

資料 4. 討議議事録(M/D)

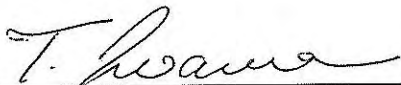
**Minutes of Discussions
on the Basic Design Study
on the Project for Improvement of the Meteorological Radar System
in the Philippines**

Referring to the results of Preparatory Study conducted in December 2007, the Government of Japan (hereinafter referred to as "the GOJ") decided to conduct a Basic Design Study on the Project for Improvement of the Meteorological Radar System (hereinafter referred to as "the Project") in the Philippines (hereinafter referred to as "the Philippines") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").


JICA sent to the Philippines the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Toshiyuki IWAMA, Director, Project Study Division I, Grant Aid and Loan Support Department, JICA and is scheduled to stay in the country from June 26 to August 03, 2008.

The Team held discussions with the officials concerned of the Government of the Philippines (hereinafter referred to as "GOP"). As a result of discussions, both parties confirmed the main items described in the attached sheets.

Quezon City, July 09, 2008



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ATTACHMENT

1. Objective of the Project

The objective of the Project is to protect lives and properties of the people and mitigate the devastation caused by tropical cyclones and other severe weather phenomena through the continuous and timely dissemination of accurate forecasts, warnings and advisories to the public, disaster management agencies and mass media by enhancing the tropical cyclone monitoring capability of PAGASA-DOST.

2. Responsible and Implementing organization

2-1) The responsible organization

The responsible organization is Department of Science and Technology (DOST).

2-2) The implementing organization

The implementing organization is the Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA-DOST).

2-3) Organization charts of organization

The respective organization charts are shown in **Annex-1**.

3. Project title

Both sides agreed to rename the Project into the "Project for Improvement of the Meteorological Radar System in the Philippines" from the previous title "Project for Enabling Communities for the Adoption of Disaster Prevention and Preparedness Measures in Areas Prone to Floods and Rain-induced Landslides through Improvement of the Meteorological Radar System in the Philippines"

4. Project sites

The proposed project sites are Virac in Catanduanes Province, Aparri in Cagayan Province, Guiuan in Eastern Samar Province and Weather and Flood Forecasting Center (WFFC) in Quezon City. Location of the Project sites and present detection range of the existing radar systems are shown in **Annex-2**.

5. Items requested by the Philippines side

After discussions with the Team, the items described in **Annex-3** were confirmed as the final requests by the Philippines side. JICA will assess the appropriateness of the request and will report the findings to the Government of Japan.

6. Japan's Grant Aid Scheme

6-1. The Philippines side understand the Japan's Grant Aid scheme explained by the Team, as described in **Annex 4-1**.

6-2. The Philippines side will take the necessary measures and allocate the necessary budget properly, as described in **Annex 4-2**, for the smooth implementation of the Project, as a condition for the Japan's Grant Aid to be implemented.

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7. Schedule of the Study

7-1. The Consultant members of the Team will proceed to further studies in the Philippines until August 03, 2008.

7-2. JICA will prepare the draft report in English and dispatch a mission in order to explain its contents in October 2008.

7-3. In case that the contents of the report are accepted in principle by the GOP, JICA will complete the final report and send it to the Philippines by the end of December, 2008.

8. Other Relevant Issues

8-1 Priority of the Project sites

Both sides agreed that the priority may be changed in accordance with the following conditions.

- 1) Climate condition of each proposed site (especially precipitation) for construction and installation works
- 2) Operation of at least 2 existing/new radar systems for tropical cyclone monitoring, during the Project implementation

However, the Team indicated that the priority of the Project sites (1. Virac in Catanduanes Province, 2. Aparri in Cagayan Province and 3. Guiuan in Eastern Samar Province) indicated in the Minutes of Discussion of the Preparatory Study signed in December 2007 would be given maximum consideration for preparation of the Project implementation schedule.

The order of Project implementation will be informed to the PAGASA-DOST in the Explanation of draft of Basic Design Study in October 2008.

8-2 Selection of the Doppler radar transmitter

As a consequence of comparison between Klystron and Solid State Power Amplifier (SSPA) raised by PAGASA-DOST during the Preparatory Study, the Team recommended SSPA due to the following advantages; cost effectiveness, easy replacement of amplifier unit, low power consumption, long estimate of life time, narrow transmitting spectrum (band width), stable transmitting output power, none preheating time, etc. The Philippines side agreed with the recommendation of the Team.

8-3 Technical confirmation of the VSAT system

The Japanese side requested the Philippines side that, in order to maximize the effect of installing the radar systems, it is crucial that the observed data from each radar station be able to be transmitted and analyzed at the Weather and Flood Forecasting Center (WFFC). However, the Philippines side explained that the existing VSAT system to be transferred from the Department of Agriculture may have problems in future usage.

Therefore, for assurance of establishment of national radar observation network, the Philippines side requested the inclusion of a new VSAT system due to several factors and conditions.

The Philippines side shall technically confirm the following items of the VSAT system transferred from the Department of Agriculture to be appropriately operational for the Project and officially inform of the result of the confirmation supported by the letter of availability of spare parts from the manufacturer to JICA



Philippines office during the stay of the Team in the Philippines.

- All units (Indoor Unit, Outdoor Unit, frame relay, modem, router, etc.) operational between the Hub system in Quezon City and the remote site(s) of Department of Agriculture.
- Availability of the manufacturer of the VSAT system
- Availability of spare parts

The Team will assess the appropriateness of the request of VSAT system.

8-4 VSAT User License for the VSAT system

The Philippines side shall obtain the VSAT User License from the National Telecommunications Commission (NTC) prior to commencement of the Project.

8-5 Space segment for the VSAT system

The Philippines side shall secure the required annual budget for the required space segment (bandwidth of transponder) fee and obtain the space segment enough for communication between the PAGASA Head Office (WFFC) and 3 meteorological radar observation stations (Virac, Aparri and Guiuan) prior to commencement of the Project.

8-6 Major undertakings by the Philippines side

The Philippines side agreed to undertake the following measures at their own cost prior to the commencement of the Project:

1) Partial demolition/renovation of the existing radar tower building

In order to utilize the existing facilities in the proposed project sites and minimize the initial cost to be borne by PAGASA-DOST, the Team made the following proposals and the Philippines side agreed with the detailed proposals from the Team indicated in the attached tables in **Annex-6**.

- Complete separation of a radar operation & maintenance facility and a staff living facility from the perspective of good hygiene and pest control
- Partial demolition/renovation of the existing building for improving the staff quarter by PAGASA-DOST instead of complete demolition of the existing radar tower building

2) Construction of access road(s) for Guiuan radar station prior to commencement of the Project implementation

3) Confirmation of non interference between radar system and the mobile phone communication at Virac radar station

The Philippines side agreed to technically confirm non interference between the radar system to be procured and the mobile phone communication at Virac.

- 4) Securement of the required budget for refunding Value Added Tax (VAT) and Custom duties, and
- 5) Security of the equipment at the proposed project sites

8-7 Utilization of the existing radar systems (Virac, Aparri and Guiuan)

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The PAGASA-DOST expressed to continuously utilize 1 of 3 existing radar systems at Daet in Camarines Norte Province and the other 2 as spares procured under the Japanese Loan Scheme in order to reinforce the plan for establishment of the national radar observation network.

8-8 Approval by the Investment Coordination Committee (ICC)

The Philippines side shall obtain ICC approval for the implementation of the Project. The Philippines side is fully aware that the Approval of ICC is a pre-requisite for the Exchange of Notes. The intended schedule explained by the Philippines side is as shown in **Annex-7**.

8-9 Acquisition of the required permit(s)/certificate(s) for ICC approval

The Philippines side shall acquire the necessary permit/certificate such as Height Clearance Permit, Radiation Influence Permit, Certificate of Non-Coverage, etc. The Philippines side agreed to obtain the required permit(s)/certificate(s) by the end of October 2008.

8-10 Operation and Maintenance

The Philippines side agreed to allocate sufficient budget and qualified staff for proper and effective operation/maintenance of the equipment procured under the Project.

8-11 Technical Training

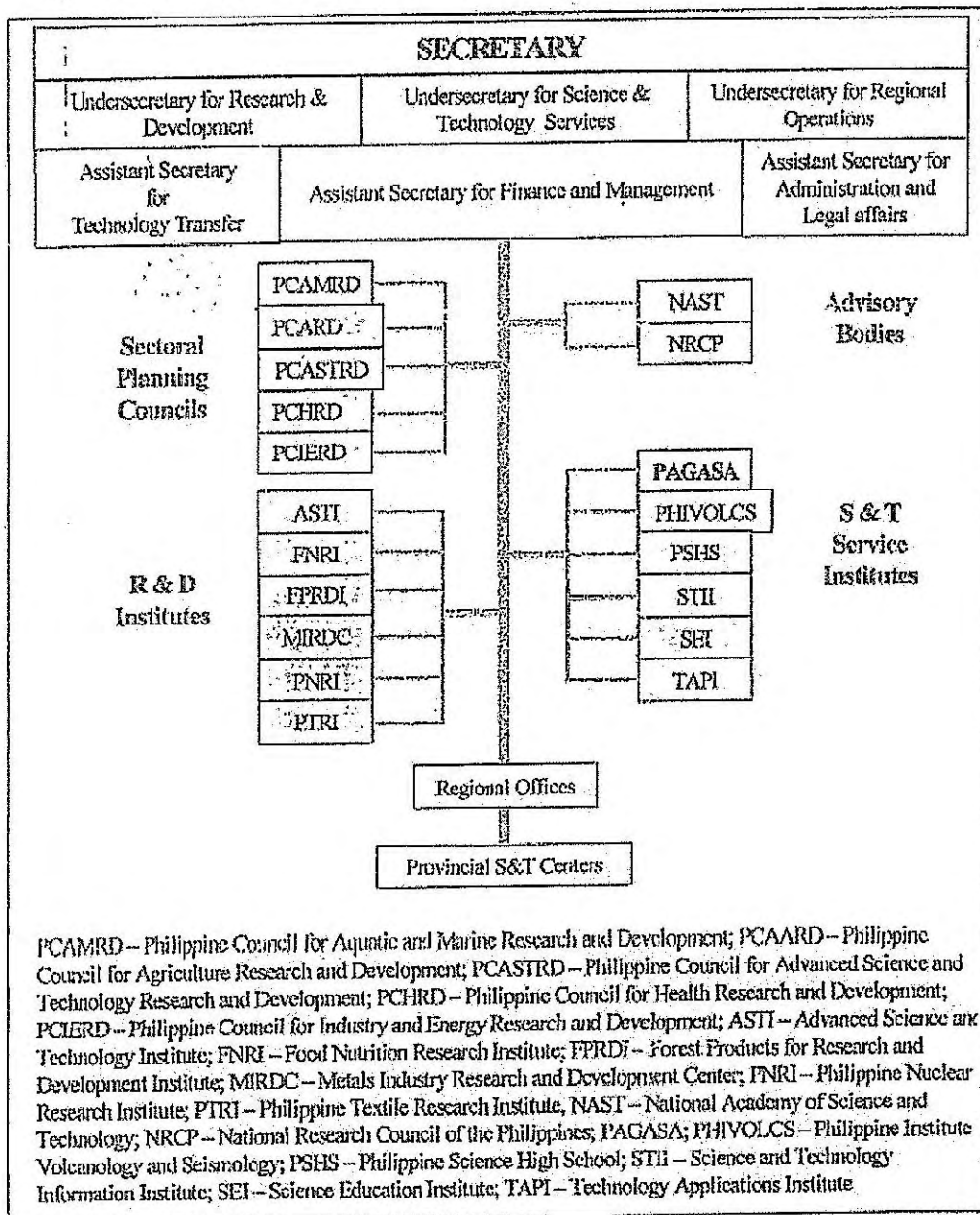
- 1) The Philippines side requested a technical training on the operation and maintenance of the Doppler radar systems provided by the equipment suppliers. The Team will study the necessity of the training.
- 2) The Philippines side also requested the technical training on the analysis and utilization of the Doppler radar products. The Philippines side is aware that preparation and submission of the application form to the NEDA is necessary.

END

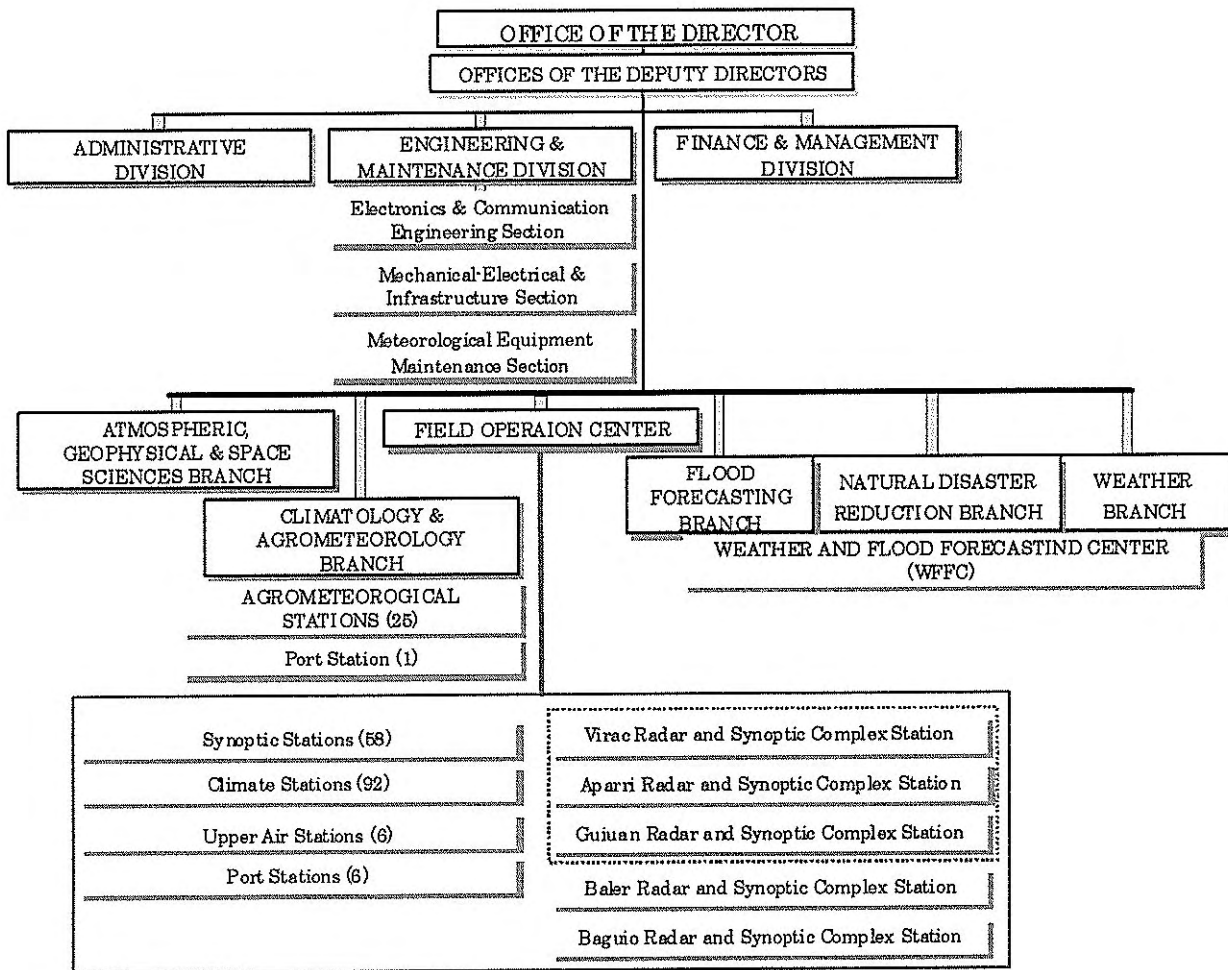
- Annex-1 Organization Charts
- Annex-2 Present Detection Range of the Meteorological Radar Network in the Philippines
- Annex-3 Final Items requested by Philippines
- Annex-4-1 Japan's Grant Aid Scheme
- Annex-4-2 Major undertakings by each government
- Annex-5 Check List of VSAT System transferred from the Department of Agriculture (DOA)
- Annex-6 Responsibility Classification for Implementation of the Project
- Annex-7 Schedule for obtaining ICC approval

Annex-1

Organization Chart of Department of Science and Technology (DOST)



Organization Structure of the DOST



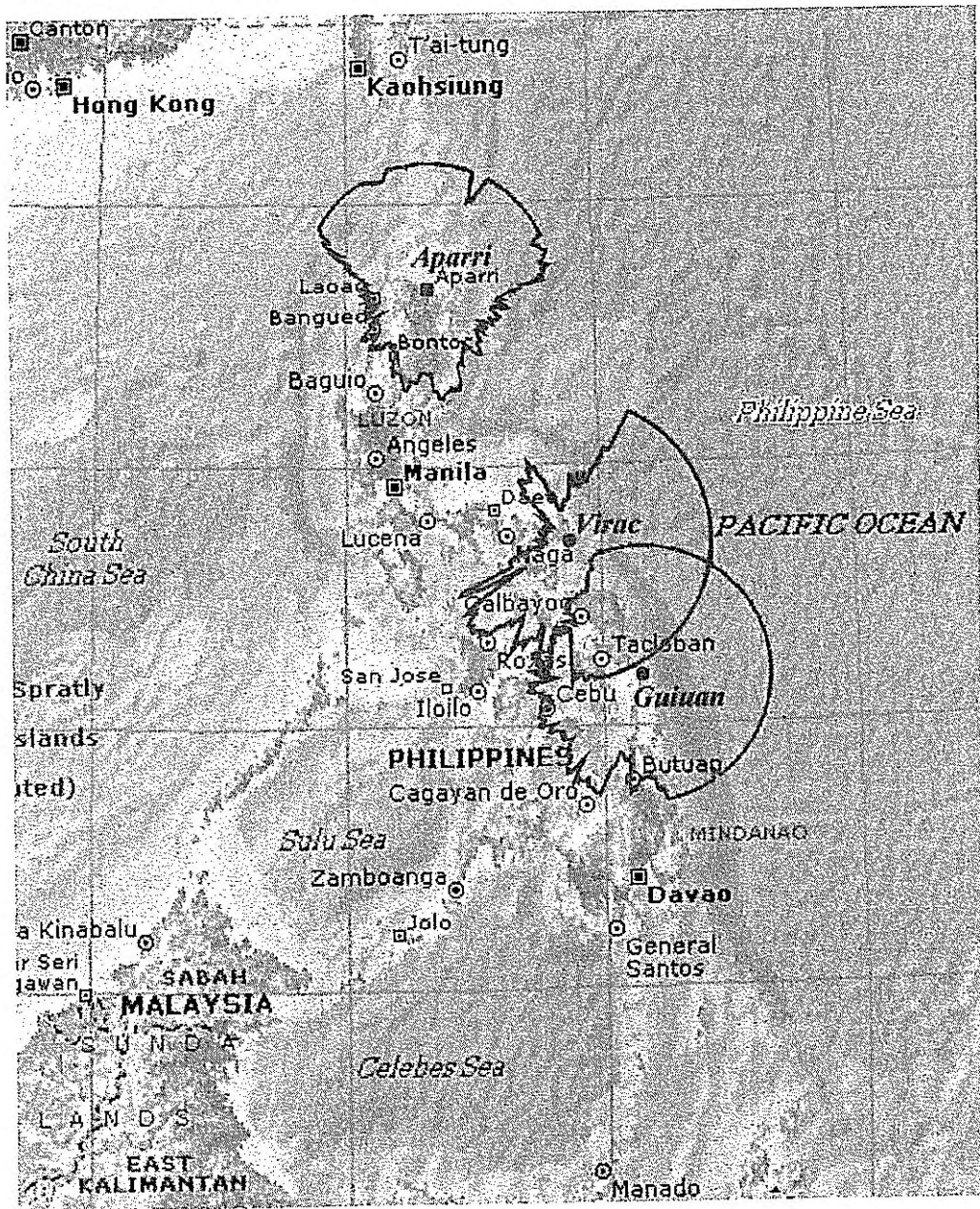
Organization Chart of PAGASA

Annex-1-2

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Annex-2

Present Detection Range of the Meteorological Radar Network in the Philippines



(The range indicates beam height of 3000m above sea level)

Note: The line of the range is calculated based on the altitude data of US Geological Survey

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