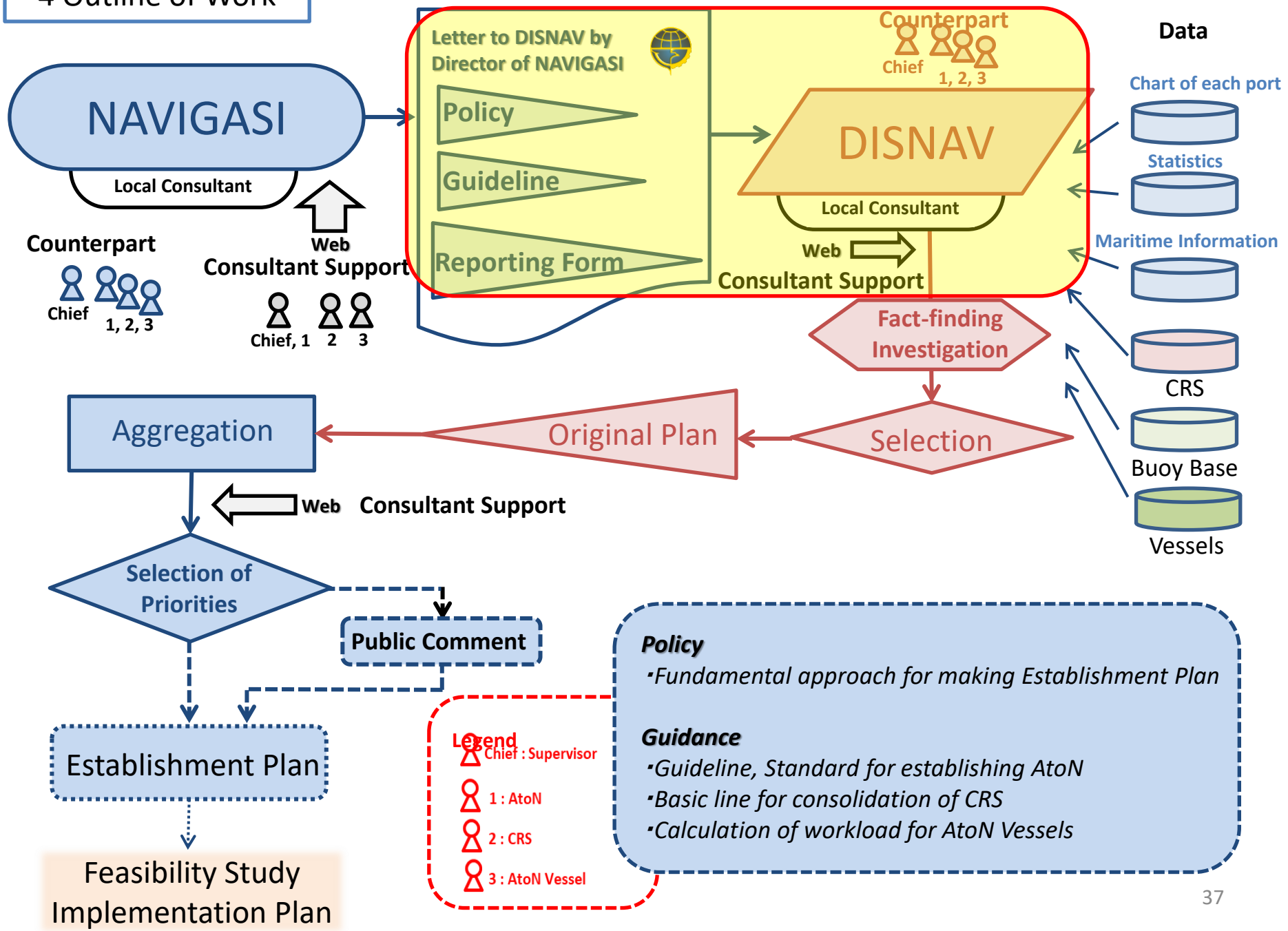
Outline of Work

Excerpt from Annex 4 (TOR for the additional activities)

1. Preparation of necessary documents such as Policy, Guideline, and Questionnaire by NAVIGASI with assistance of the Consultants
2. Guidance to DISNAV by NAVIGASI and Consultants
3. Data collection by each DISNAV with supports from Consultants
4. Preparation of the Draft Establishment Plan by each DISNAV with the support from Consultants
5. Formulation of the draft Master Plan by NAVIGASI and Consultants

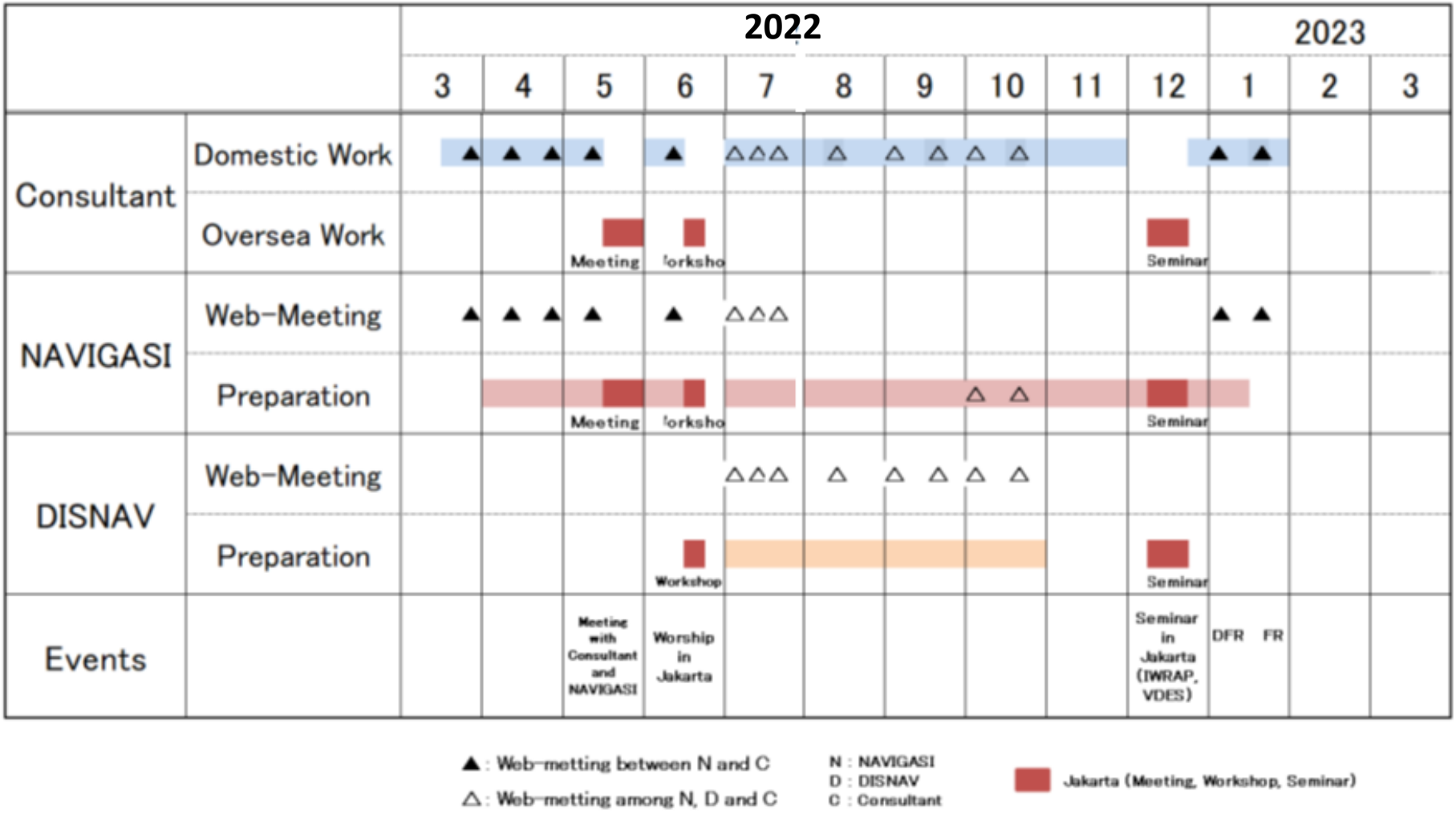
- **Preparation of documents and Reporting forms**
- **Collection and Summarization of data and information**
- **Compilation of summarized plan**

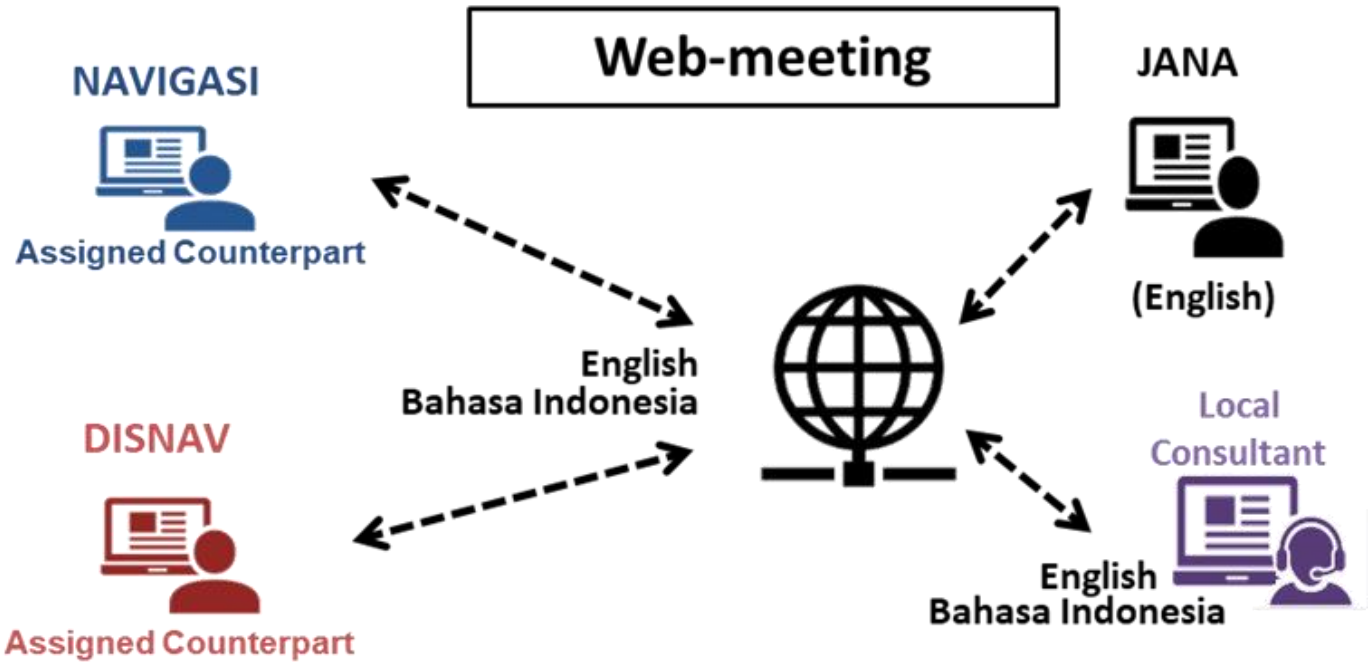
The work flow for The Establishment Plan



5 Schedule

Schedule for Activities





Local Staff
(Dhana, Apsari)

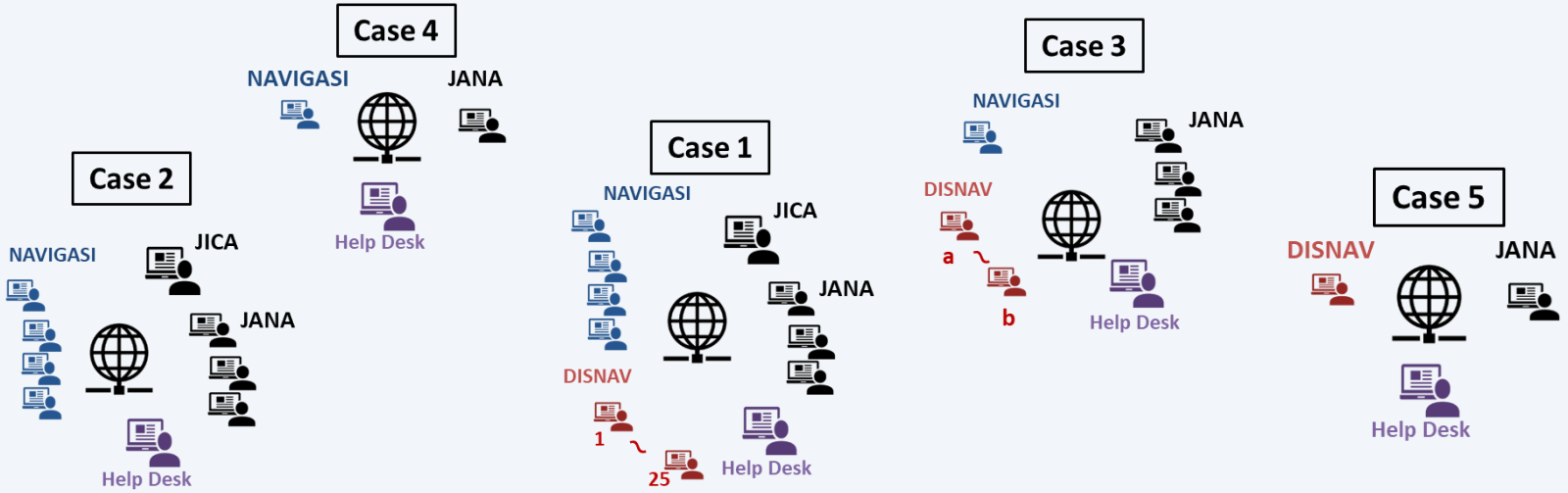
Help Desk

Local Consultant
(PT. TOMO & SON)

- Interpretation
- Documentation
- Translation of documents
- Data Compilation

Schedule for Activities

2022										2023		
3	4	5	6	7	8	9	10	11	12	1	2	3
		Meeting	Workshop						Seminar			
		NAVIGASI		DISNAV				NAVIGASI				
		Preparation		Data Collection				Data Compilation				
▲ Web	▲ Web	▲ Web	▲ Web	△ Web	△ Web	△ Web	▲ Web		▲ Web	▲ Web		
C-2	C-4	C-2 C-4	C-2 C-4	C-1 C-3	C-3 C-5	C-5	C-3 C-4		C-2 C-4	C-2		



Local Staff & Consultant

Counterpart (Consultant)

- **Component 1** (Aids to Navigation and VTS, including “Ships Routing)
  Yoku SANTO (JANA)

- **Component 2** (Coastal Radio Station)
  Goro TSUKAKOSHI (JANA)

- **Component 3 (**Vessels for Aids to Navigation)
  Hajime KOGA (JANA)

Local Staff

- **Mr. Dhana Mulyana**
- **Ms. Apsari Putri**

Local Consultant

PT. TOMO & SON

Name List of Counterpart

			Field	Supervisor	AtoN	CRS	Vessel	Local-staff
	Consaltant		Name	Yoku SANTO	Yoku SANTO	oro TUKAKOSH	Hajime KOGA	Dhana Mulyana
	JANA		e-mail	santo@jana.or.jp	santo@jana.or.jp	goro@jana.or.jp	koga@jana.or.jp	dhana.jananet@gmail.com
DISNAV	1	Sabang	Title					
			Name					
			e-mail					
	2	Belawan	Title					
			Name					
			e-mail					
	3	Sibolga	Title					
			Name					
			e-mail					
	4	Dumai	Title					
			Name					
			e-mail					
	5	Tanjung Pinang	Title					
			Name					
			e-mail					
	6	Teluk Bayur	Title					
			Name					
			e-mail					
	7	Palembang	Title					
			Name					
			e-mail					
	8	Tanjung Priok	Title					
			Name					
			e-mail					
	9	Semarang	Title					
			Name					
			e-mail					
	10	Cilacap	Title					
			Name					
			e-mail					
	11	Surabaya	Title					
			Name					
			e-mail					
	12	Benoa	Title					
			Name					
			e-mail					
	13	Kupang	Title					
			Name					
			e-mail					

Name List of Counterpart

			Field	Supervisor	AtoN	CRS	Vessel
	Headquarters		Name				
	NAVIGASI		e-mail				
DISNAV	14	Pontianak	Title				
			Name				
			e-mail				
	15	Banjarmasin	Title				
			Name				
			e-mail				
	16	Samarinda	Title				
			Name				
			e-mail				
	17	Tarakan	Title				
			Name				
			e-mail				
	18	Makassar	Title				
			Name				
			e-mail				
	19	Kendar	Title				
			Name				
			e-mail				
	20	Bitung	Title				
			Name				
			e-mail				
	21	Ambon	Title				
			Name				
			e-mail				
	22	Tual	Title				
			Name				
			e-mail				
	23	Sorong	Title				
			Name				
			e-mail				
	24	Jayapura	Title				
			Name				
			e-mail				
	25	Merauke	Title				
			Name				
			e-mail				

Lampiran 3.6 -4

Presentation (AtoN)

Indonesia G20 Presidency
Recover Together
Recover Stronger

G20 INDONESIA 2022

KEMENTERIAN PERHUBUNGAN REPUBLIK INDONESIA
DIREKTORAT JENDERAL PERHUBUNGAN LAUT
DIREKTORAT KENAVIGASIAN

SEMINAR

THE PROJECT FOR REVIEW OF THE STUDY FOR MARITIME TRAFFIC SAFETY SYSTEM DEVELOPMENT PLAN

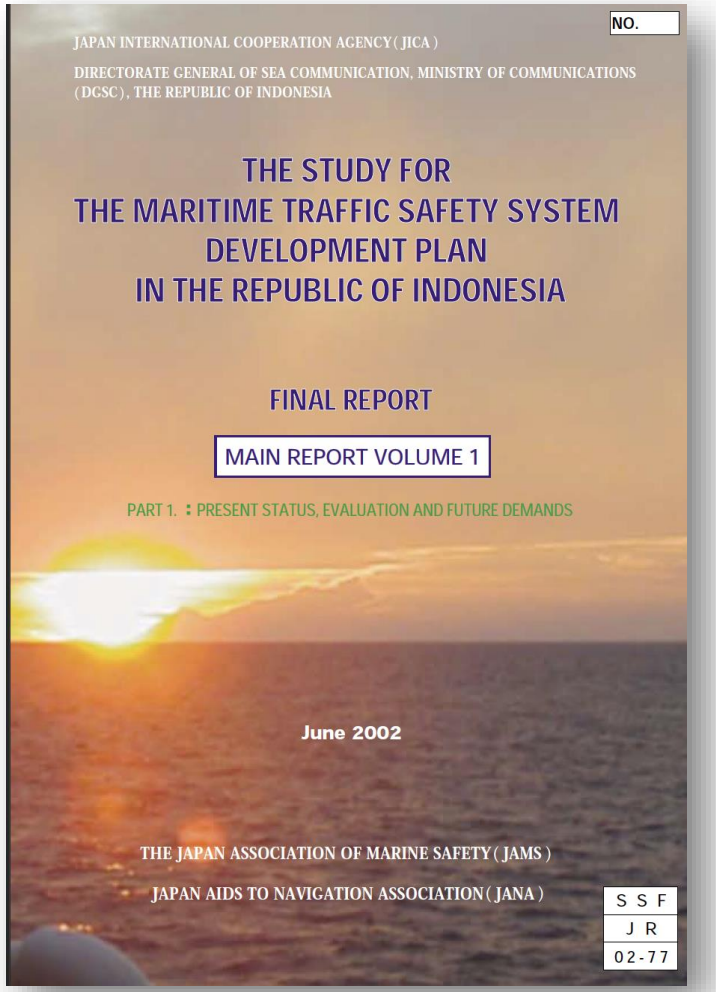
JAKARTA, 16 JUNI 2022

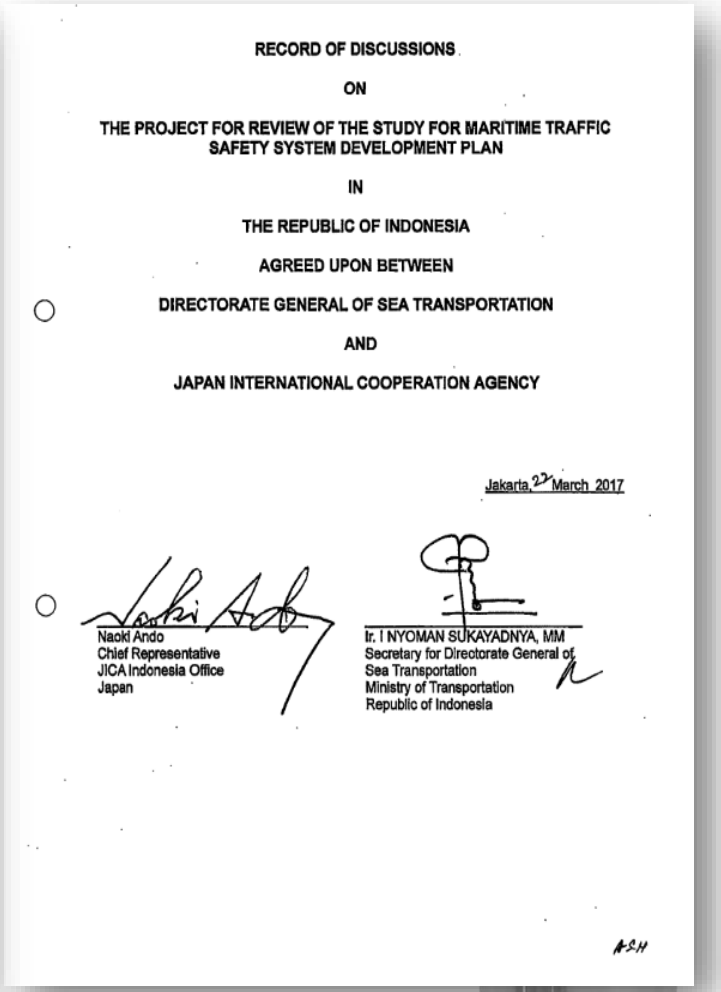
LATAR BELAKANG

- Pada tahun 2002, DJPL telah melakukan Studi Rencana Pengembangan Sistem Keselamatan Lalu Lintas Maritim (*Maritime Traffic Safety System Development Plan*) yang berisi Rencana Induk sampai dengan tahun 2020 dan Rencana Jangka Pendek sampai dengan tahun 2007 bekerjasama dengan JICA.

- Pada tahun 2017, berdasarkan Record of Discussion yang ditandatangani oleh DGST dan JICA, disepakati pelaksanaan update dan review dari hasil *The Study for Maritime Traffic Safety Development Plan di tahun 2002,* termasuk untuk melaksanakan penyusunan Masterplan Kenavigasian sampai dengan tahun 2040.

- Pelaksanaan kegiatan tersebut berbentuk *in kind contribution* di bawah kegiatan *Technical Cooperation for Development Planning (TCDP)* antara JICA dan Pemerintah Indonesia, serta dilaksanakan dalam kerangka Kerjasama *Colombo Plan Technical Cooperation Scheme* antara Indonesia dan Jepang.





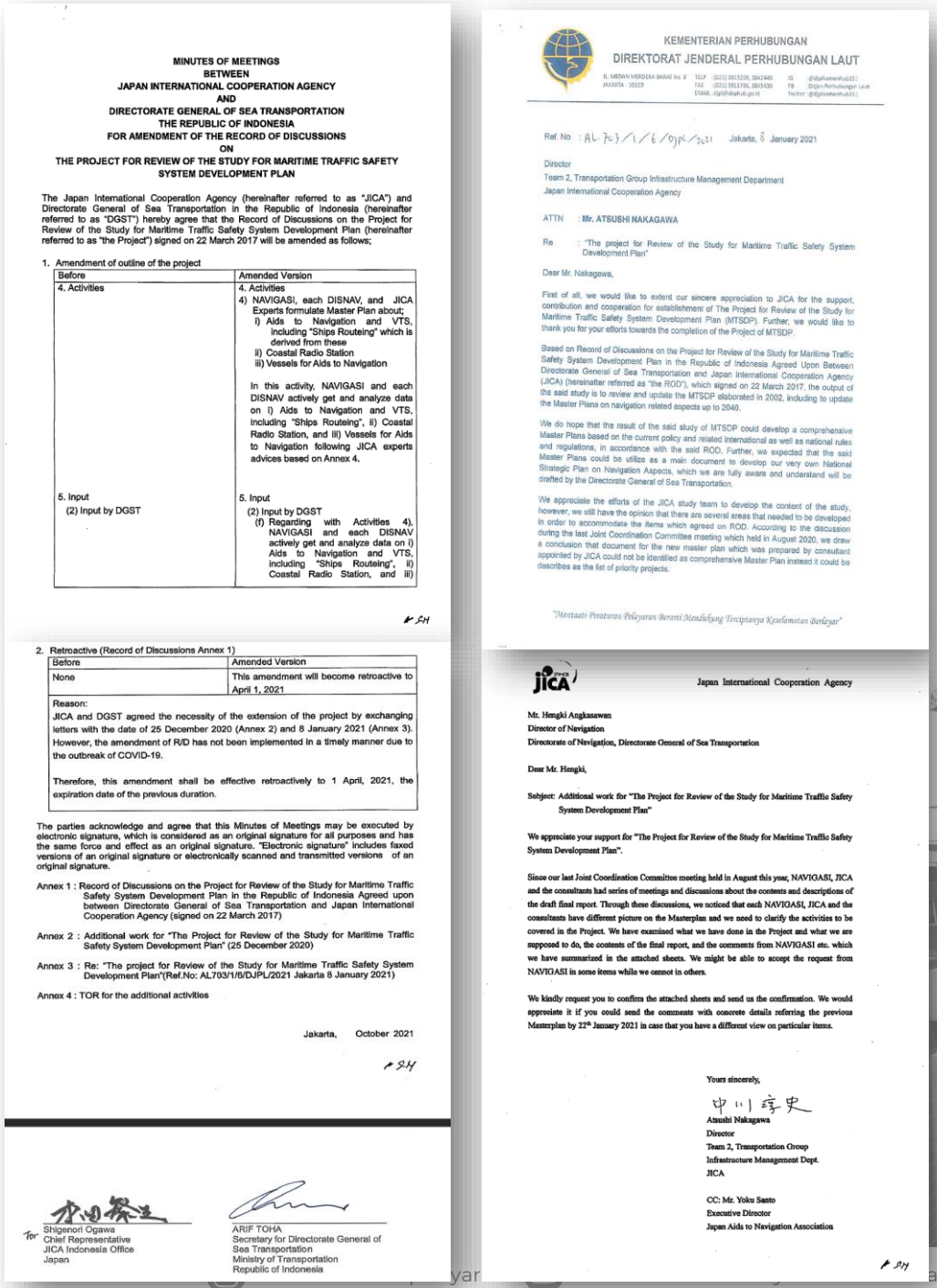
PELAKSANAAN KEGIATAN REVIEW STUDY

- Sebagai tindak lanjut telah ditandatangani Minutes of Meetings antara Sesditjen Hubla dan Chief Reprensentative JICA Indonesia, untuk merevisi *Record of Discussion (ROD) on the The Project for the Review of the Study for Maritime Traffic Safety System Development Plan.*

- Revisi / amandemen berfokus pada perpanjangan waktu studi yang semula berakhir pada tahun 2021 menjadi tahun 2023 serta penekanan terkait dengan lingkup kegiatan yang telah mengakomodir masukan dari Ditjen Hubla.

- Lebih lanjut diperlukan peran serta dari Direktorat Kenavigasian dan Distrik Navigasi terhadap studi yang dilaksanakan oleh JICA agar dapat dilaksanakan secara komprehensif.

- Adapun pada pertengahan Februari 2022, telah dilaksanakan kick off meeting kegiatan studi tersebut.



MINUTES OF MEETINGS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
DIRECTORATE GENERAL OF SEA TRANSPORTATION
THE REPUBLIC OF INDONESIA
FOR AMENDMENT OF THE RECORD OF DISCUSSIONS
ON
THE PROJECT FOR REVIEW OF THE STUDY FOR MARITIME TRAFFIC SAFETY SYSTEM DEVELOPMENT PLAN

The Japan International Cooperation Agency (hereinafter referred to as "JICA") and Directorate General of Sea Transportation in the Republic of Indonesia (hereinafter referred to as "DGST") hereby agree that the Record of Discussions on the Project for Review of the Study for Maritime Traffic Safety System Development Plan (hereinafter referred to as "the Project") signed on 22 March 2017 will be amended as follows;

1. Amendment of outline of the project

Before	Amended Version
4. Activities	4. Activities 4) NAVIGASI, each DISNAV, and JICA Experts formulate Master Plan about; i) Aids to Navigation and VTS, including "Ships Routeing" which is derived from these ii) Coastal Radio Station iii) Vessels for Aids to Navigation In this activity, NAVIGASI and each DISNAV actively get and analyze data on i) Aids to Navigation and VTS, including "Ships Routeing", ii) Coastal Radio Station, and iii) Vessels for Aids to Navigation following JICA experts advices based on Annex 4.
5. Input (2) Input by DGST	5. Input (2) Input by DGST (f) Regarding with Activities 4), NAVIGASI and each DISNAV actively get and analyze data on i) Aids to Navigation and VTS, including "Ships Routeing", ii) Coastal Radio Station, and iii)

2. Retroactive (Record of Discussions Annex 1)

Before	Amended Version
None	This amendment will become retroactive to April 1, 2021
Reason: JICA and DGST agreed the necessity of the extension of the project by exchanging letters with the date of 25 December 2020 (Annex 2) and 8 January 2021 (Annex 3). However, the amendment of R/D has not been implemented in a timely manner due to the outbreak of COVID-19. Therefore, this amendment shall be effective retroactively to 1 April, 2021, the expiration date of the previous duration.	

The parties acknowledge and agree that this Minutes of Meetings may be executed by electronic signature, which is considered as an original signature for all purposes and has the same force and effect as an original signature. "Electronic signature" includes faxed versions of an original signature or electronically scanned and transmitted versions of an original signature.

Annex 1 : Record of Discussions on the Project for Review of the Study for Maritime Traffic Safety System Development Plan in the Republic of Indonesia Agreed upon between Directorate General of Sea Transportation and Japan International Cooperation Agency (signed on 22 March 2017)

Annex 2 : Additional work for "The Project for Review of the Study for Maritime Traffic Safety System Development Plan" (25 December 2020)

Annex 3 : Re: "The project for Review of the Study for Maritime Traffic Safety System Development Plan"(Ref.No: AL703/1/6/DJPL/2021 Jakarta 8 January 2021)

Annex 4 : TOR for the additional activities

Jakarta, October 2021

For Shigenori Ogawa
Chief Representative
JICA Indonesia Office
Japan

ARIF TOHA
Secretary for Directorate General of Sea Transportation
Ministry of Transportation
Republic of Indonesia

KEMENTERIAN PERHUBUNGAN
DIREKTORAT JENDERAL PERHUBUNGAN LAUT

Ref. No : AL.703/1/6/DJPL/2021 Jakarta, 8 January 2021

Director
Team 2, Transportation Group Infrastructure Management Department
Japan International Cooperation Agency

ATTN : Mr. ATSUSHI NAKAGAWA

Re : "The project for Review of the Study for Maritime Traffic Safety System Development Plan"

Dear Mr. Nakagawa,

First of all, we would like to extent our sincere appreciation to JICA for the support, contribution and cooperation for establishment of The Project for Review of the Study for Maritime Traffic Safety System Development Plan (MTSDP). Further, we would like to thank you for your efforts towards the completion of the Project of MTSDP.

Based on Record of Discussions on the Project for Review of the Study for Maritime Traffic Safety System Development Plan in the Republic of Indonesia Agreed Upon Between Directorate General of Sea Transportation and Japan International Cooperation Agency (JICA) (hereinafter referred as "the ROD"), which signed on 22 March 2017, the output of the said study is to review and update the MTSDP elaborated in 2002, including to update the Master Plans on navigation related aspects up to 2040.

We do hope that the result of the said study of MTSDP could develop a comprehensive Master Plans based on the current policy and related international as well as national rules and regulations, in accordance with the said ROD. Further, we expected that the said Master Plans could be utilize as a main document to develop our very own National Strategic Plan on Navigation Aspects, which we are fully aware and understand will be drafted by the Directorate General of Sea Transportation.

We appreciate the efforts of the JICA study team to develop the content of the study, however, we still have the opinion that there are several areas that needed to be developed in order to accommodate the items which agreed on ROD. According to the discussion during the last Joint Coordination Committee meeting which held in August 2020, we draw a conclusion that document for the new master plan which was prepared by consultant appointed by JICA could not be identified as comprehensive Master Plan instead it could be describes as the list of priority projects.

"Mematuhi Peraturan Pelayaran Berarti Mendukung Terciptanya Keselamatan Berlayar"

Japan International Cooperation Agency

Mr. Hengki Angkasawan
Director of Navigation
Directorate of Navigation, Directorate General of Sea Transportation

Dear Mr. Hengki,

Subject: Additional work for "The Project for Review of the Study for Maritime Traffic Safety System Development Plan"

We appreciate your support for "The Project for Review of the Study for Maritime Traffic Safety System Development Plan".

Since our last Joint Coordination Committee meeting held in August this year, NAVIGASI, JICA and the consultants had series of meetings and discussions about the contents and descriptions of the draft final report. Through these discussions, we noticed that each NAVIGASI, JICA and the consultants have different picture on the Masterplan and we need to clarify the activities to be covered in the Project. We have examined what we have done in the Project and what we are supposed to do, the contents of the final report, and the comments from NAVIGASI etc. which we have summarized in the attached sheets. We might be able to accept the request from NAVIGASI in some items while we cannot in others.

We kindly request you to confirm the attached sheets and send us the confirmation. We would appreciate it if you could send the comments with concrete details referring the previous Masterplan by 22th January 2021 in case that you have a different view on particular items.

Yours sincerely,

Atsushi Nakagawa
Director
Team 2, Transportation Group
Infrastructure Management Dept.
JICA

CC: Mr. Yoku Santo
Executive Director
Japan Aids to Navigation Association

TAHAPAN DAN KOMPONEN KEGIATAN

Tahapan Kegiatan:

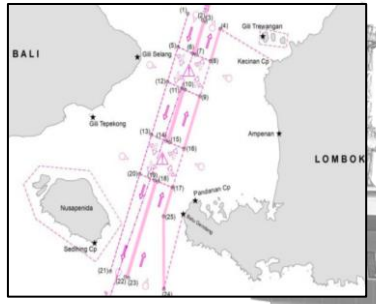
- Preparation necessary documents such as Draft of Policy, Guideline and Questionnaire by DITNAV and Consultants;
- Guidance to DISNAV by DITNAV and Consultants
- Data collection by DISNAV with supports from Consultants
- Preparation of the Draft Establishment Plan by Consultants
- Formulation of the draft Master Plan by Consultants

Lingkup Kegiatan

Komponen 1 : Sarana Bantu Navigasi-Pelayaran (SBNP) dan VTS termasuk Sistem Rute Alur-Pelayaran;

Komponen 2 : Stasiun Radio Pantai (SROP)

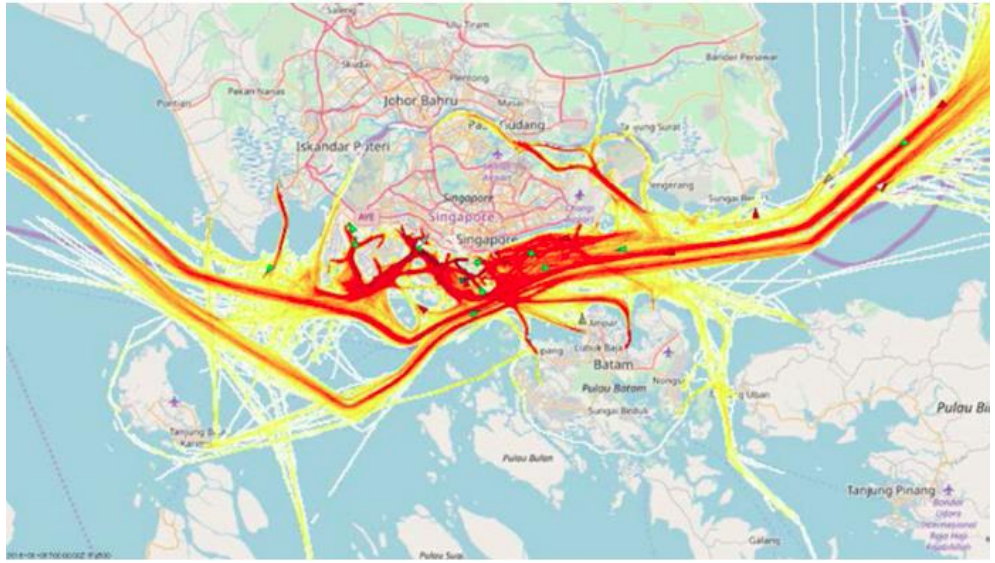
Komponen 3 : Kapal Negara Kenavigasian



STRATEGI DAN KEBIJAKAN

Dalam rangka keselamatan pelayaran yang aman dan efisien, pembangunan **Sarana Bantu Navigasi-Pelayaran (SBNP) dan penyediaan informasi maritim** memainkan peran yang sangat penting.

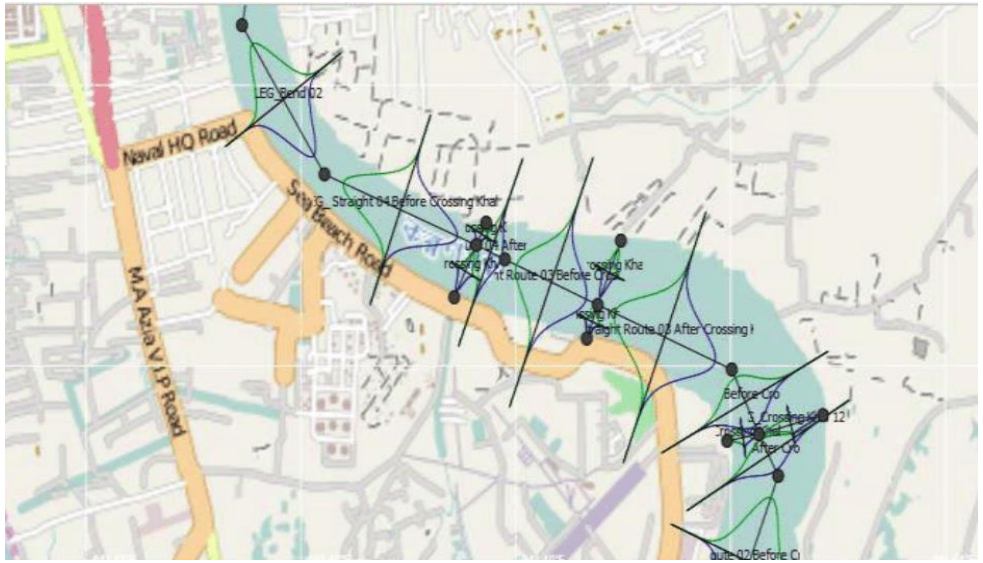
RISK ASSESSMENT



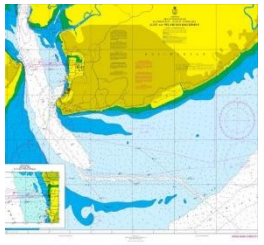
Untuk mengevaluasi validitas pada desain sistem rute (penyelenggaraan Alur-Pelayaran), penempatan/pengembangan Sarana Bantu Navigasi-Pelayaran dan VTS

IALA Waterway Risk Assessment Program (IWRAP)

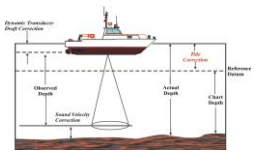
Menggunakan data AIS akan digunakan untuk menganalisa pergerakan kapal dan kemungkinan terjadinya kecelakaan.



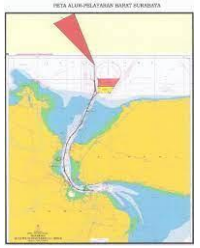
STRATEGI SISTEM RUTE



Justifikasi Perencanaan Sistem Rute (Contoh : Alur-Pelayaran Masuk Pelabuhan, Alur-Pelayaran Umum dan Perlintasan serta Masukan/Permintaan dari stakeholder)



Survey Hidro-Oseanografi, Pengumpulan dan Evaluasi Data Sekunder (Contoh : RIPN, RIP, Data Traffic, RZWP3K, DLL)



Perencanaan dan Analisa Risiko Desain Alur-Pelayaran, Sistem Rute, Tata Cara Berlalu Lintas, dan Daerah Labuh Kapal Sesuai Dengan Kepentingannya

STRATEGI PEMBANGUNAN SBNP

Justifikasi Pembangunan SBNP (Contoh : Lokasi Pelabuhan atau Masukan/Permintaan dari stakeholder)

Survey Penentuan Lokasi SBNP (Contoh : Penetapan Alur)

Detail Engineering Design (DED) SBNP

GUIDELINE

KATEGORI AREA PERAIRAN

1. Perairan lepas pantai;
2. Perairan pantai;
3. Area perairan memiliki traffic yang padat;
4. Pelabuhan (area perairan yang terbatas);
5. Perairan di sungai.

KATEGORI

a. VISUAL SBNP

*Referensi

Jarak terlihat yang direkomendasikan

- Coastal aid : 12 NM atau lebih
- Alur/Penanda Berbahaya, Penanda indikasi

b. Radio AtoN

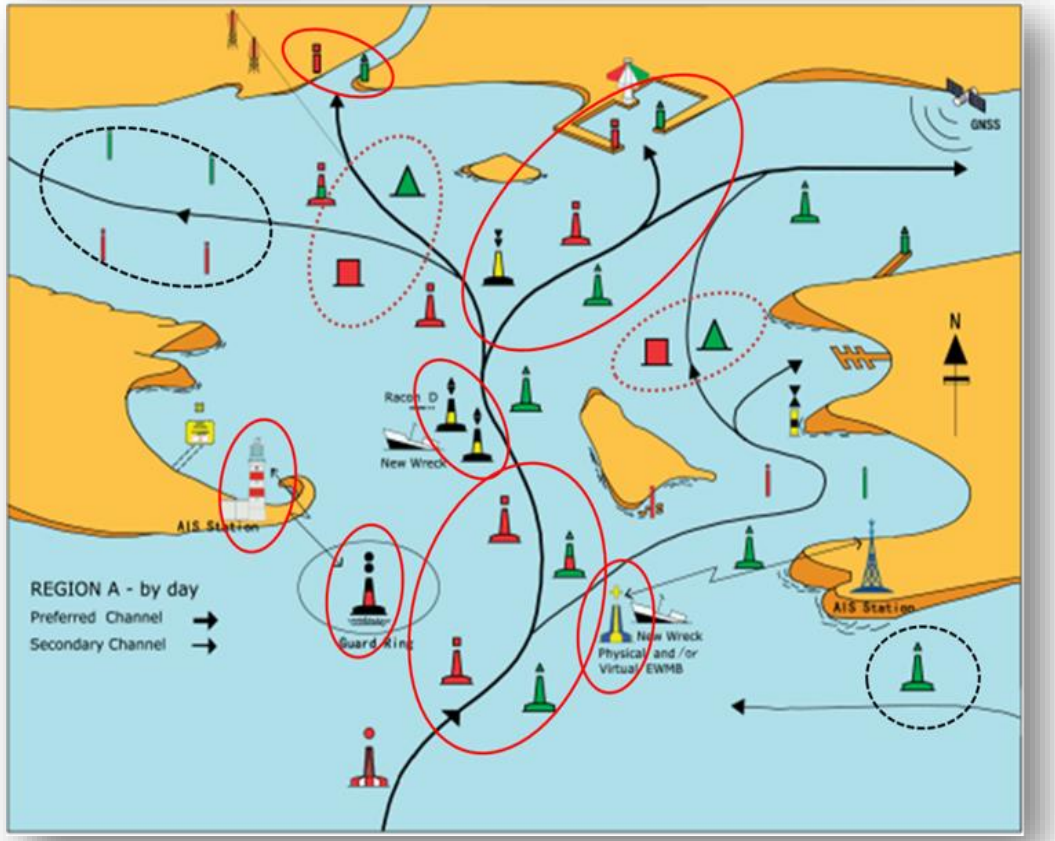
(termasuk sistim penyediaan informasi)

*Referensi

VTS, AIS AtoN, Radar-beacon, Signal station

KLASIFIKASI

Explanatory Figure for Classification of significance for the installation



KATEGORI 1
VITAL

- Pendaratan (Landfalls)
- Alur utama
- Bahaya

KATEGORI 2
PENTING

- Alur sekunder
- Penanda tambahan dari rute utama

KATEGORI 3
DIPERLUKAN

- Membantu/Berguna untuk navigasi pelayaran

PENEMPATAN SBNP

1. PENEMPATAN PADA AWAL ALUR-PELAYARAN (PERAIRAN AMAN)

2. PENEMPATAN PADA TITIK DIMANA:
   - Kapal harus mengubah arahnya;
   - Batas alur-pelayaran;
   - Area perairan dangkal dan batu, atau bahaya navigasi lainnya;
   - Alur berpotongan atau bercabang.

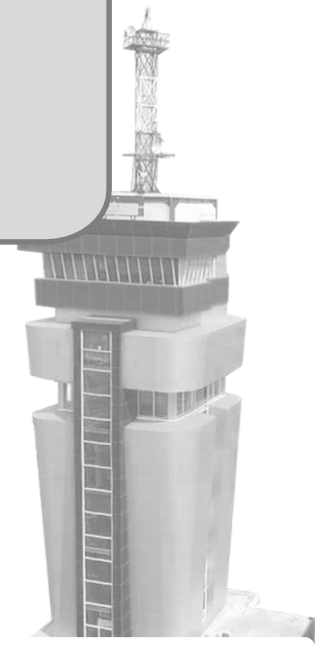
3. BAGAN PEMISAH (TSS)
   Navigator harus dapat melihat dengan jelas konstruksi SBNP di perairan.

STRATEGI PEMBANGUNAN VTS

Pra Feasibility Study dan Feasibility Study

- *Preliminary Assessment, Feasibility dan Desain;*
- *Analisa Risiko dan Cost Benefit.*

VTS Establishment



KLASIFIKASI V T S

Diklasifikasikan berdasarkan Tujuan dan Operasi tertentu

a. INS : INFORMATION SERVICE SYSTEM
(Penyediaan Informasi)

b. TOS : TRAFFIC ORGANIZATION/ MANAGEMENT SYSTEM
(Untuk menghindari kemacetan)

c. NAS : NAVIGATIONAL ASSISTANCE SERVICE
(Membantu kapal lebih efisien dalam bernavigasi)

d. OTHER : SURVEILLANCE, ALLIED SERVICE
(Keamanan, kerjasama/dukungan)

VESSEL TRAFFIC SERVICES

1. **VTS Area (Type of VTS)**
   - Coastal waters (Coastal VTS)
   - Port/Harbor (Port VTS)
   - Inland Water/River
2. **Provided Information**
   - Traffic
   - Weather
   - Tidal
   - Berthing
   - Allied services
3. **Facilities**
   - Radar
   - AIS
   - Meteorological Instrument
   - Radio Communication (VHF)
   - Traffic/Tidal Signal
   - Other sensors

OUTPUT

Meningkatkan keselamatan pelayaran pada wilayah perairan Pelabuhan dan teluk

Transformasi pelabuhan yang memiliki sistem rute yang aman dan selamat

Tujuannya adalah pelabuhan yang memiliki sistem rute digunakan kapal dalam bernavigasi dengan aman dan efisien

TERIMA KASIH

وَسَلَامٌ عَلَيْكُمْ وَرَحْمَةُ اللهِ وَبَرَكَاتُهُ

Direktorat Jenderal Perhubungan Laut
Kementerian Perhubungan

Direktorat Kenavigasian

Gedung Karya Lantai 21
Kementerian Perhubungan
Jl. Medan Merdeka Barat no. 8
Jakarta Pusat 10110

https://i-motion.dephub.go.id/
http://hubla.dephub.go.id:82/e-licensing
telkompel.ditnav@kemenhub.go.id
telekomunikasi.pelayaran
Telekomunikasi Pelayaran - Direktorat Kenavigasian