

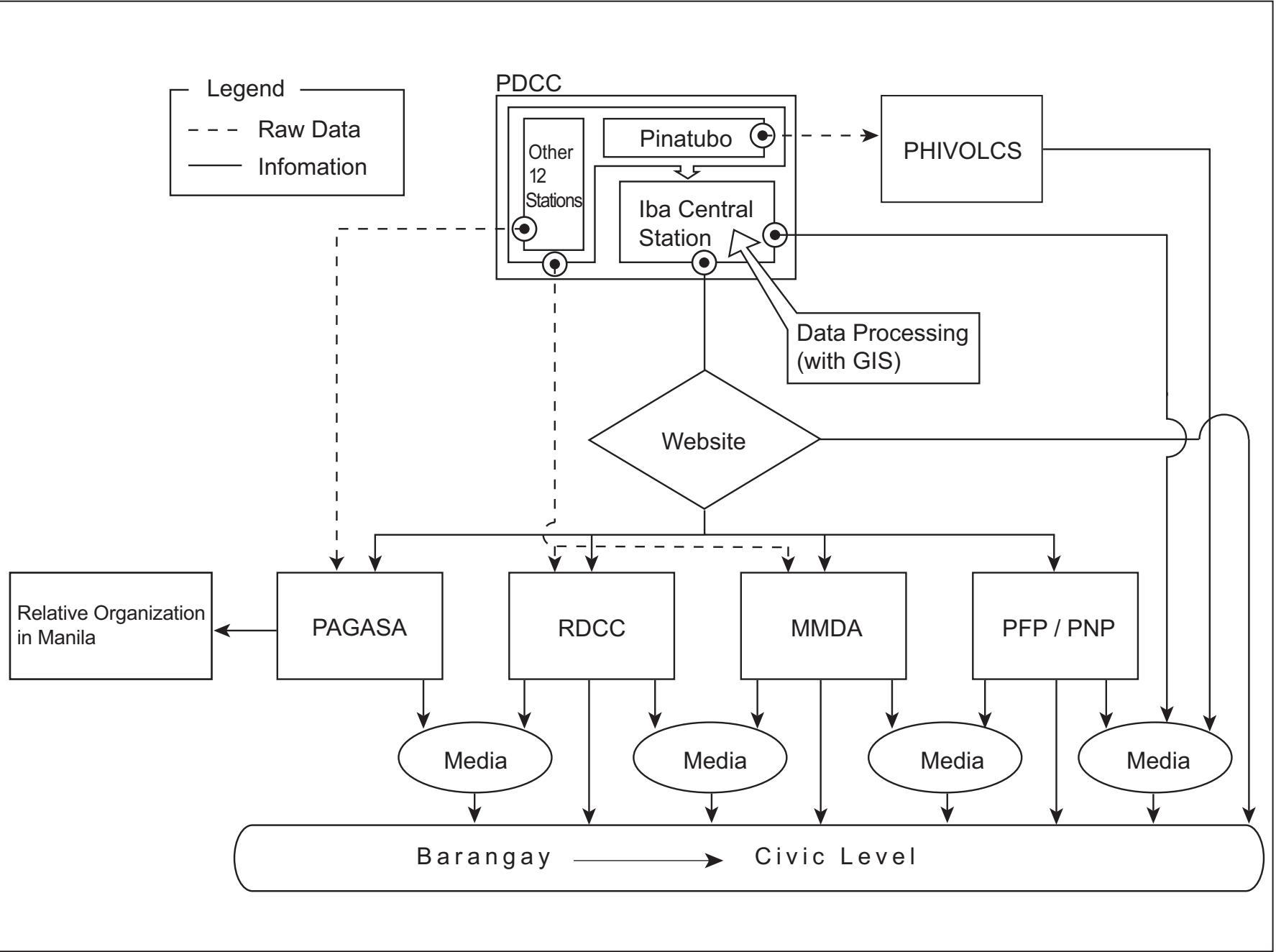
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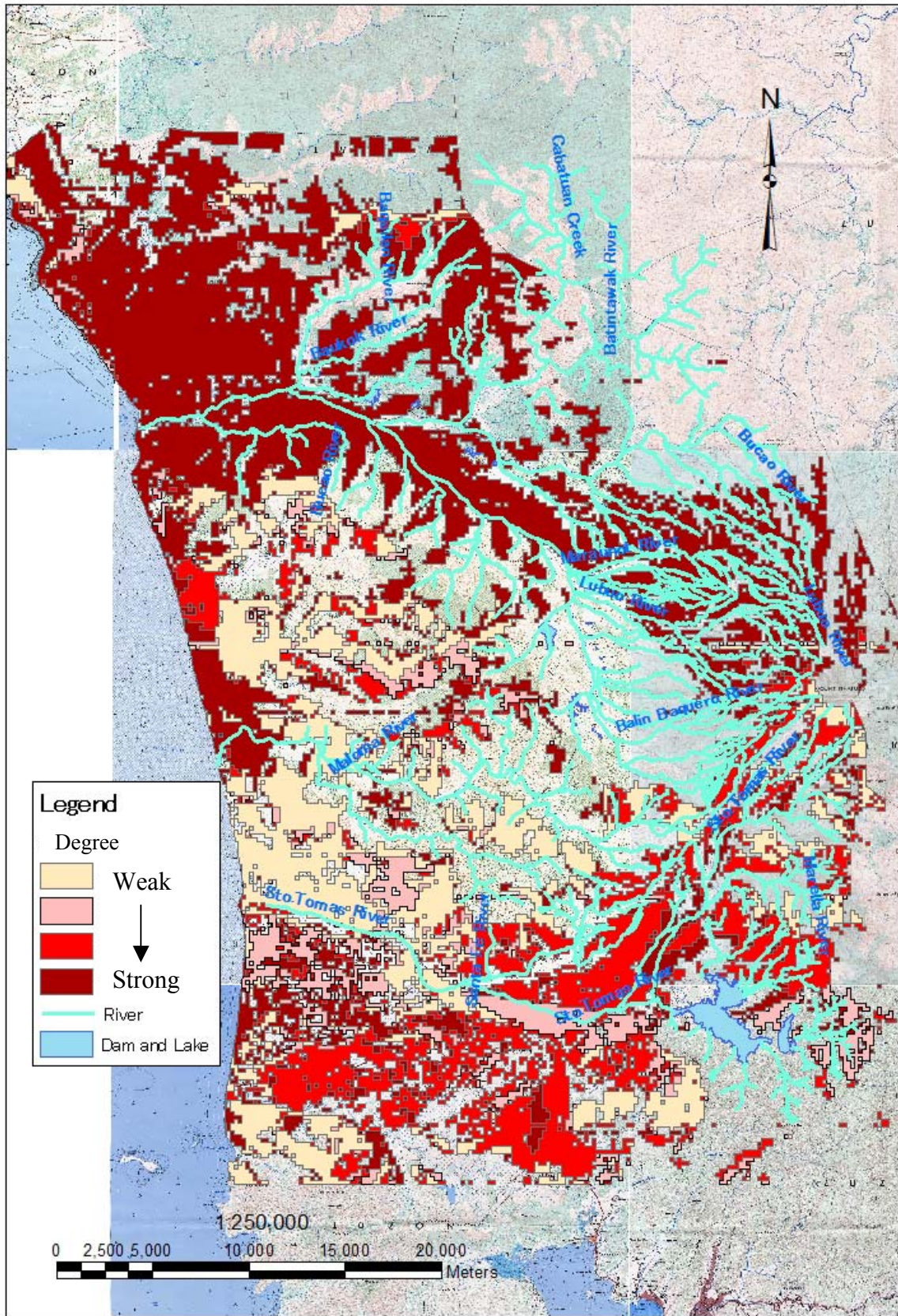
**Figure 2.5.1**

**General Idea of Data Dissemination System  
 by Cellular Phone**



**Figure 2.5.2**

**Dissemination System for Flood/Mudflow  
Warning**



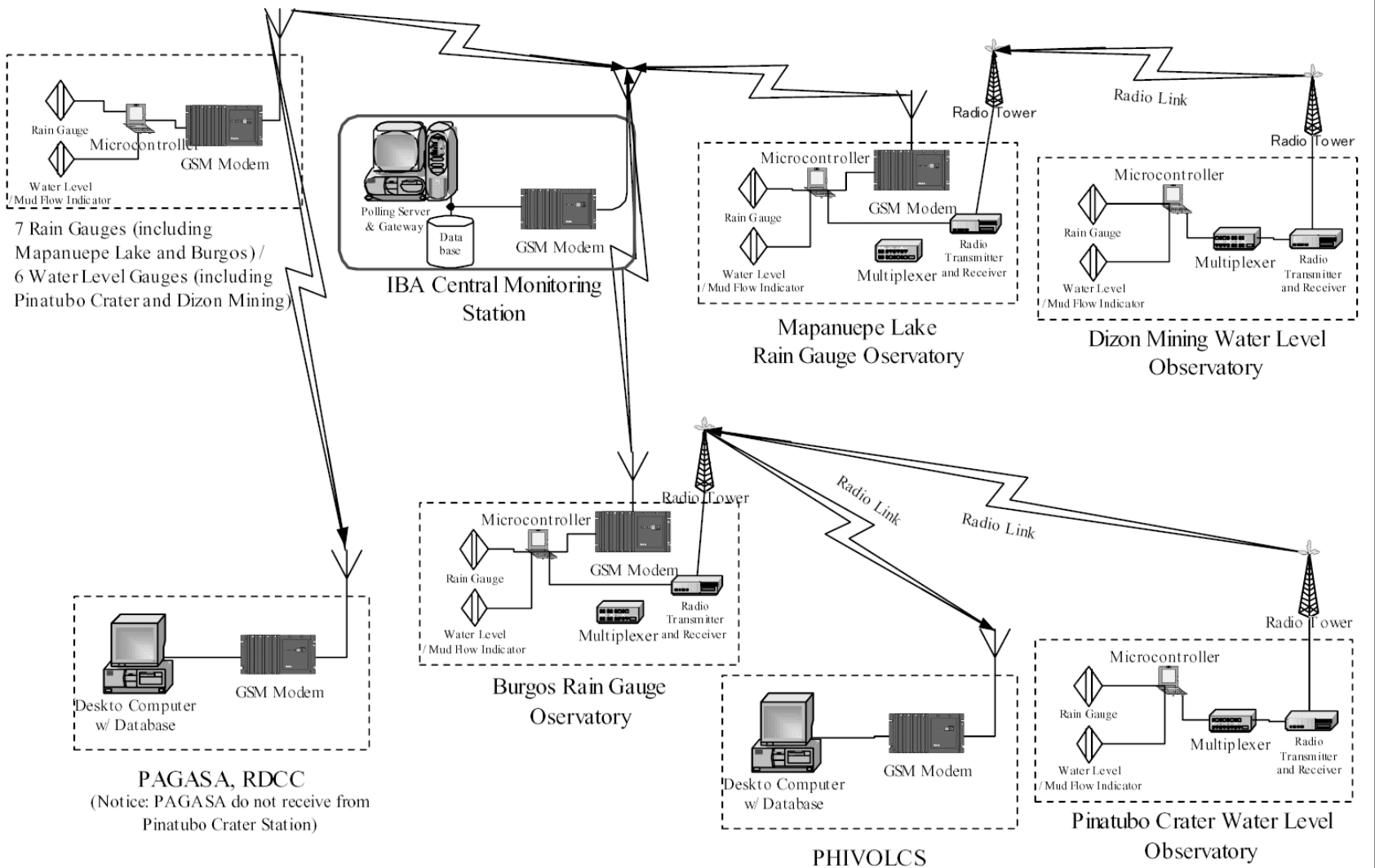
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**Figure 2.5.3**

**Probable Propagation Area of Radio Wave for  
Cellular Phone**



**Figure 2.5.4**

**Data Transmission System**

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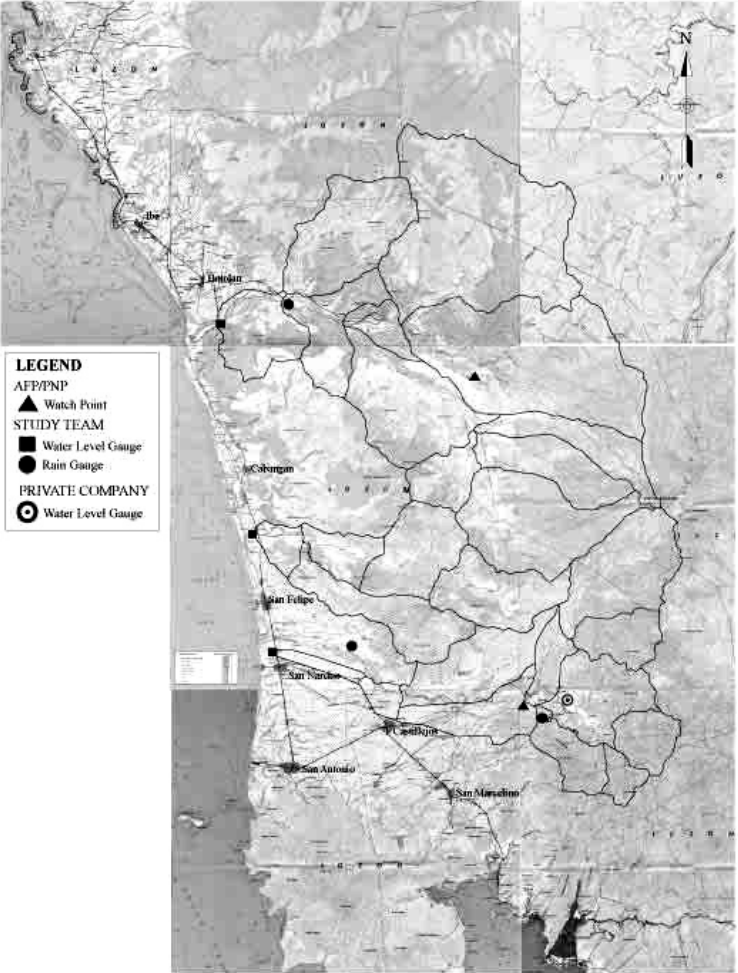
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Work Item	Year/Month	1st Year												2nd Year												3rd Year											
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
<b>I</b>	<b>DETAILED DESIGN &amp; TENDER PROCESS</b>																																				
	<b>1 Basic Design</b>																																				
	<b>2 Detailed Design &amp; Tender Process</b>																																				
	Exchange of Notes (E/N)																																				
	Contract with Consultants																																				
	Detailed Design																																				
	Tender Process																																				
	<b>3 Construction Works</b>																																				
	Order & Fabrication																																				
	Check & Transport																																				
	Installation & Turn Over																																				
	<b>4 Operation &amp; Maintenance</b>																																				
	Technical Assistance																																				
	Transfer of Knowledge																																				
	Seminar																																				
<b>II</b>	<b>CONSULTANT SERVICES</b>																																				
	Team Leader																																				
	Electric Engineer																																				
	Cost Estimator																																				
	Installation Engineer																																				
	Tutor																																				

**Figure 2.6.1**

**Implementation Schedule of Flood Warning System**

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**Figure 2.7.1**

**Step-wise Development on Flood Warning  
System**

Item	Existing System	Recommended System	Inclusive Private System
<b>Applied Method</b>	- Visual Observation	- Application of Cellular Phone for Data Dissemination	- Visual Observation - Obtained Value from Rainfall Gauge
<b>Administrative Body</b>	- AFP/PNP	- PDCC - PHIVOLCS	- AFP/PNP - Dizon Mining Company - Private Watchman paid by PDCC
<b>No. of Watch / Monitoring Points</b>	- Water Level W-Point :2	- Rainfall Gauging : 7 - Water level Gauging : 6 (11 Stations in Total)	- General Information from Dam Site - Water Level W-Point : 2 - Rainfall Gauging : 1
<b>Warning Issuance Base</b>	- Individual Judgment	- Accumulated rainfall value - Intensity of Rainfall	- Individual Judgment - Accumulated rainfall value
<b>Transmission Path of Information</b>	- Watch points to PDCC (radio wave) - PDCC to Barangay (broadcasting by radio)	- Rainfall/Water Level Gauging Station to PDCC (Refer to Figure 15.4.3) - Barangay to Residents (broadcasting by radio /siren) - PDCC to Anybody through Website	- Watch points to AFP/PNP (radio wave) - AFP/PNP to PDCC (Telephone) - Dizon Dam Site to Main Office (radio wave) - Main Office to PDCC (Telephone) - Rainfall Gauging Station to PDCC (Telephone) - PDCC to Barangay (broadcasting by radio)
<b>Amount of Initial Investment</b>	- No Extra Cost	- 182 million yen (around 80 million Peso)	- No Extra Cost
<b>Operation and Maintenance Cost</b>	- As it is.	- Around 1 million pesos	- Petty cash to the watchmen
<b>Effectiveness</b>	- As it is	- Most effective - Data accumulation for monitoring is available	- Better than present
<b>Problems</b>	- Judgment will depend on the personality.	- Initial investment, operation & maintenance cost is extremely high compared with others	- Need negotiation with Dizon mining Company - Judgment will depend on the personality.