

APPENDIX 5

FIELD REPORT

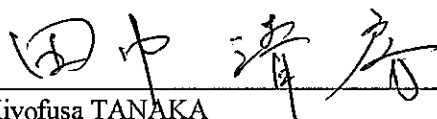
**PREPARATORY SURVEY (FOR BASIC DESIGN)
ON
THE PROJECT
FOR
THE IMPROVEMENT OF RADIO BROADCASTING NETWORK
FOR
ADMINISTRATION OF DISASTER PREVENTION
IN
SOLOMON ISLANDS**

FIELD REPORT

15th October, 2009

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1. Introduction

This Field Report is to establish mutual understandings between JICA Study Team (hereinafter referred to as “the Team”) for the project for the Improvement of Radio Broadcasting Network for Administration of Disaster Prevention (hereinafter referred to as “the Project”) and the Solomon Islands side such as Solomon Islands Broadcasting Corporation (hereinafter referred as “SIBC”) and relevant organizations of the Government of Solomon Islands on the technical and engineering aspects for the Project. This has been also prepared by the Team based on the results of the field survey and discussions with the Solomon Islands side.

Through the field survey, the Team confirmed the present condition of the existing radio broadcasting facilities in SIBC which services has been damaged due to technical problems, those facilities force reduce power. Instead SIBC started MW Radio broadcasting services to the three islands in the country. However the existing MW transmitters in some islands have stopped due to mechanical trouble and no radio service can reach to those islands. The existing transmitting building has become superannuated and the Project is desired for the country to recover SW radio broadcasting services by replacing to new facilities.

The Project aims to provide radio broadcasting services reliably to all the islands in the country by establishing SW radio broadcasting system. Both the Solomon Islands and the Japanese sides have recognized to proceed the plans of the equipment component, specifications and undertakings by the both sides under the Project as described in this report.

It is also noted that all the information as described in this report will be decided after further studies in Japan and consultations with JICA and relevant organizations of the Government of Japan. JICA will submit the draft final report, which describes the final component of the Project, to the Solomon Islands side in February 2010 as stated in the Minutes of Discussions (M/D) signed by both parties on 8th October 2009.

2. Present Situation of the Project site

2-1 SIBC’s SW Radio Transmitter and Radio Transmitting Building

The existing Radio Transmitting Building was constructed in 1982. At present, there can be seen serious damage due to rain in the house as well as missing of air-cooling in the room. This situation is disturbing proper operating radio transmitter, renovation or repairing of the building shall be required for new SW Transmitter

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2-2 SW Antenna Site

The proposed site for the new SW Antenna is located direction of west the SIBC's existing transmitter house. There is a possibility that unexploded bombs are buried in the ground, which will be removed by the Solomon Islands side if the Project is approved for implementation. Those bushes shall be removed by the Solomon Islands side before foundation work of the new SW Antenna by the Japanese side. The Land Certificate for the project site is shown in Annex 1.

3. Basic Design Concept

In order to design the buildings and plan the equipment component of the Project, the following technical design concept shall be considered.

3-1 Climatic Conditions

(1) Altitude of the Site

- Radio Transmitter House: 25 meter (above sea level)
- SW Antenna: 19 meter (above sea level)

(2) Temperature

- Minimum: 19.9 °C in 2008
- Maximum: 32.8 °C in 2008

(3) Humidity: Max. 99 % in 2008

(4) Maximum Sustained Wind 39.0 m/s in 2008

(5) Seasons

- Rainy season: January to April
- Dry season: May to December

(6) Annual Rainfall: 2,726 mm in 2008

(7) Earthquake: Many earthquakes have been recorded

(8) Thunderstorms: 20days thunderstorms per year (SIEA regulation)

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3-2 Applicable Design Standards

Table 3-2-1. Applicable Design Standards

| | Name of Standards | Application |
|-----|--|---|
| (a) | International Electrotechnical Commission (IEC) | Main functions of electrical goods in general |
| (b) | International Standardization Organization (ISO) | Performance of industrial products in general |
| (c) | Japanese Industrial Standards (JIS) | Industrial products in general |
| (d) | Japanese Electrotechnical Commission (JEC) | Electrical goods in general |
| (e) | The Standard of Japan Electrical Manufacturer's Association (JEM) | Same as above |
| (f) | Japan Electric Association Code (JEAC) | Same as above |
| (g) | Japan Cable Maker's Association Standard (JCS) | Electrical wires and cable |
| (h) | Electrical Industrial Association of Japan (EIAJ) | Electrical goods in general |
| (i) | International Telecommunication Union (ITU) | Electrical goods in general |
| (j) | Society of Motion Picture and Television Engineers (SMPTE) | Broadcasting equipment in general |
| (k) | Other related Japanese and International standards such as AES/EBU (Audio Engineering Society/ European Broadcast Union) | Industrial products in general |
| (l) | International Civil Aviation Organization (ICAO) | Antenna Mast |
| (m) | Electronic Industries Alliance of the U.S.A (EIA) | Same as above |
| (n) | Japanese building code and standards | Building design |

3-3 Other Issues for Design

- (1) AC Power Supply: 415 V (3 phase) or 240 V (single phase), 50Hz
- (2) Soil Bearing Capacity: 150 kN/m² for the Antenna site

4. Equipment Plan

The Team and SIBC have agreed to the following contents of the equipment plan (hereinafter referred to as "the Equipment") as a draft schedule for further studies by the Team in Japan, such as project cost estimation, preparations of the detail equipment specification and the draft final report, etc.

4-1 List of the Planned Equipment Component

| Category | No. | Description | Q'ty |
|----------|------------------------|--|--------|
| A | 1 | Short Wave Transmitter System (Henderson Transmitter Site) | 1 lot |
| | 1.1 | 10kW AM Short Wave Transmitter (Day/Night 2 Frequency Changeover Type) | 1 set |
| | 1.2 | Coaxial Patch Panel | 1 set |
| | 1.3 | Directional Coupler | 1 set |
| | 1.4 | Dummy Load | 1 set |
| | 1.5 | Program Input Equipment (PIE) | 1 lot |
| | (1) | Control Clock | 1 set |
| | (2) | Line Input Select Switch and Monitor Panel | 1 set |
| | (3) | Audio Processor Amplifier | 1 set |
| | (4) | Audio Distribution Amplifier | 1 set |
| | (5) | Monitor Speaker and Monitor Amplifier | 1 set |
| | (6) | AM Monitor Receiver with Receiving Antenna | 1 set |
| | (7) | FM Monitor Receiver with Receiving Antenna | 1 set |
| | (8) | VHF Audio Program Transmission Link Receiver (for SW Broadcasting) | 1 set |
| | (9) | Audio Jack Panel | 1 set |
| (10) | NFB Panel | 1 set | |
| (11) | Rack | 1 set | |
| A | 2 | Short Wave Antenna System (Wide Band Dipole Antenna) (Henderson Transmitter Site) | 1 lot |
| | 2.1 | Antenna Mast | 1 set |
| | 2.2 | Antenna Element | 1 set |
| | 2.3 | Antenna Feeder | 1 set |
| | 2.4 | Balun | 1 set |
| 2.5 | Earth Ground Mat | 1 set | |
| A | 3 | Power Supply Equipment for Transmitter (Henderson Transmitter Site) | 1 lot |
| | 3.1 | Isolation and Lightning Protection Transformer | 1 set |
| | 3.2 | Automatic Voltage Regulator | 1 set |
| | 3.3 | Primary Distribution Board (PDB) | 1 set |
| B | 4* | Disaster Prevention Broadcasting Communications Radio System | 1 lot |
| | 4.1 | VHF Radio Transceiver | 5 sets |
| | 4.2 | VHF Radio Repeater | 1 set |
| | 4.3 | Power Supply for VHF Radio Transceiver | 4 sets |
| | 4.4 | VHF Radio Antenna | 3 sets |
| | 4.5 | Antenna Pole | 1 set |
| 4.6 | Mobile VHF Transceiver | 14 sets | |
| B | 5* | SIBC Emergency Broadcasting Equipment | 1 lot |
| | 5.1 | VHF Audio Program Transmission Link Receiver with Antenna (for EMG) | 1 set |
| | 5.2 | FM Monitor Receiver with Antenna | 1 set |
| | 5.3 | Emergency Break in Detector Equipment | 1 set |
| | 5.4 | VHF Audio Program Transmission Link Transmitter (for SW Broadcasting) | 1 set |
| | 5.5 | Automatic Voltage Regulator | 1 set |

| Category | No. | Description | Q'ty |
|----------|-------------|--|--------|
| B | 6* | Basic Studio Equipment in NDMO (Honiara) | 1 lot |
| | 6.1 | Audio Mixer | 1 set |
| | 6.2 | Microphone and Stand | 1 set |
| | 6.3 | Headphone | 1 set |
| | 6.4 | VHF Audio Program Transmission Link Transmitter with Antenna (for EMG) | 1 set |
| | 6.5 | FM Monitor Receiver with Antenna | 1 set |
| | 6.6 | Audio Distribution Amplifier | 1 set |
| | 6.7 | Emergency Break in Encoder Equipment | 1 set |
| | 6.8 | FM Broadcasting Transmitter (100W) with Antenna | 1 set |
| | 6.9 | Automatic Voltage Regulator | 1 set |
| | 6.10 | Equipment Rack | 1 set |
| A | 7 | Maintenance Equipment and Tools | 1 lot |
| | 7.1 | Oscilloscope | 1 set |
| | 7.2 | Spectrum Analyzer | 1 set |
| | 7.3 | Circuit Tester | 1 set |
| | 7.4 | High Voltage Probe | 1 set |
| | 7.5 | Liner Detector | 1 set |
| | 7.6 | Distortion Meter/Oscillator | 1 set |
| | 7.7 | Audio Attenuator | 1 set |
| | 7.8 | Tool Kit | 1 set |
| 7.9 | Safety Belt | 2 sets | |
| A | 8 | Spare Parts | 1 lot |
| | 8.1 | Spare Parts for Short Wave Transmitter | 1 set |
| | 8.2 | Spare Parts for FM Transmitter | 1 set |
| | 8.3 | Maintenance Kit for Antenna System | 1 set |
| A | 9 | Consumable Parts | 1 lot |
| | 9.1 | Fan unit for Transmitter | 5 sets |
| | 9.2 | Air Filter for Transmitter | 5 sets |
| | 9.3 | Fuse for Transmitter | 5 sets |
| | 9.4 | Surge Absorber for Isolation Transformer | 5 sets |
| | 9.5 | Fuse for PIE | 5 sets |
| A | 10 | Installation Materials | 1 lot |
| | 10.1 | Installation Materials for Short Wave Transmitter | 1 set |
| | 10.2 | Earth Ground System for Short Wave Transmitter (Henderson Site) | 1 set |
| | 10.3 | Installation Materials for NDMO and SIBC studio | 1 set |
| B | 11 | Renovation Work of Transmitting Building (Henderson Transmitter Site) | 1 lot |
| | 11.1 | Renovation Work of Transmitting Building | 1 set |
| | 11.2 | Air Conditioning System | 1 set |

* Item 4, 5, and 6 designed from MOU (draft) on Disaster Broadcasting (Annex-2)

A: Confirmed at M/D

B: Expected equipment that will be requested by SIBC

4-2 Key Specifications of the Equipment

4-2-1. Short Wave Transmitter System (Henderson Transmitter Site)

(1) 10 kW Short Wave Transmitter

| | |
|---------------------|-----------------------|
| Frequency: | 9545 kHz/ 6080 kHz |
| Output Power: | 10 kW |
| Transmitting System | Single |
| Type: | Fully Solid State |
| Modulation: | Digital AM modulation |
| Output Impedance: | 50 Ω |
| Audio Input Level: | 0 ~ +10 dBm |
| Cooling System: | Forced Air Cooling |
| Power Supply: | AC 415 V, 3 φ, 50 Hz |

(2) Coaxial Patch Panel

| | |
|-------|-------------|
| Type: | U-link Type |
|-------|-------------|

(3) Directional Coupler

This is used for measurement of the output system of the transmitter.

(4) Dummy Load

| | |
|-----------------|--------------------|
| Capacity: | 10 kW |
| Impedance: | 50 Ω |
| Cooling System: | Forced Air Cooling |

(5) Program Input Equipment (PIE) Rack

This is the rack system consisting of the following equipment, which shall be installed in the existing control room.

- Control Clock

This is equipment which changes the frequency of the transmitter of daytime and nighttime by clock.

- Line Input Select Switch and Monitor Panel

It shall include meter panel and line input select and monitor select switch.

- Audio Processor Amplifier

A Multi-band compression shall maintain a high level of average modulation and increase sideband power.

- Audio Distribution Amplifier

Input: 1 x Output 4 or more

- Monitor speaker and amplifier
 - Monitor Amplifier: 20 W or more
 - Panel type monitor speaker
- AM monitor receiver with receiving antenna
 - Receiving range: 150 kHz to 32 MHz
- FM monitor receiver with receiving antenna
 - Receiving range: FM Broadcasting Band
- VHF Audio Program Transmission Link Receiver (for SW Broadcasting)
 - Frequency 170MHz Band
 - Antenna 6 Element or more YAGI Type
- Audio Jack Panel: 20 pairs or more
- NFB Panel Include Main NFB
- Rack 19 inch Rack (EIA Type)

4-2-2. Short Wave Antenna System (Wide Band Dipole Antenna)
(Henderson Transmitter Site)

It shall be horizontal polarization type short wave wide band dipole antenna.

- (1) Antenna Mast: 15m height two tower
- (2) Antenna Element: Horizontal polarization dipole antenna
- (3) Antenna Impedance 300Ω
- (4) Environmental Performance EIA Specification RS-222
- (5) Earth mat: 30m x 55m Area
- (6) Balun: 50Ω/300Ω
- (7) Antenna Feeder: 300Ω Parallel 2 wire line

4-2-3. Power Supply Equipment for Transmitter
(Henderson Transmitter Site)

The Isolation & Lightning Transformer, AVR and PDB shall cover the range of voltage fluctuations in consideration with the site condition.

(1) Isolation and Lightning Protection Transform

- Input: AC 415 V, 3 phase 4 wires
- Output: AC 415-240 V

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- Capacity 35 kVA or more
- (2) Automatic Voltage Regulator
 - Capacity: 35 kVA or more
- (3) Primary Distribution Board (PDB)
 - Capacity: 35 kVA or more

4-2-4. Disaster Prevention Broadcasting Communications Radio System

- (1) VHF Radio Transceiver: 140MHz to 170MHz (10W) (*note 1)
 - Location of the sites SIBC, MET Service (Headquarter),
Henderson Weather Centre,
Police Communication Centre,
Ministry of Mines, Energy and Rural
Electrification,
- (2) VHF Radio Repeater: 150MHz to 170MHz (10W) (*note 1)
 - (Two frequency)
 - Location of the sites NDMO Office
- (3) Power Supply for VHF Radio Transceiver:
 - Type Battery with charger
- (4) VHF Radio Antenna: Non-directional Groundplane Type
- (5) Antenna Pole: 10m Height Panzamast
- (6) Mobile VHF Transceiver 140MHz to 170MHz (3W) (*note 1)
 - Location

| | |
|--|-------|
| SIBC | 3 set |
| NDMO | 2 set |
| MET Service | 2 set |
| Police | 2 set |
| Ministry of Mines, Energy and Rural Electrification | 4 set |
| Hospital emergency | 1 set |

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4-2-5. SIBC Studio Equipment

- (1) VHF Audio Program Transmission Link Receiver with Antenna (for EMG):

Frequency 170MHz Band (*note 2)
 Antenna 6 Element or more YAGI Type

- (2) FM Monitor Receiver with Antenna:

Receiving range: FM Broadcasting Band

- (3) Emergency Break in Detector Equipment:

This equipment switches the audio line to the emergency line by control signal sent from the encoder installed in NDMO.

- (4) VHF Audio Program Transmission Link Transmitter (for SW Broadcasting):

Frequency 170MHz Band
 Output Power 20W or More
 Antenna 6 Element or more YAGI Type

- (5) Automatic Voltage Regulator: 500VA or more

4-2-6. Basic Studio Equipment in NDMO

The following measuring equipment shall be provided for maintenance of the Equipment:

- (1) Audio Mixer: 4ch or more
 (2) Microphone and Stand: Dynamic type with Table Stand
 (3) Headphone: Dynamic type
 (4) VHF Audio Program Transmission Link Transmitter with Antenna (for EMG):

Frequency 170MHz Band (*note 2)
 Output Power 20W or More
 Antenna 6 Element or more YAGI Type

- (5) FM Monitor Receiver with Antenna:

- (6) Audio Distribution Amplifier: 1input / 4out put more

- (7) Emergency Break in Encoder Equipment:

This equipment is sent coded signal to the detector which installs in the SIBC studio through radio link. the control signal changes the audio line to the emergency line.

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(8) FM Broadcasting Transmitter (100W) with Antenna:

| | |
|--------------|----------------------------------|
| Frequency | 80MHz Band (*note 3) |
| Output Power | 100W or more |
| Antenna | Non-directional Groundplane Type |

(9) Automatic Voltage Regulator: 1kVA or more

(10) Equipment Rack: Small Rack (EIA Type)

(* Note: SIBC shall inform to the Study Team regarding necessary frequencies by 30th October.)

4-2-7. Maintenance Equipment and Tools

The following measuring equipment shall be provided for maintenance of the Equipment:

- Oscilloscope
Frequency range: DC to 100 MHz
- Spectrum Analyzer
Frequency range:
- Circuit Tester
- High Voltage Probe
Attenuation: x 1,000
- Liner Detector:

- Distortion Meter/Oscillator
It shall be provided to measure automatically various audio signal parameters such as Distortion, S/N, etc.
- Audio Attenuator: 4 dial type
- Tool Kit
It shall be designed for daily and periodical maintenance of broadcasting equipment with a carrying case.
- Safety Belt and Safety Belt (Long type)
It shall be provided for safety during maintenance work of the antenna tower, etc.
- Storage Rack
It shall be provided to protect and save the precision equipment and spare parts, such as a microphone and measuring instrument, from damage, salt and humidity.



* SIBC shall inform the result of discussion with SOLMAS regarding measuring equipment by 30th of October.

4-2-8. Spare Parts

The following spare parts shall be provided for repairing work in a short time at a failure:

- Spare Parts for Short Wave Transmitter

(The following contents are included, but not limited to)

PA Module for Transmitter (1 pc each type)

RF Driver Unit for Transmitter

Power Supply Module for Transmitter (1 pc each type)

Control Board for Transmitter

Monitor Board for Transmitter

Power FET for PA Module

Printed Board for AVR Control

- Spare Parts for FM Transmitter
- Maintenance Kit for Antenna System

4-2-9. Consumable Parts

The following consumable parts shall be provided for periodical maintenance works and daily regular works:

- Fan unit for Transmitter
- Air Filter for Transmitter
- Fuse for Transmitter
- Surge Absorber for Isolation Transformer
- Fuse for PIE
- Fuse for AVR

4-2-10. Installation Materials

The following materials shall be provided for the Installation Work of the Equipment (but not limited to):

- Installation Materials for Short Wave Transmitter
- Earth Ground System for Short Wave Transmitter (Henderson Site)
- Installation Materials for NDMO and SIBC studio

5. Results of the Other Studies

The Team carried out the following study(ies) to confirm availability of the Project site for safe operation of the broadcasting equipment.

<Measurement of Voltage Stability>

SIBC has 2 different route of power supply; 1 by public city power operated by Solomon Islands Electricity Corporation (SIEC), another by a stand-by diesel engine generator operated by SIBC to be switched on during power interruption of the public city power. The Team measured a voltage at a location in the existing SIBC's Radio Station Building. The result of the measurement is shown as follows:

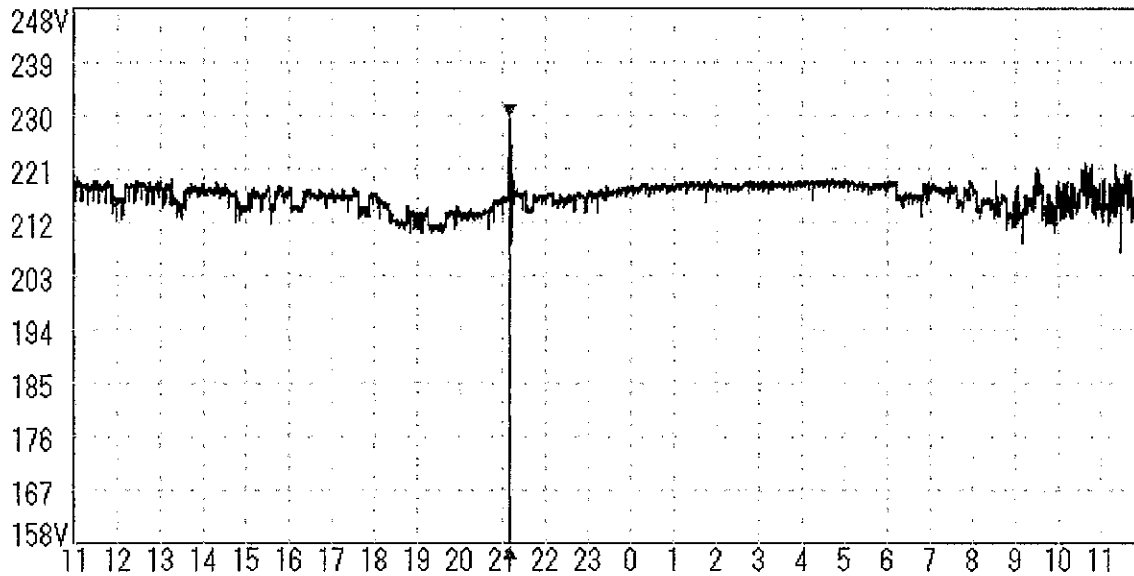
Location: The existing production studio

Period: From "10:56 on 11th Oct. 2009" until "11:53 on 12th Oct. 2009"

Result: See Fig. 7-1.

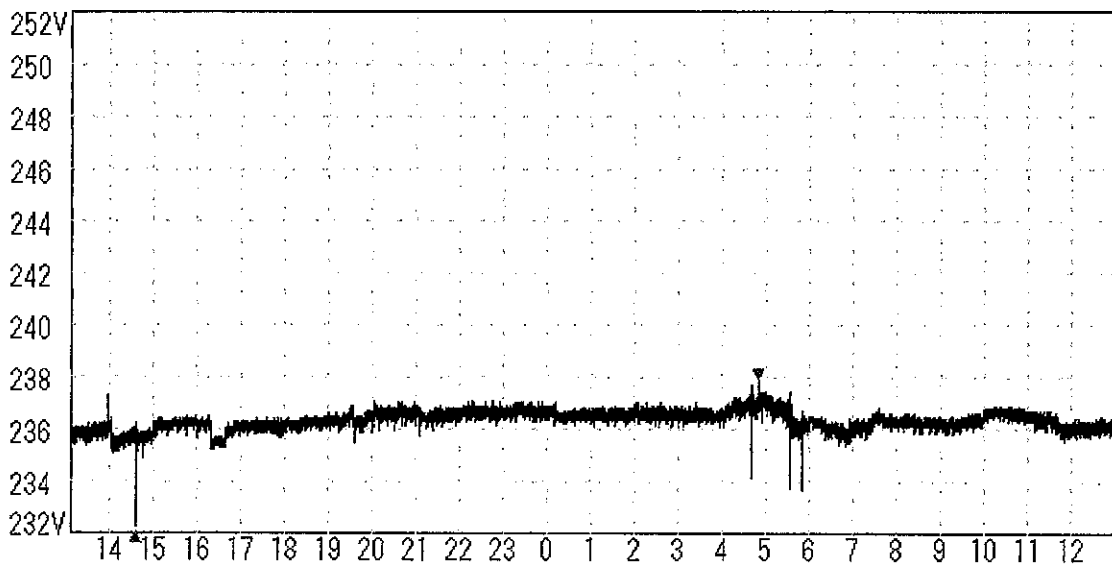
The rated voltage in Solomon Islands is 240V. According to the result, voltage values at the location were measured average of 215V. Although the average of voltage at Transmitting Building was almost satisfied for proper operation, there were sometimes voltage drops lower than permissible level that is -10% (216V) of the rated voltage in the existing production studio. Moreover, lack of power supply is expected in future.

Therefore, the Team plans to equip with UPS and/or AVR with the Equipment to protect from such striking voltage drop for safe operation of the Equipment.



1. Period: From "10:56 on 11th Oct. 2009" until "11:53 on 12th Oct. 2009"
2. Location: Production Studio
3. Max. value: 229.5V at 21:10 on 11th Oct. 2009
4. Min. value: 158.0V at 21:10 on 11th Oct. 2009

Fig. 7-1: Result of Voltage Measuring in the Existing SIBC's Radio Station Building



1. Period: From "13:06 on 1st Oct. 2009" until "13:04 on 2nd Oct. 2009"
2. Location: Transmitting Building
3. Max. value: 237.8V at 04:50 on 2nd Oct. 2009
4. Min. value: 232.2.V at 14:36 on 1st Oct. 2009

Fig. 7-2: Result of Voltage Measuring in the Transmitting Building

6. The Work Demarcation of the Project

6-1 Principle

The work demarcation between the Japanese side and the Solomon Islands side (SIBC and relevant organizations of the Government of Solomon Islands) shall be as shown below.

Table 6-1. The Work Demarcation of the Project

| Work Item | Responsibilities | | Remarks |
|--|------------------|-----------------|--|
| | Japanese | Solomon Islands | |
| (1) Procurement of the Equipment | ○ | | "The Equipment" is defined in the Equipment Plan of Chapter 4. |
| (2) Transportation of the Equipment to the Project site including insurance | ○ | | Delivery Point: Store yard near the Project site |
| (3) Tax exemption and custom clearance of the Equipment at the port of disembarkation | | ○ | |
| (4) Securing store yard for unloading containers of the Equipment near the Project site | | ○ | |
| (5) Renovation of Transmitting Building in the Project site | * | ○ | |
| (6) Installation, Adjustment and Testing of the Equipment | ○ | | |
| (7) Initial operation & Total system trainings of the Equipment including equipment for the trainings | ○ | | |
| (8) Bush clearing and Removal of Obstacles in the Project site for the new Antenna | | ○ | Preparatory work including bush clearing and unexploded bomb disposal will be completed before starting foundation work of the new Antenna by the Japanese side. |
| (9) Securing of yard for rubbish | | ○ | |
| (10) Test Broadcasting (On Air) | (Advice) | ○ | |
| (11) Construction of Fences and Gates around the new Antenna | | ○ | |
| (12) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contracts | | ○ | |

Note: ○ indicates the side responsible for the work.

* If SOLMAS will not carry out the Renovation Work, there will be a possibility to include the project. The possibility will be decided after further studies in Japan based on an official request by SIBC mentioning on the M/D.

6-2 Renovation Work of Transmitting Building (Henderson Transmitter Site)

SIBC shall carry out renovation work of Transmitting Building

(1) Layout for SW transmitter equipment.

The Equipment Dimension for new SW Antenna is as follows:



Existing Equipment Location Plan



Repair Equipment Location Plan

(2) Renovation Items are as follows

- a. Removal and Construction of Concrete Block Wall
- b. Mortar with paint external and internal
- c. Sealing board
- d. Floor vinyl tile
- e. Steel sheet roofing

(3) Air Conditioning System

Air Conditioning System shall be prepared for the equipments. Power loss of the equipment is shown Table 6-2.

Table 6-2. Equipment Dimension and Power Loss

| Equipment | Width (mm) | Depth (mm) | Power Loss (kW) |
|-----------------------|------------|------------|-----------------|
| SW Transmitter | 1,140 | 810 | 12.5 (note-1) |
| PIE Rack | 570 | 650 | 1.0 |
| AVR | 750 | 650 | 2.5 (note-2) |
| Isolation Transformer | 1,200 | 800 | 1.5 (note-3) |
| Coaxial Patch Panel | 600 | 450 | — |
| Dummy Road | 500 | 500 | — |

(note-1)

- 10kW Transmission Power
- 100% DSB modulation
- Efficiency: 55%

(note-2)

Efficiency: 93%

(note-3)

Efficiency: 95%

6-3 Tax Exemption Procedure

The following procedure shows steps necessary to exempt from taxes and custom duty of the Equipment to be procured under the Project. The Solomon Islands side shall undertake arrangement necessary for the exemption of the Equipment without delaying.

- ① Before shipment of the Equipment, the Japanese Contractor shall submit "the Master List of the Equipment" to the Office of the Prime Minister and its copy to SIBC.
- ② The Office of the Prime Minister will submit applications for Tax Exemption of the Equipment to Revenue Office, Ministry of Finance and Treasury with the Master List of the Equipment.
- ③ The approval will be notified from Revenue Office to the Japanese Contractor through Office of the Prime Minister / SIBC.

7. Budget Estimation of the Undertakings by SIBC (the Solomon Islands side)

For the undertakings to be done by the Solomon Islands side (SIBC and relevant organizations of the Government of Solomon Islands) as shown in Chapter 7 above, The Team estimated the budget necessary for the undertakings to be secured by the Solomon Islands side as follows:

Table 7-1. Budget Estimation of the Undertakings by the Solomon Islands side

| Item | Estimated Cost (SBD) | Remarks |
|---|----------------------|--|
| (1) Securing store yard for unloading containers of the Equipment near the Project site | 0 | SIBC will utilize the existing store yard near the Project site. |
| (2) Bush clearing and Removal of Obstacles in the Project site for the new Antenna | 800 | |
| (3) Removal work of the existing equipment and cables including Shifting work of the existing Transmitter | 2,520 | |
| (4) Securing of yard for rubbish | 0 | |
| (5) Provision of new license acquisition of required frequency, and annual rental fee. (New frequency) 1) STL NDMO to ISBC - Frequency : 170MHz Band - Power : 20W 2) FM Radio from NDMO - Frequency : 80MHz band - Power : 100W 3) Communications Radio - Frequency : 140MHz to 170MHz (2 frequency) - Power : 20W | 4,000 | 1 frequency @ SBD 1,000 x 4 = 4,000/ year |
| (6) Construction of Fences and Gates around the new Radio Station Building | 116,000 | |
| (7) Renovation Work of Transmitting Building (Henderson Transmitting Site) | 300,000 | |
| Total amount: | 423,320 | |

* Bank commission for AP shall be need 0.1% of the Project Budget

8. Implementation Schedule of the Project (Tentative)

The project for Improvement of Radio Broadcasting Network for Administration of Disaster Prevention in Solomon Islands

Implementation Schedule (Tentative)

| Item | 2010 | | | | | | | | | | | | 2011 | | | | | | | | | | | |
|---|------|---|---|---|---|---|----|----|----|---|---|---|------|---|---|---|---|---|----|----|----|---|--|--|
| | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | | |
| 1. Approval by Cabinet, Exchange of Notes (E/N) and Grant Agreement (G/A) | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | | |
| 2. The Consulting Services Agreement between TMD and the Consultant and Preparation of the Tender Documents | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Tender Notice, Tender Opening and Evaluation | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. The Contract between SIBC and Japanese Supplier | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Procurement and Installation of the Equipment ★ Hand-over | | | | | | | | | | | | | | | | | | | | | | | | |
| Group-1: Materials for SW Antenna Foundation | | | | | | | | | | | | | | | | | | | | | | | | |
| Group-2: SW Antenna System | | | | | | | | | | | | | | | | | | | | | | | | |
| Group-3: SW Transmitter System, SIBC Studio Equipment, NDMD Equipment, Maintenance Equipment and Tools, Spare Parts and Consumable Parts | | | | | | | | | | | | | | | | | | | | | | | | |
| Group-4: Option Extension Work of SW Transmitter Room | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Undertakings by the Solomon Islands side | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) Securing of Store Yard and Rebuild Yard | | | | | | | | | | | | | | | | | | | | | | | | |
| (2) Bush clearing and Removal of Obstacles in the Project site (including unexploded bombs if any) | | | | | | | | | | | | | | | | | | | | | | | | |
| (3) Removal work of the existing equipment and cables (if any) including shifting work of the existing facilities | | | | | | | | | | | | | | | | | | | | | | | | |
| (4) Provision of the New Transmitter Compartment | | | | | | | | | | | | | | | | | | | | | | | | |
| (5) Provision of Power Supply from the existing installation to the new Transmitter Compartment | | | | | | | | | | | | | | | | | | | | | | | | |
| (6) Connection to the New System and Test Broadcasting | | | | | | | | | | | | | | | | | | | | | | | | |

* Renovation work shall not be done without an official request by SIBC anytime.

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9. Operation and Maintenance and Financial Plans for SIBC

9-1 Budget Estimation of Operation and Maintenance

The Team estimated budget to be secured by the Solomon Islands side necessary for proper operation and maintenance of the facilities after the completion of the Project in the following categories:

(1) Staffing

The Team advises the Solomon Islands side that

1) SIBC should modify the contract of existing security guard for disaster prevention for 24 hours from 2010 (SBD 16,900/year).

2) SIBC should employ additionally one (5) person on duty for 24 hours disaster prevention from 2011 (SBD 130,000/year).

(2) Building

| Item | Unit Cost | Every Year | |
|---------------------------------|-----------|------------|---------------|
| | | Q'ty | Amount |
| Maintenance of Air Conditioning | 1,000 | 1 | 1,000 |
| Repairing Electrical Facility | 1,400 | 1 | 1,400 |
| Painting Antenna Mast | 11,400 | 1 | 11,400 |
| Total | | | 13,800 |
| SBD Rate | | | 92,000 |

(3) Spare Parts

| Item | Unit Cost | Every Year | | Every 3 Years | | Every 5 Years | |
|--|-----------|------------|--------------|---------------|---------------|---------------|---------------|
| | | Q'ty | Amount | Q'ty | Amount | Q'ty | Amount |
| Cables | 140 | 3 | 420 | | | | |
| Microphone(Communication for NDMO) | 290 | 1 | 290 | | | | |
| Headphone(Communication for NDMO) | 290 | 1 | 290 | | | | |
| Switches, Connectors, etc. | 710 | 1 | 710 | | | | |
| Fan Unit for TX | 710 | 1 | 710 | | | | |
| Air Filter for TX | 710 | 2 | 1,420 | | | | |
| Various Fuses | 290 | 5 | 1,450 | | | | |
| Surge Absorber for Iso. Tr. (for Existing) | 1,430 | 1 | 1,430 | | | | |
| PA Module for TX | 1,430 | | 0 | 3 | 4,290 | | |
| RF Driver Unit for TX | 1,430 | | 0 | 3 | 4,290 | | |
| Power Supply Module for TX | 1,430 | | 0 | 3 | 4,290 | | |
| Various Printed Board | 2,860 | | 0 | 3 | 8,580 | | |
| FET for PA Module | 1,430 | | 0 | 3 | 4,290 | | |
| AVR | 7,140 | | 0 | | | 1 | 7,140 |
| UPS | 2,860 | | 0 | | | 3 | 8,580 |
| Total | | | 6,720 | | 25,740 | | 15,720 |
| SBD Rate | | | 44,800 | | 171,600 | | 104,800 |

CR

(4) Consumables

| Item | Unit Cost | 2nd year | | 3rd year | | 4th year and after | |
|--------------|-----------|----------|--------|----------|--------|--------------------|--------|
| | | Q'ty | Amount | Q'ty | Amount | Q'ty | Amount |
| CD-R (Media) | 1 | 3,000 | 3,000 | 3,000 | 3,000 | 2,000 | 2,000 |
| Total | | | 3,000 | | 3,000 | | 2,000 |

The above quantities of consumables are estimated on the basis of:

- Consumables to be used in the 1st year after the completion of the Project are 3,000 pcs of CD-R which will be provided under the Project for the initial operation of the new facility.
- The Solomon Islands side shall secure a budget for consumables to be used in the 2nd year and afterwards.
- 3,000 pcs of CD-R per year until the 3rd year will be required for converting the SIBC's existing archives to different format of the new media.
- After the 4th year, 2,000 pcs of CD-R per year will be used for regular works.

(5) Reserve Fund for Replacing to the New Facilities (For 10 years)

| Item | Unit Price | Q'ty | Amount |
|--------------------------|------------|------|------------|
| Transmitter | 714,000 | 1 | 714,000 |
| Guy wires and Insulators | 143,000 | 1 | 143,000 |
| Studio Equipment | 571,000 | 1 | 571,000 |
| Air Conditioning | 43,000 | 1 | 43,000 |
| Back up Generator | 43,000 | 1 | 43,000 |
| Total | | | 1,514,000 |
| SBD Rate | | | 10,093,333 |

9-2 Training Cost for SIBC's Staffs

The Team estimated budget to be secured by the Solomon Islands side necessary for training programmes plan in the following table, necessary for SIBC's management to achieve the benefits of the Project below-mentioned in Chapter II.

| Training Plan (1): Number of person | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
| 1. Overseer Training for the Radio Broadcasting by own fund (1) | 10,000 | | 10,000 | | 10,000 | | 10,000 | | 10,000 | | 10,000 | |
| 2. Workshop and Training in country(4) | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 |
| 3. Overseer Training for the Radio Broadcasting by ODA (1) | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 |
| Total Cost | 16,000 | 6,000 | 16,000 | 6,000 | 16,000 | 6,000 | 16,000 | 6,000 | 16,000 | 6,000 | 16,000 | 6,000 |
| SBD Rate | 106,667 | 40,000 | 106,667 | 40,000 | 106,667 | 40,000 | 106,667 | 40,000 | 106,667 | 40,000 | 106,667 | 40,000 |

Note: Cost of the above Trainings

- 1. 10,000 AS One (1) month training for broadcasting on the school by the Government of Solomon Islands
- 2. 2,000 AS Workshop for Media in Country
- 3. 2,000 AS One (1) month training for broadcasting on the school by ODA scholarship

9-3 Financial Plan for SIBC

The Team advises the Solomon Islands side a financial plan for SIBC by the following table, basing on the financial record of SIBC as of 2008 and 2009 and foreseeing costs through the above-mentioned budget estimation of operation and maintenance and training cost for SIBC's staffs.

The plan also shows that SIBC can renew the MW radio broadcasting equipment to be expected after ten (10) years of the completion of the Project by reserving fund every year.

Financial Plan for SIBC

(Unit: x1,000SBD)

| No | Year | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|------|--|----------------|----------------|----------------|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| | 項目 | | | | Completion of the Project | | | | | | | | | |
| A. | Revenue | | | | | | | | | | | | | |
| (1) | Commercial Radio(Spot Advertising) | 1,406.0 | 1,546.6 | 1,701.3 | 1,871.4 | 2,058.5 | 2,264.4 | 2,490.8 | 2,739.9 | 3,013.9 | 3,315.3 | 3,646.8 | 4,011.5 | 4,412.6 |
| (2) | Program Broadcasting (Parliament Church etc) | 320.0 | 320.0 | 320.0 | 320.0 | 352.0 | 369.6 | 369.6 | 369.6 | 388.1 | 388.1 | 388.1 | 388.1 | 388.1 |
| (3) | Messages Broadcasting (Birthday greeting etc) | 928.0 | 1,020.8 | 1,122.9 | 1,235.2 | 1,630.4 | 1,799.5 | 1,972.8 | 2,170.1 | 2,387.1 | 2,625.8 | 2,888.4 | 3,177.2 | 3,495.0 |
| (4) | Emergency Broadcasting fee (from the Gov.) | | | 17.0 | 450.0 | 495.0 | 544.5 | 599.0 | 658.8 | 724.7 | 797.2 | 876.9 | 964.6 | 1,061.1 |
| (5) | PA System & Equipment Hire | 134.0 | 134.0 | 134.0 | 134.0 | 134.0 | 134.0 | 134.0 | 134.0 | 140.7 | 140.7 | 140.7 | 140.7 | 140.7 |
| (6) | Sales Merchandise (Production Fee, Daving Fee etc) | 396.0 | 435.6 | 479.2 | 527.1 | 579.8 | 637.8 | 701.5 | 771.7 | 848.9 | 933.7 | 1,027.1 | 1,129.8 | 1,242.8 |
| (7) | Advertising Fee of Honora FM | 211.0 | 221.6 | 243.7 | 268.1 | 294.9 | 324.4 | 356.8 | 392.5 | 431.7 | 474.9 | 522.4 | 574.6 | 632.1 |
| (8) | Advertising Fee of Rata SIBC | 14.0 | 14.7 | 16.2 | 17.8 | 19.6 | 21.5 | 23.7 | 26.0 | 28.6 | 31.5 | 34.7 | 38.1 | 41.9 |
| (9) | Advertising Fee of Gizo SIBC | 63.0 | 66.2 | 72.8 | 80.0 | 88.0 | 96.9 | 106.5 | 117.2 | 128.9 | 141.8 | 156.0 | 171.6 | 188.7 |
| (10) | Others(Project) | 142.0 | 156.2 | 171.8 | 189.0 | 207.9 | 228.7 | 251.6 | 276.7 | 304.4 | 334.8 | 368.3 | 405.1 | 445.7 |
| (11) | Carry-over | | -0.0 | -0.0 | 91.9 | 374.1 | 201.9 | -758.1 | -1,960.7 | -2,710.4 | -3,140.5 | -3,228.4 | -2,539.4 | -1,308.1 |
| | TOTAL [A] | 3,613.3 | 3,915.6 | 4,278.7 | 5,184.4 | 6,234.2 | 6,617.0 | 6,268.2 | 5,695.9 | 5,686.6 | 6,043.4 | 6,821.0 | 8,462.1 | 10,740.6 |
| B. | Expenditure | | | | | | | | | | | | | |
| (1) | Salaries and Allowances | 2,136.2 | 2,243.0 | 2,355.1 | 2,602.9 | 2,753.0 | 2,869.7 | 3,013.2 | 3,163.8 | 3,322.0 | 3,488.1 | 3,662.5 | 3,845.7 | 4,037.9 |
| (2) | Electrical Fee for SIEA | 761.5 | 1,125.4 | 1,125.4 | 1,125.4 | 1,125.4 | 1,125.4 | 1,125.4 | 1,125.4 | 1,181.7 | 1,181.7 | 1,181.7 | 1,181.7 | 1,181.7 |
| (3) | Others(Sparr Parts, Renovation.) | 1,798.1 | 1,888.0 | 1,999.5 | 2,099.5 | 2,204.2 | 2,314.5 | 2,430.2 | 2,551.7 | 2,679.3 | 2,813.2 | 2,953.9 | 3,101.6 | 3,256.7 |
| (4) | Maintenance Cost for the Project | 0.0 | 0.0 | 40.0 | 798.1 | 776.2 | 842.9 | 947.8 | 842.9 | 911.0 | 1,044.5 | 806.2 | 872.9 | 977.8 |
| 1) | Building (transmitting Station, Antenna) | 0.0 | 0.0 | 0.0 | 92.0 | 92.0 | 92.0 | 92.0 | 92.0 | 92.0 | 92.0 | 92.0 | 92.0 | 92.0 |
| 2) | Spare Parts (SW Transmitter Communication Net) | 0.0 | 0.0 | 0.0 | 44.8 | 44.8 | 44.8 | 216.4 | 44.8 | 149.6 | 216.4 | 44.8 | 44.8 | 216.4 |
| 3) | Electrical Fee for SIEA | 0.0 | 0.0 | 0.0 | 599.4 | 599.4 | 599.4 | 599.4 | 599.4 | 629.4 | 629.4 | 629.4 | 629.4 | 629.4 |
| 4) | Training Fee | 0.0 | 0.0 | 40.0 | 106.7 | 40.0 | 106.7 | 40.0 | 106.7 | 40.0 | 106.7 | 40.0 | 106.7 | 40.0 |
| (5) | debt-repayment | | | 167.0 | 175.4 | 184.1 | 193.3 | 203.0 | 213.1 | 223.8 | 235.0 | 246.7 | 259.1 | 272.0 |
| | TOTAL [B] | 4,695.8 | 5,256.4 | 5,686.9 | 6,801.0 | 7,023.0 | 7,345.8 | 7,719.5 | 7,897.0 | 8,317.7 | 8,762.5 | 8,851.0 | 9,260.9 | 9,726.1 |
| C | A-B=C | -1,082.5 | -1,340.8 | -1,408.1 | -1,616.6 | -788.8 | -728.8 | -1,451.4 | -2,201.1 | -2,631.1 | -2,719.1 | -2,030.0 | -798.8 | -1,014.5 |
| D | Governmental Budget for Compensation | 5.0 | 500.0 | 1,500.0 | 3,000.0 | 2,000.0 | 1,000.0 | 500.0 | 500.0 | 500.0 | 500.0 | 500.0 | 500.0 | 500.0 |
| E | E=C+D | -1,077.5 | -840.8 | 91.9 | 1,383.4 | 1,211.2 | 271.2 | -951.4 | -1,701.1 | -2,131.1 | -2,219.1 | -1,530.0 | -298.8 | -514.5 |
| F | Sharehold Contributions/equity | 1,077.5 | 840.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| G | Reserve Fund (Depreciation) | 0.0 | 0.0 | 0.0 | 1,009.3 | 1,009.3 | 1,009.3 | 1,009.3 | 1,009.3 | 1,009.3 | 1,009.3 | 1,009.3 | 1,009.3 | 1,009.3 |
| H | Total Reserve Fund | | | | 1,009.3 | 2,018.7 | 3,028.0 | 4,037.3 | 5,046.7 | 6,056.0 | 7,065.3 | 8,074.7 | 9,084.0 | 10,093.3 |

10. Benefit of the Project

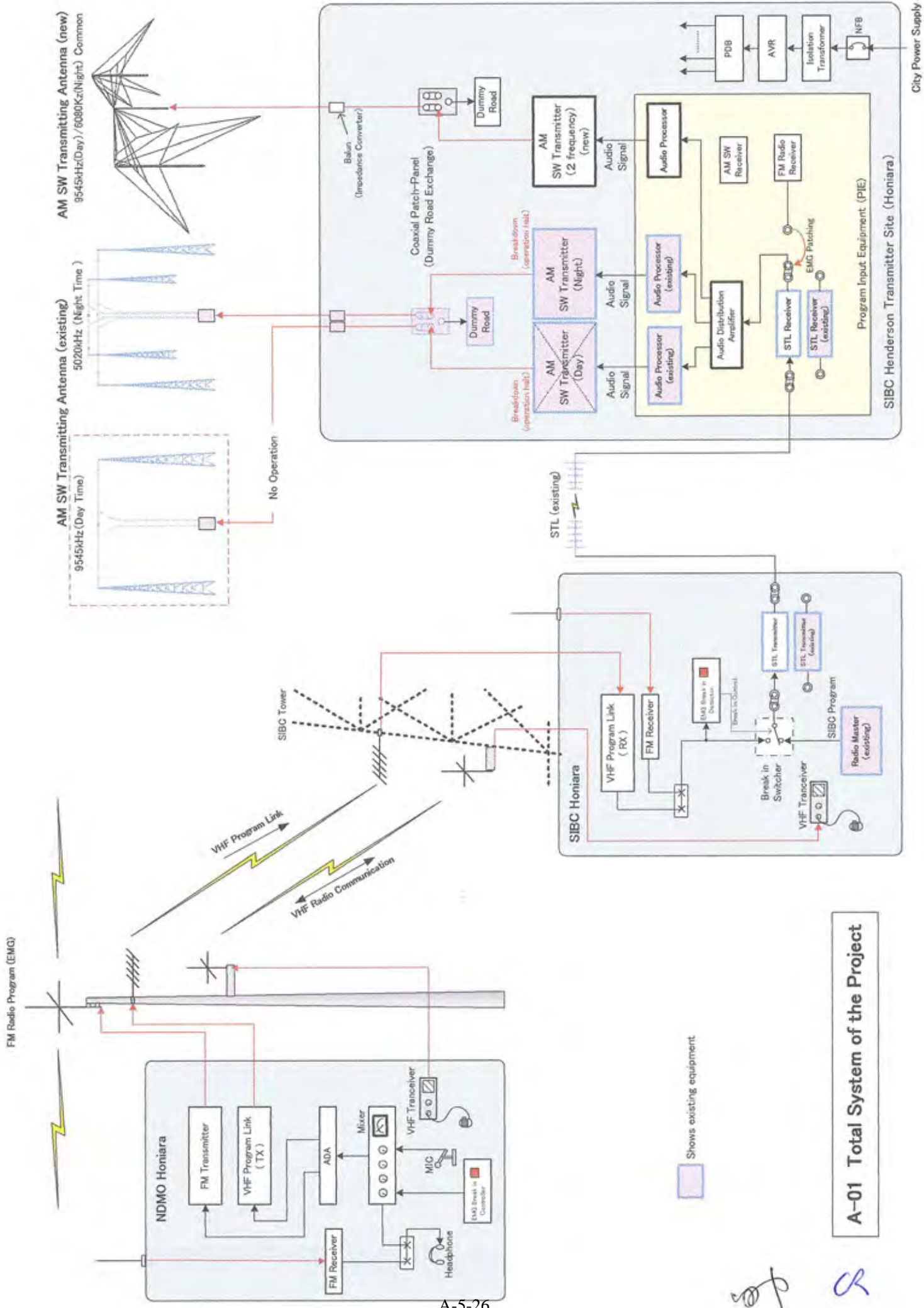
The Team and SIBC confirmed the benefit of the Project which is to be achieved after three (3) years from the completion of the Project in 2011, as follows.

- **To increase the coverage of population of SW approximately 99% of all over the Solomon Islands, and to improve and provide disaster information to the people in Solomon Islands.**
- **To provide reliable and stable 24 hours national SW radio services to the people living in all the islands in Solomon Islands**
- **To increase the programs to cope disaster prevention and mitigation including awareness and preparedness by relevant agencies on disasters.**

11. Drawings for Basic Design

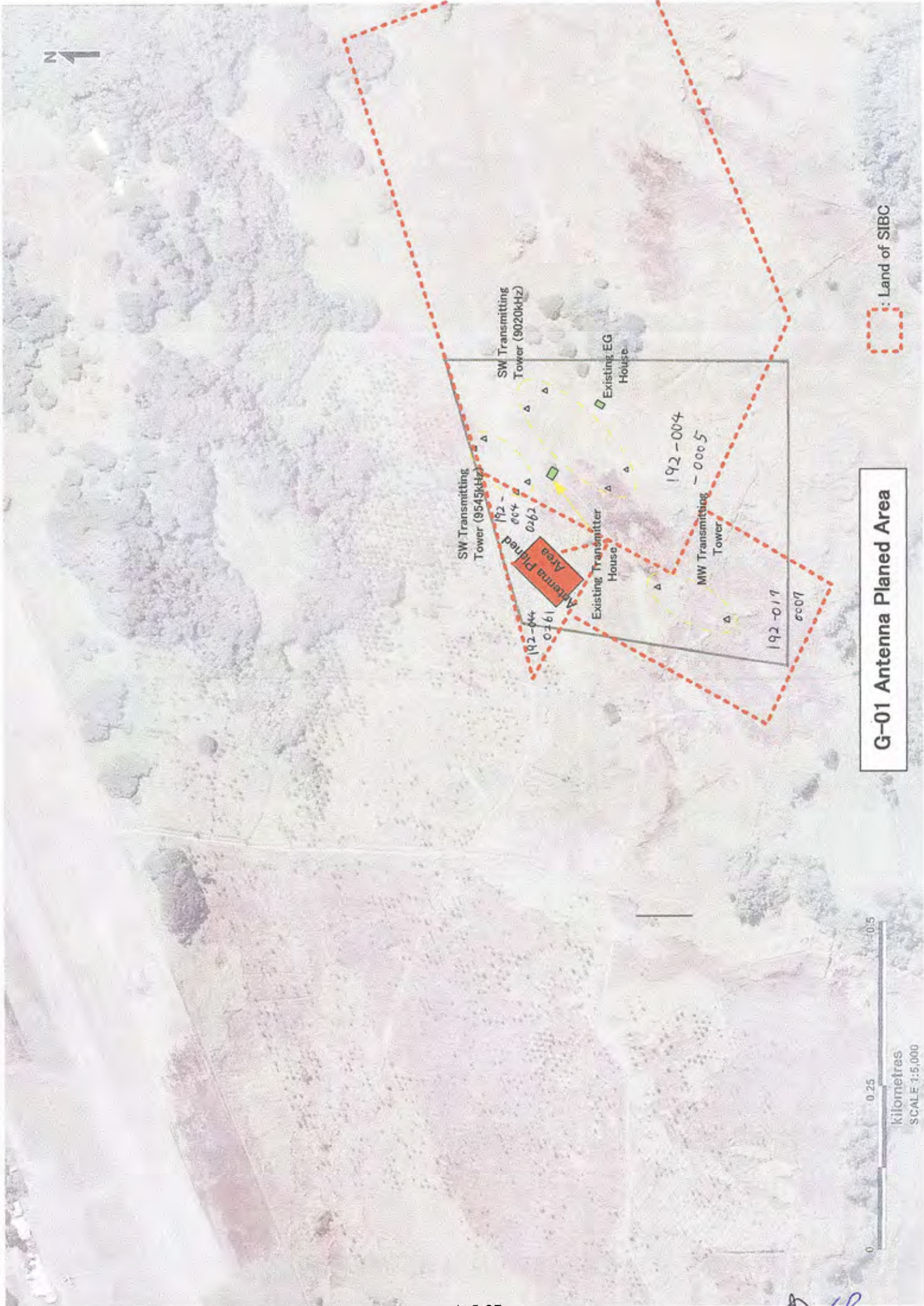
| <u>Dwg. No.</u> | <u>Title</u> |
|-----------------|---|
| A-01 | Total System of the Project |
| G-01 | Antenna Planed Area |
| G-02 | SW Service Area (after rehabilitation) |
| G-03 | Proposed Site Plan of Antenna pole in NDMO |
| G-04 | External view of SW Antenna (proposed plan) |

(End)



A-01 Total System of the Project

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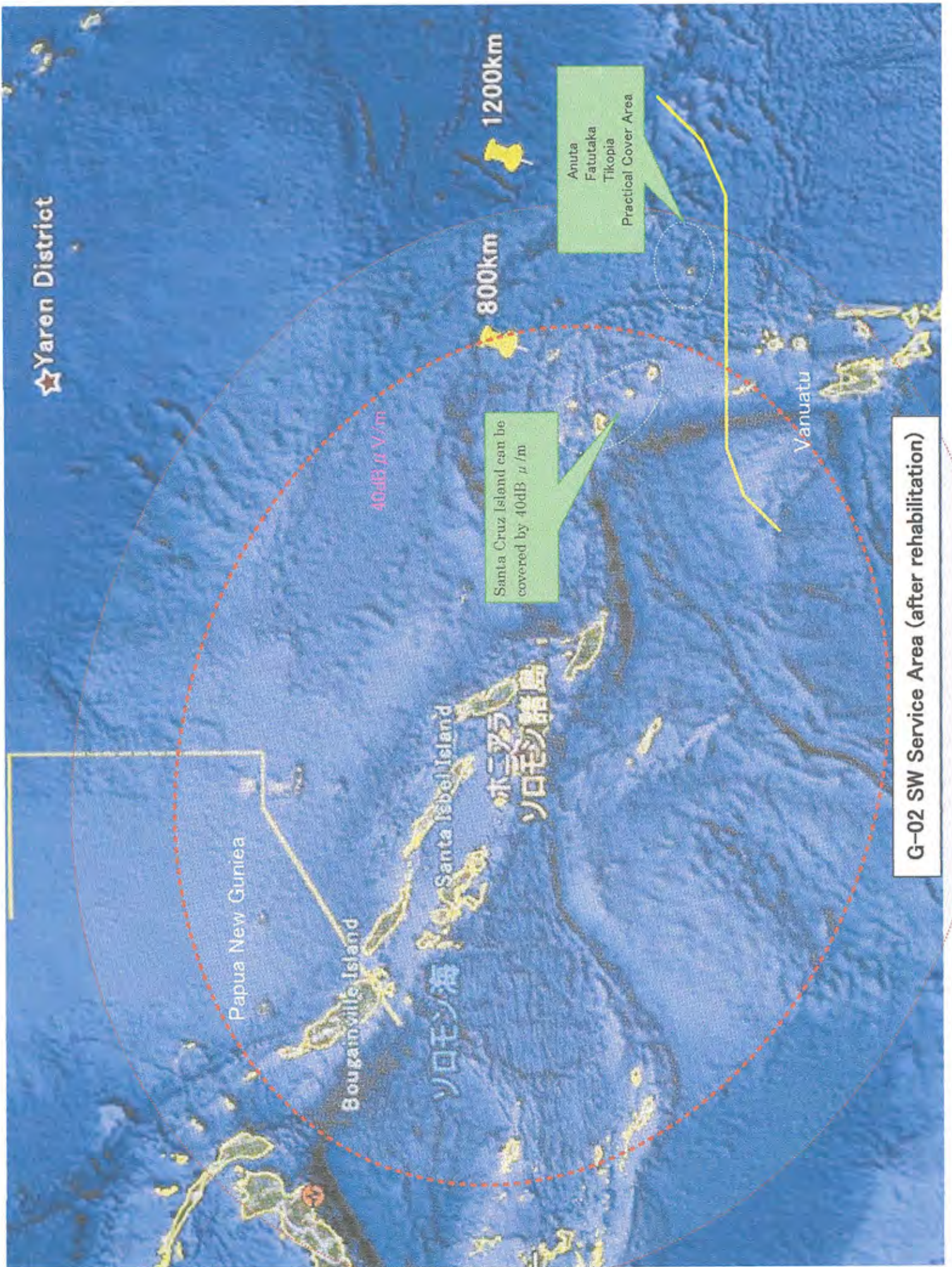


□ : Land of SIBC

G-01 Antenna Planned Area

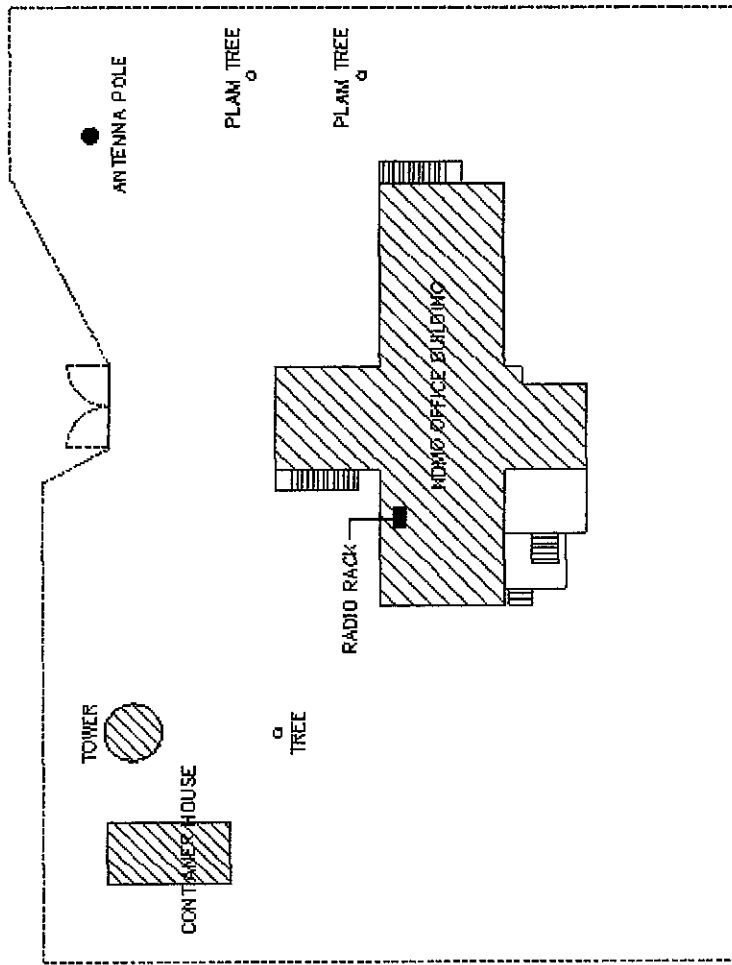
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G-02 SW Service Area (after rehabilitation)

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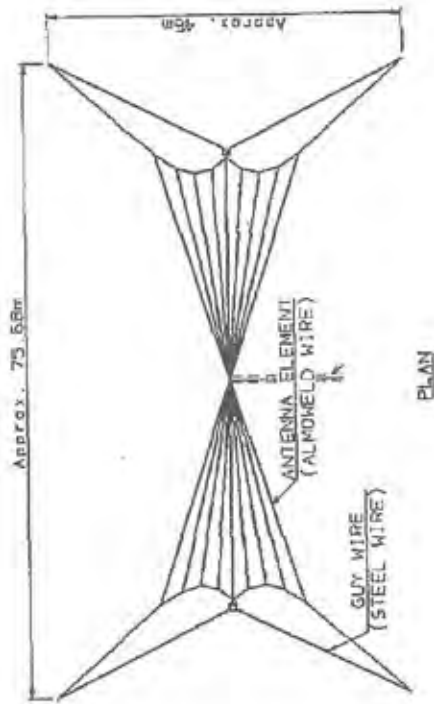
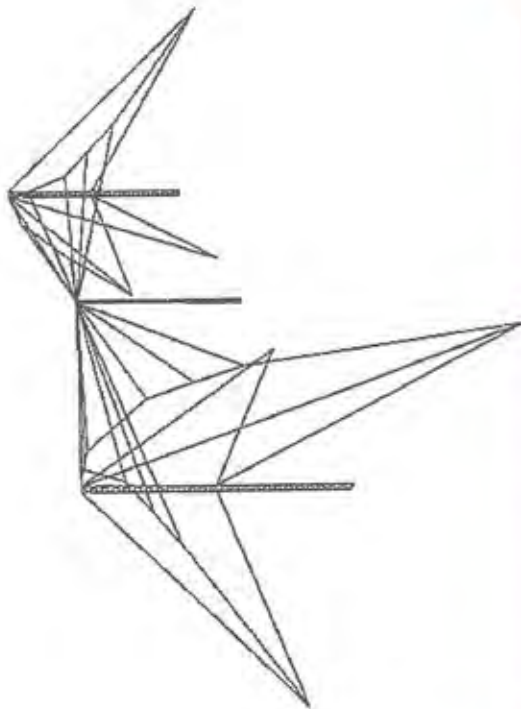


NDMO SITE PLAN

G-03 Proposed Site Plan of Antenna pole in NDMO

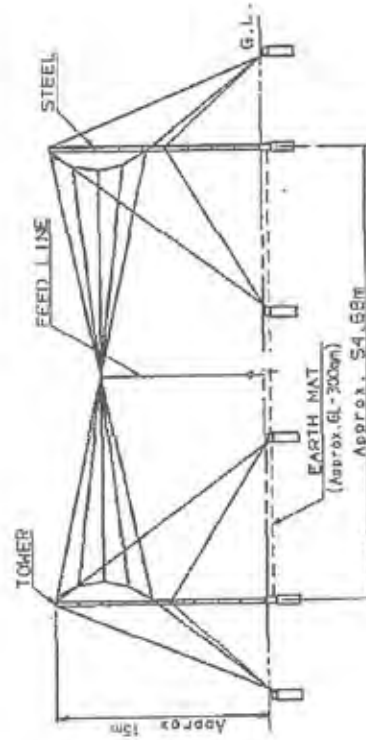
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PLAN

| | |
|---|--|
| © | Approximately 80m x Approximately 50m (3496 m ²) |
| © | Height : Approximately 15m |
| © | Reasonable Cost |
| © | Compatible 2 frequency |
| ○ | Frequency : 3MHz ~ 30MHz |
| | Directivity : Non |
| | VSWR : Approximately 2.5 max |
| | Gain : Approximately 8dBi max |



G-04 External view of SW Antenna (proposed plan)

sp

cr

Annex-1: Letter of arrangement land secure by Ministry of Lands, House and Survey

JICA Study Team indicated the location of the Project Site of Henderson Transmitting Station. SIBC shall obtain the Land Certificate for the Project Site of Henderson Transmitting Station from Ministry of Lands, House and Survey, and submit the Certificate to JICA by 15th November.

15/10/09.

TO JICA STUDY TEAM.

ATTN. KIYOFUSA TANAKA.

SUBJECT: SIBC ARIEL / ANTENNA PLANT AREA.

The map of Antenna Plant for SIBC future Plan area has been received.

The ministry of Lands and Survey would like to advise that the site identified, covered about 4 private properties in which the office of Commissioner of Lands will work with the tenants to acquire the properties to allow the project to develop.

We would also like to assure your organization that will try our best to assist in securing the site, which we hope to do within a month.

So as government can secure the sites,

we will inform you to begin work on site.

Yours faithfully,

Er

Joseph Pinita

Deputy Comm. of Lands

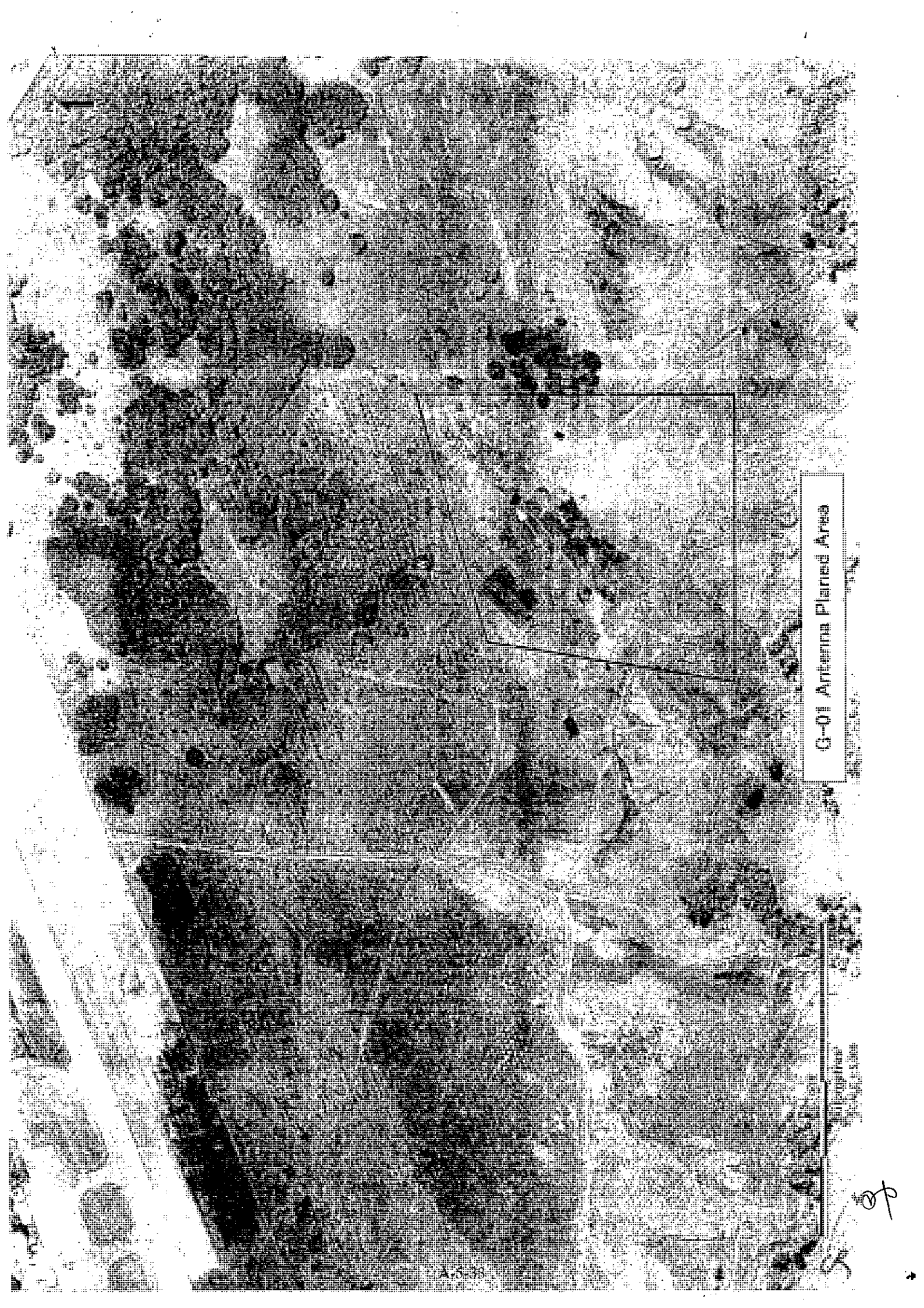
Min. of Lands, Housing & Survey

WOP CR

attached

1. G-01 Antenna Plant Area

2. Antenna Plant Area Site Survey



G-01 Antenna Planned Area

1/1/1978
1/1/1978

87

Antenna Planned Area Site Survey
**Honiara - Radio Transmission
 Site Survey**

Surveyed 23 September 2009

Datum: WGS 1984

Grid: UTM Zone 57 (South)

Elevations above Mean Sea Level

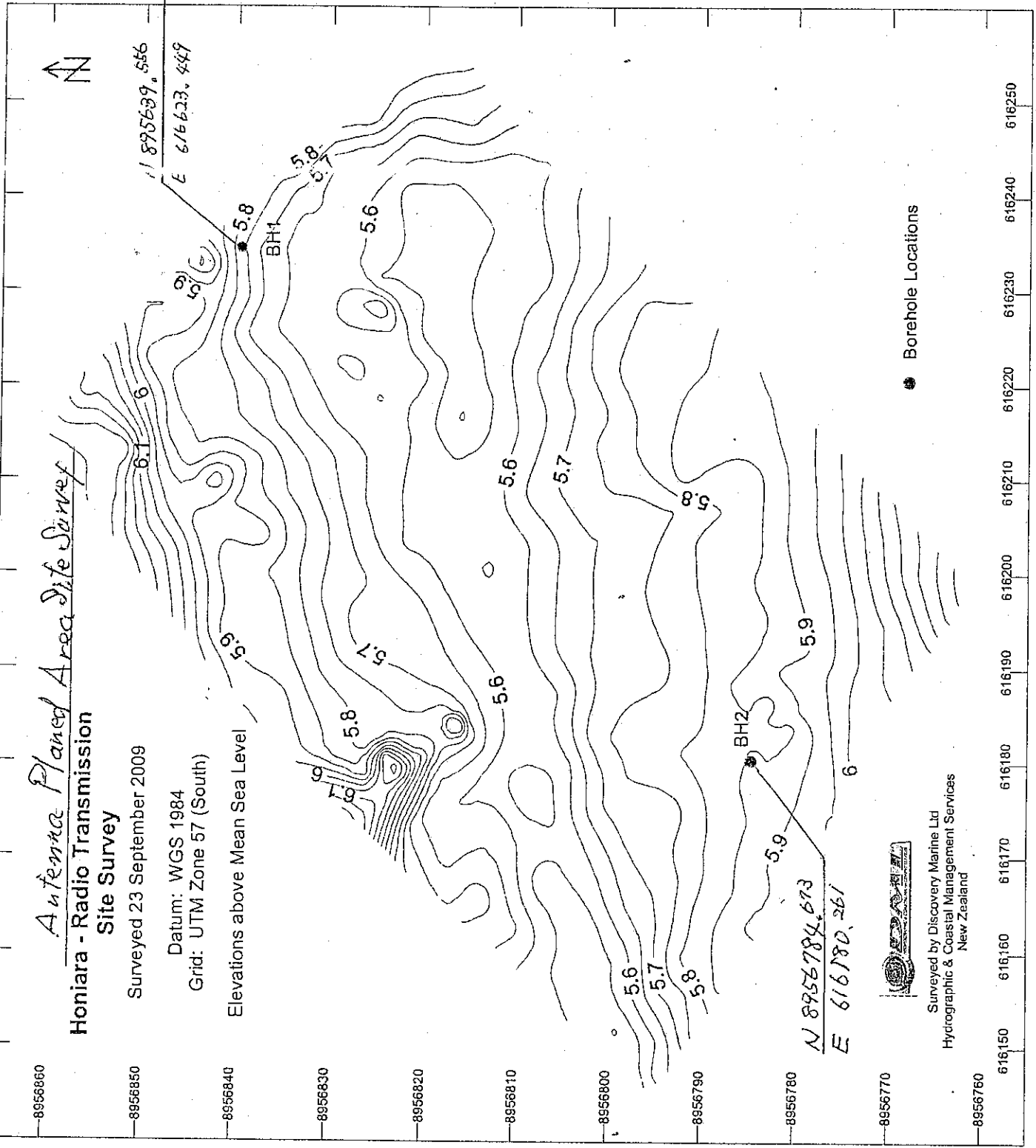
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Surveyed by Discovery Marine Ltd
 Hydrographic & Coastal Management Services
 New Zealand

● Borehole Locations



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map

CR

**Memorandum of Understanding
(MOU)**

on

Disaster Broadcasting

between

Solomon Islands Broadcasting Corporation
(SIBC)

and

National Disaster Council
(NDC)

and

Ministry of Environment, Conservation and Meteorology
(MECM)

October 2009

**Honiara
Solomon Islands**

WSP

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Signatory Page

Fred Fakari'i
Chairman
National Disaster Council
Ministry of Home Affairs

Date:

A large, stylized signature consisting of a grid of dots forming the letter 'R'.

Augustine Taneko
Chairman
Solomon Islands Broadcasting Corporation

Date:

Rence Sore
Permanent Secretary
Meteorology Division
Ministry of Environment,
Conservation and Meteorology

Date:

A large, stylized signature consisting of a grid of dots forming the letter 'T'.

Handwritten initials 'V09' and 'CR' in the bottom right corner.

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Article 1: Introduction 4

Article 2: Purposes of Disaster Broadcasting 4

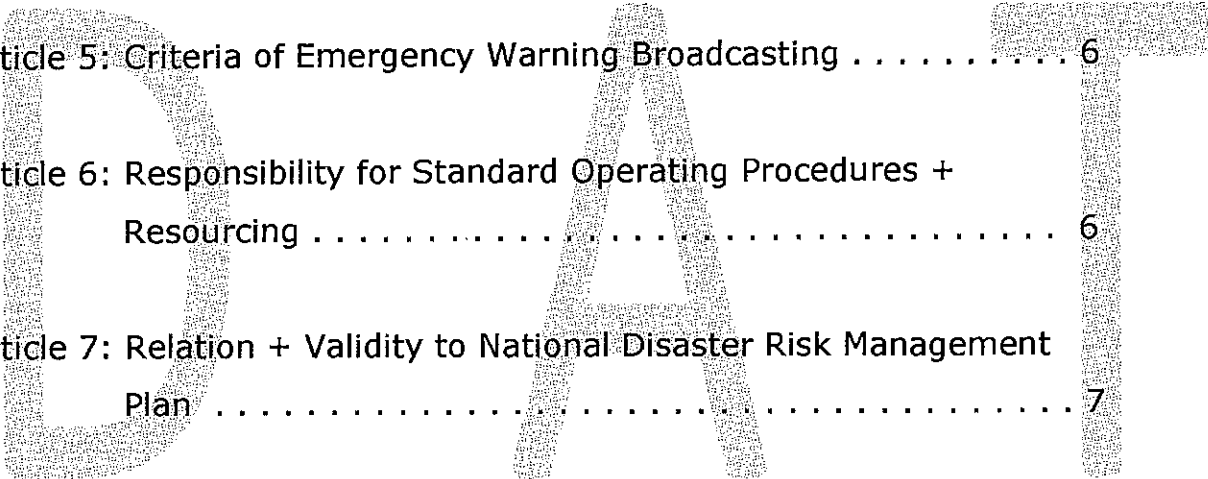
Article 3: Disaster Risk Management System 5

Article 4: Responsibility of Disaster Broadcasting 6

Article 5: Criteria of Emergency Warning Broadcasting 6

Article 6: Responsibility for Standard Operating Procedures +
Resourcing 6

Article 7: Relation + Validity to National Disaster Risk Management
Plan 7



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Article 1: Introduction

1. This MOU provides for a common understanding on Disaster Broadcasting through radio broadcasting services by Solomon Islands Broadcasting Corporation (SIBC) between National Disaster Management Office (NDMO), Ministry of Environment, Conservation and Meteorology (MECM), and Solomon Islands Broadcasting Corporation.
2. This MOU is for supporting the services of SIBC related to disaster reporting and not intended to place any constraints on the journalistic roles, such as reporting news, fulfilled by SIBC.

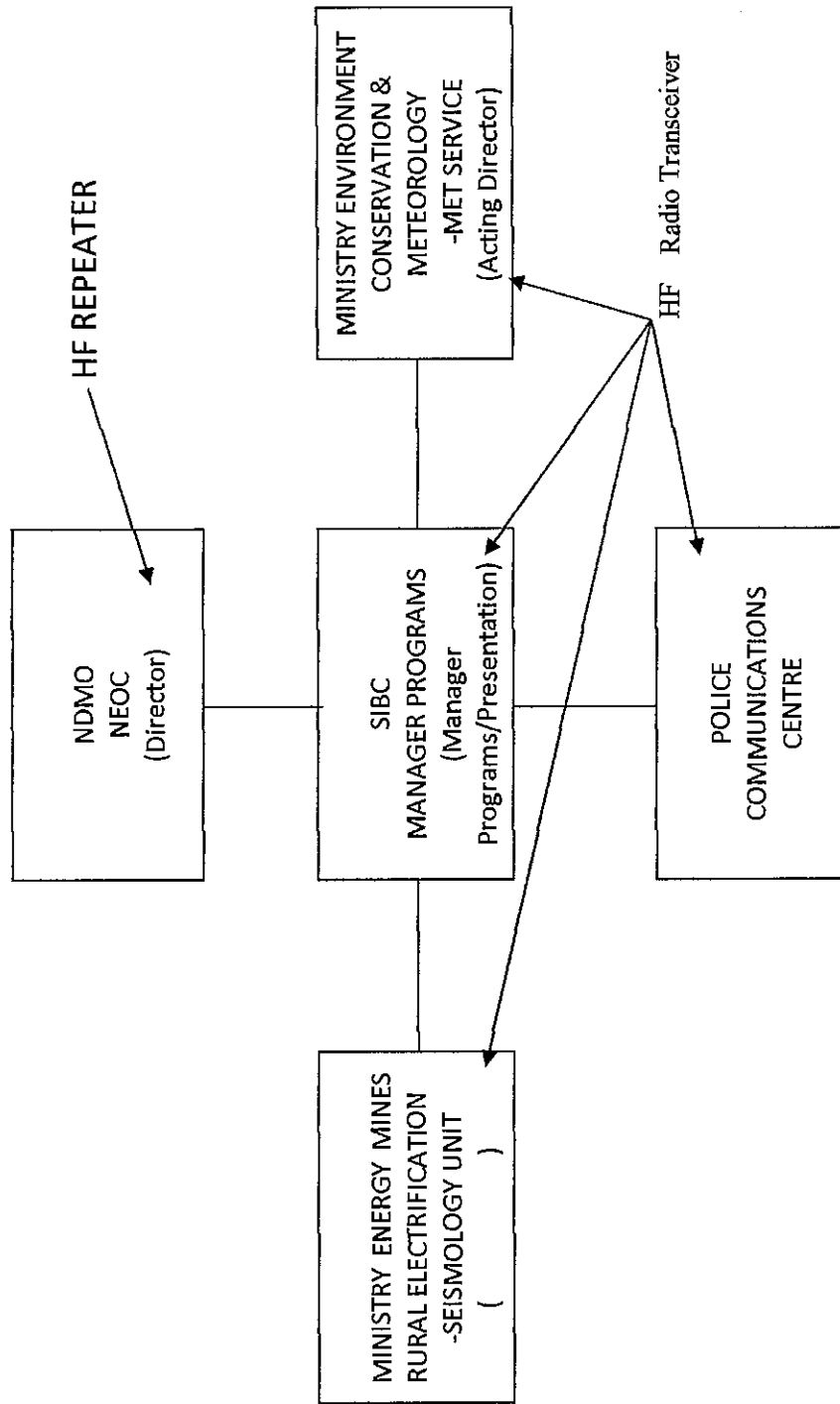
Article 2: Purposes of Disaster Broadcasting

3. The purposes of Disaster Broadcasting are:
 - To provide for early warning and information to the public on a potential or impending disaster in order to allow steps to be taken to reduce the impacts and prepare for assistance of people with special needs.
 - To provide an evacuation order or other instructions to the public under the National Disaster Council Act or the National Disaster Risk Management Plan, or other relevant plans.
 - To distribute information during disasters and on assistance available from the central government, local governments, medical facilities, Donors, NGOs and the other relevant organisations.
 - To provide public education broadcasts from time to time on measures to prepare for and manage disasters and reduce risk.
 - To provide forecasting and warning of disaster risks before any disaster occurs or to provide disaster information during and following a disaster.
4. The possible threats to be announced to citizens by Disaster Broadcasting are:

| | |
|--|--|
| Tropical Cyclones + Wind Storms | Ministry Environment, Conservation and Met |
| Floods | Hydrology Department (Ministry of Mines, Energy and Rural Electrification) +MECM |
| Earthquakes | Seismology Department (MMERE) |
| Landslides | Geology Department (MMERE) |
| Volcanic Eruptions | Vulcanology Department (MMERE) |
| Tsunamis + Wave Surges | MECM |
| Droughts | Agriculture Ministry + MECM |
| Pandemics | Health Ministry |
| Agricultural Pests + Diseases | Agriculture Ministry |
| Aviation + Maritime Disasters | Aviation Ministry + Marine Division (Ministry of Infrastructure Devt) |
| Fires | Fire Service + Police |
| Industrial Accidents | Fire Service + Police |
| Marine Pollution | SI Ports Authority + Environment Dept |
| Other man-made threats including the civil impacts of conflict | Police + National Security |

VP *CR*

DISASTER COORDINATION COMMUNICATIONS

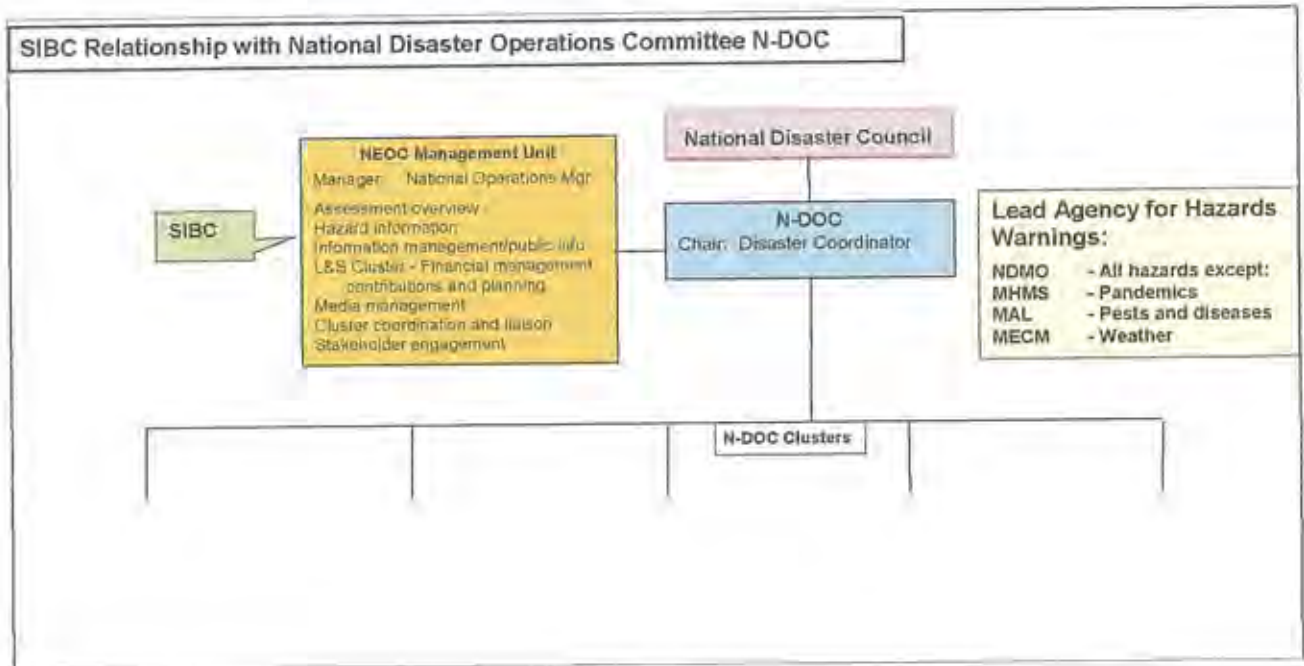


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Article 3: Disaster Risk Management System

5. The disaster risk management system in Solomon Islands addresses all of the disaster phases of disaster risk reductions, preparedness, and response as well as recovery and rehabilitation. With clear roles and responsibilities of the national and local governments, the relevant stakeholders of the public and private sectors cooperate in implementing various disaster countermeasures.
6. The organisational arrangement of the disaster risk management system for Disaster Broadcasting is:-



- ◆ N-DOC The National Disaster Operations Committee co-ordinates warnings and disaster response and is informed by the relevant Lead Agency for hazard warnings. The N-DOC is chaired by the Disaster Coordinator. This is the Director of NDMO.
- ◆ NEOC The National Emergency Operations Centre services the N-DOC through the National Operations Manager.
- ◆ SIBC Provides a Disaster Broadcasting Service through the NEOC Management Unit to the Disaster Coordinator or the relevant Lead Agency. For weather warnings, the service is provided directly to the Solomon Islands Meteorological Service.

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Article 4: Responsibility for Disaster Broadcasting

- 7. SIBC has responsibility for providing for Disaster Broadcasting as a designated public corporation and as a critical infrastructure agency under the National Disaster Risk Management Plan. Broadcasts shall be made in an accurate and timely manner according to the criteria set out in Article 5.
- 8. Disaster Broadcasting shall be requested by National Disaster Coordinator or Director Meteorology Service, or relevant Technical Agency for the hazard (listed in Article 2 Item 4).

Article 5: Criteria for Disaster Broadcasting

- 9. Disaster Broadcasting shall be requested by NDMO and Ministry of Environment, Conservation and Meteorology according to the criteria as shown in the following Table 1.

10. Table 1: Criteria of Emergency Warning Broadcasting

| PURPOSE | HAZARD | TIME FRAME FOR BROADCAST |
|---------------------------------|-------------------|--|
| Warning | Weather | Guideline issued by Ministry of Environment, Conservation & Meteorology. |
| | All other hazards | Within 5 minutes of receipt of request and material. |
| Evacuation Order or Instruction | All hazards | Within 5 minutes of receipt of request and material or as requested. |
| Information during a disaster | All hazards | As information bulletin within one hour or as requested. |
| Public Education | All hazards | As information bulletins to an agreed time table. |

- 11. a) Disaster Broadcasts for the purposes of Warnings and Evacuation Orders or Instructions shall not be charged to the organization which requested it.
- b) Disaster Broadcasts for the purpose of Information (normal awareness/education) and Public Education shall be charged to the Lead Agency.

Article 6: Responsibility for Standard Operating Procedures + Resourcing

- 12. All Departments and Agencies, noted under Section 4, will be required to develop their own Standard Operating Procedures (SOPs) to provide information about disasters to SIBC for broadcast. SIBC will be required to develop its own SOPs to broadcast information about disasters.
- 13. The Departments and Agencies named in this document are responsible for resourcing their own activities connected with Disaster Broadcasting.

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Article 7: Relation, Validity to the National Disaster Risk Management Plan

- 14. This MOU shall be defined on the National Disaster Risk Management Plan, which will be finalised by the Government.
- 15. Before establishment of the National Disaster Risk Management Plan, this MOU has validity by itself.
- 16. Validity of this MOU shall belong to the National Disaster Risk Management Plan automatically after establishment of the plan.

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APPENDIX 6

MEMORANDUM OF UNDERSTANDING ON DISASTER BROADCASTING

Memorandum of Understanding on Disaster Broadcasting

Between


Solomon Islands Broadcasting Corporation,

And


Ministry of Environment, Climate Change, Disaster Management and Meteorology

December 2010


**Honiara
Solomon Islands**


Mr. Joe Hopkrou
Acting Permanent Secretary
Director/Environment
Ministry of Environment, Climate Change,
Disaster Management and Meteorology
P O Box 21
Honiara




Mr. Lotile
Director/National Disaster Management Office
Ministry of Environment, Climate Change,
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Article 1: Introduction

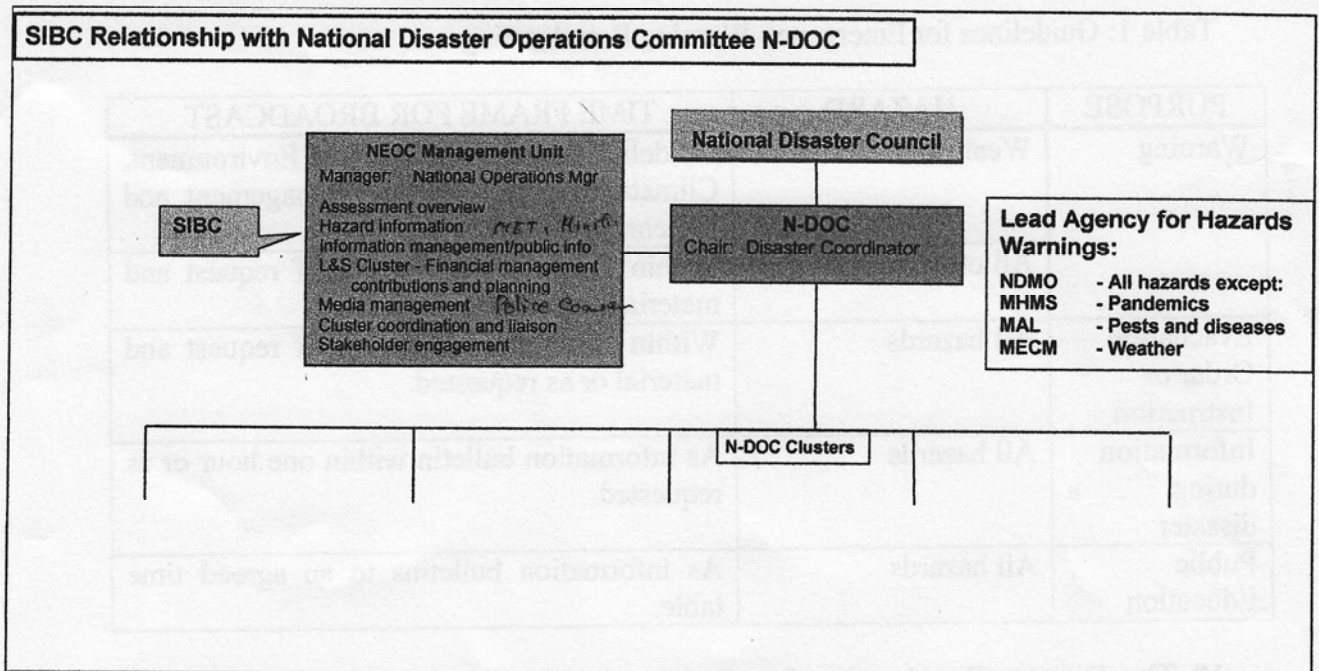
1. This MOU provides for a common understanding on Disaster Broadcasting through radio broadcasting services by Solomon Islands Broadcasting Corporation (SIBC) between the Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM), and Solomon Islands Broadcasting Corporation.
2. This MOU is for supporting services of SIBC relating to disaster reporting and not intended to place any constraints on the journalistic roles, such as reporting news, fulfilled by SIBC.

Article 2: Purposes of Disaster Broadcasting

3. The purposes of Disaster Broadcasting are:
 - To provide for early warning and information to the public on a potential or impending disaster in order to allow steps/measures to be taken to reduce the impacts of such disaster and prepare for assistance of people with special needs.
 - To provide evacuation orders or other instructions to the public under the National Disaster Council Act or the National Disaster Risk Management Plan.
 - To broadcast and disseminate information during disasters and on any assistance from the central government, provincial governments including Honiara City Council, medical facilities, Donors, NGOs and the other relevant organizations.
 - To provide public educational broadcasts from time to time on steps and measures to prepare for and manage disasters and reduce risk.
 - To provide forecasting and warning of disaster risks before any disaster occurs or to provide disaster information during and following a disaster.
4. The possible threats to be announced to the public by Disaster Broadcasting are:
 - Tropical Cyclones and Wind Storms
 - Floods
 - Earthquakes
 - Landslides
 - Volcanic Eruptions
 - Tsunamis and wave surges
 - Droughts
 - Pandemics
 - Agriculture Pests and Diseases
 - Aviation and Maritime Disasters
 - Fires
 - Industrial Accidents
 - Marine Pollution
 - Other man-made threats including the civil impacts of conflict

Article 3: Disaster Risk Management System

- The disaster risk management system in Solomon Islands addresses all of the disaster phases of disaster risk reductions, preparedness, and response as well as recovery and rehabilitation. With clear roles and responsibilities of the national and local governments, the relevant stakeholders of the public and private sectors cooperate in implementing various disaster countermeasures.
- The organization arrangement of the disaster risk management system for Disaster Broadcasting is:-



- ◆ **N-DOC** - The National Disaster Operations Committee co-ordinates warnings and disaster response and is informed by the relevant Lead Agency for hazard warnings. The N-DOC is chaired by the Disaster Coordinator. This is the Director of NDMO.
- ◆ **NEOC** - The National Emergency Operations Centre services the N-DOC through the National Operations Manager.
- ◆ **SIBC** - Provides a Disaster Broadcasting Service through the NEOC Management Unit to the Disaster Coordinator or the relevant lead agency. For weather warnings the service is provided directly to the Solomon Islands Meteorological Service.

Article 4: Responsibility for Disaster Broadcasting

- SIBC has responsibility for providing for Disaster Broadcasting as a designated public corporation and as a critical infrastructure agency under the National Disaster Risk

Management Plan. Such Broadcasting shall be made in an accurate and timely manner according to the criteria set out in Article 5.

8. A Request for Disaster Broadcasting shall be made by Director NDMO or the Disaster Coordinator in the Ministry of Environment, Climate Change, Disaster Management and Meteorology to SIBC. Material to be broadcasted shall be provided by the Lead Agency for the hazard.

Article 5: Criteria for Disaster Broadcasting

9. A Request for Disaster Broadcasting shall be made by Director NDMO or the Disaster Coordinator in the Ministry of Environment, Climate Change, Disaster Management and Meteorology according to the criteria shown in the following table 1:-

Table 1: Guidelines for Emergency Warning Broadcasting

| PURPOSE | HAZARD | TIME FRAME FOR BROADCAST |
|--|-------------------|---|
| Warning | Weather | Guideline issued by Ministry of Environment, Climate Change, Disaster Management and Meteorology. |
| | All other hazards | Within 5 minutes of receipt of request and material. |
| Evacuation Order or Instruction | All hazards | Within 5 minutes of receipt of request and material or as requested. |
| Information during disaster ^a | All hazards | As information bulletin within one hour or as requested. |
| Public Education | All hazards | As information bulletins to an agreed time table. |

10. The Disaster Broadcasting for the purposes of Warnings and Evacuation Orders or Instructions shall not be charged to the organization which requested it. Disaster Broadcasts for the purpose of Information and Public Education shall be charged to the Lead Agency.

Article 7: Relation, Validity to the National Disaster Risk Management Plan

11. This MOU shall be defined on the National Disaster Risk Management Plan, which will be finalized by the Government.
12. Before establishment of the National Disaster Risk Management Plan, this MOU has validity by itself.