

APPENDIX-6

OUTLINE OF HYDROPOWER RESOURCE DATABASE

The Study Project on Resource Inventory
on Hydropower Potential in the Philippines

Introduction of Hydropower Resource Database

March, 2012

JICA study team

NEWJEC Inc.

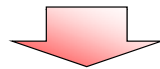
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1. Background of developing database

Current Situation of Promoting Hydropower Development

- ◆ **Update the Project List is tough work for DOE staff**
 - ⇒ Updating Data on the DOE web is not easy
 - ⇒ It is difficult for investors to get updated project information
- ◆ **Preparing detail information for the Project site is tough work for DOE staff**
 - ← many many project sites
 - ← Preparing maps and data are not easy



Therefore,

It takes long time to prepare enough information
for both DOE staff and Investors
It takes long time for promoting project sites

2. Purpose of developing database

- ◆ **To help DOE staff for easier promotion and preparing documents for the projects**
 - easy to find and check the project sites (ex. Coordinates, Duplications)
 - easy to update the project status and information
 - easy to prepare project information for providing to developers
- ◆ **To make it easy for preparing Web contents to be disclosed about the project information**
 - easy to update information on the Web



To make it easy for Investors to access the updated project information

3. Overview of the Database system

3.1 Hydropower Resource Database (HRD)

◆ Access Database of Hydropower Project sites

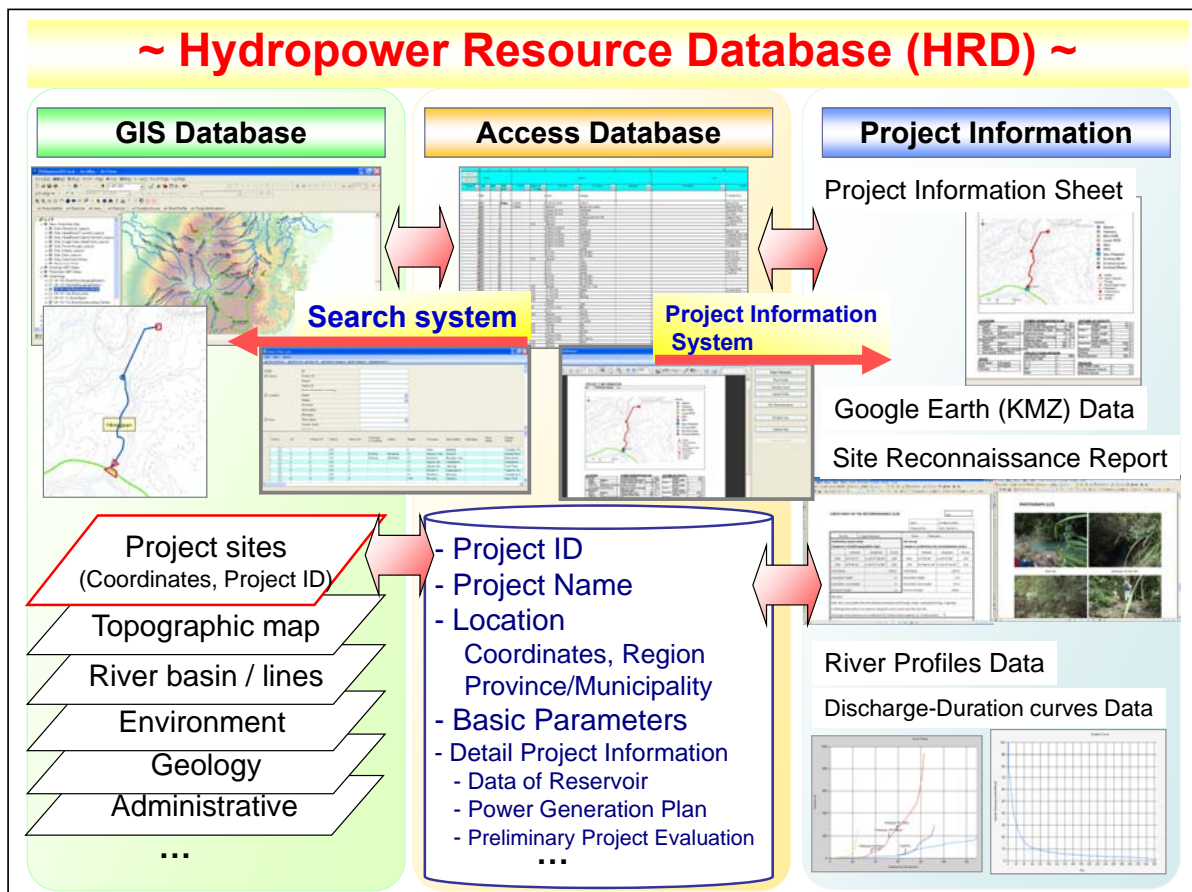
Project ID, Location, Status, Project Parameters

◆ GIS Database

Hydropower Project sites,
Other related GIS data (Topography, Administrative, Geology,
Hydrology, Environment, ...)

◆ Project Information

Preliminary Project Layout, Project Information Sheets
Site Reconnaissance Reports, 3D Bird's eye view (Google Earth data)
River Profiles, Discharge-Duration Curves
Preliminary Project Design information, Evaluation



3.2 Introduction of Data Contents

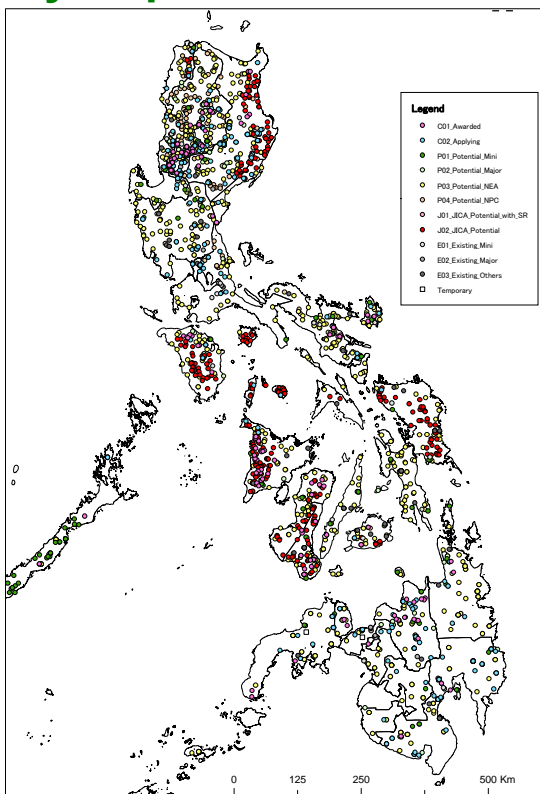
Basically,
GIS data covers
All over the Philippines

1. Existing Water Facilities
2. **Hydropower Potential Sites**
3. Power Facilities
4. Topography
5. Infrastructure
6. **Hydrology**
7. Electric Demand Area
8. Social Environment
9. Geology
10. Administrative Boundary

Target Area for MAP STUDY
JICA study's Potential Sites
Site Reconnaissance
Detail River Lines & River System Areas
Based on 1/50,000 topographic map



Hydropower Potential Sites



Data of HEP Potential Sites

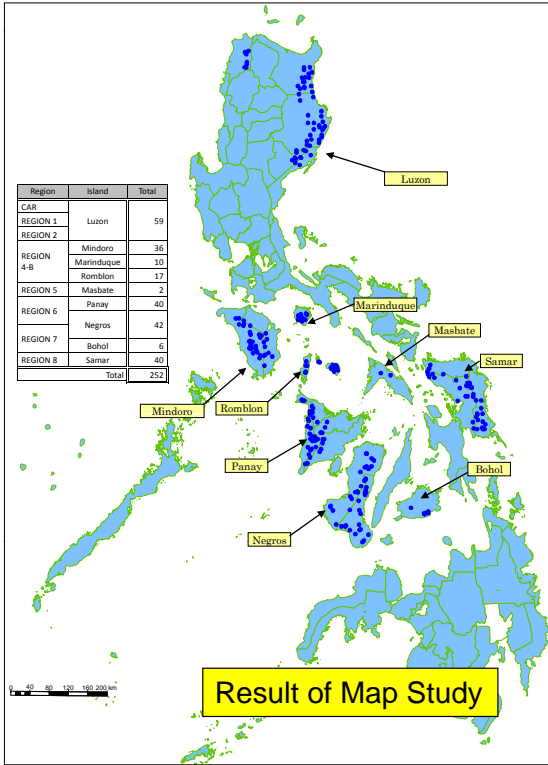
Status	Item	Num bers	Data Source
Contract Hydro Electric power Potential Sites	C01 Potential sites by private sector (Awarded)	124	Potential sites by private sector (Awarded)
	C02 Potential sites by private sector (Applying)	250	Potential sites by private sector (Applying)
Existing facilities	E01 Existing mini hydropower plants	53	Existing mini hydropower plant
	E02 Existing hydropower plants	19	Existing hydropower plants
	E03 Other facilities	46	- Dam in the Philippine (NWRB) - Water and Flood (DPWH)
New Hydro Electric power Potential Sites	J01 JICA potential site with Site reconnaissance	47	Outcome of Map study
	J02 JICA potential site	205	ditto
Existing Hydro Electric power Potential Sites	P01 Potential sites of mini hydropower (<10MW)	118	- Potential sites of mini hydropower - Potential sites by JICA's Master plan in Palawan - Potential sites by JIC project in the Iugao terrace paddy fields
	P02 Potential sites of major hydropower (>10MW)	56	Potential sites of major hydropower (>10MW)
	P03 Potential sites investigated by NEA	905	Potential sites investigated by NEA
	P04 Potential sites by NPC's inventory survey	145	Potential sites by NPC's inventory survey
Additional Hydro Electric power Potential Sites	T01 Temporary site in a pending condition	uncertain	Temporary category for pending (could not decide the status) sites due to lack of specific or significant information.

ALL project in Database : About 2,000
With Coordinates : About 550

JICA's Study : **252**

JICA's Study with Site Reconnaissance : **47**

The Result of Map Study



Regional Distribution and Generation Type of HEP Potential Sites

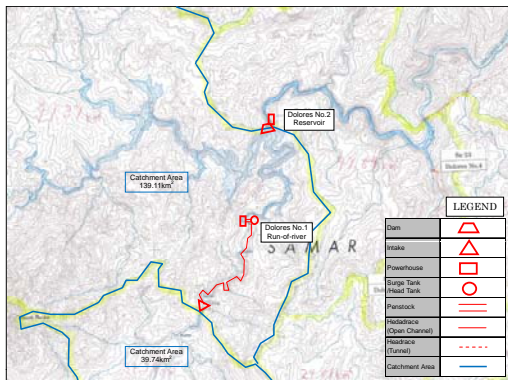
Region	Island	Run-of-river	Reservoir / Pondage	Sub Total	
CAR	CORDILLERA ADMINISTRATIVE REGION	Luzon	52	7	
REGION 1	ILOCOS REGION				
REGION 2	CAGAYAN VALLEY				
REGION 4-B	MIMAROPA	Mindoro	30	6	36
		Marinduque	9	1	10
		Romblon	17	0	17
REGION 5	BICOL REGION	Masbate	2	0	2
REGION 6	WESTERN VISAYAS	Panay	39	1	40
		Negros	35	7	42
REGION 7	CENTRAL VISAYAS	Bohol	6	0	6
REGION 8	EASTERN	Samar	32	8	40
Sub Total			22	30	Total 252

JICA study team had identified **252** sites by Map Study.

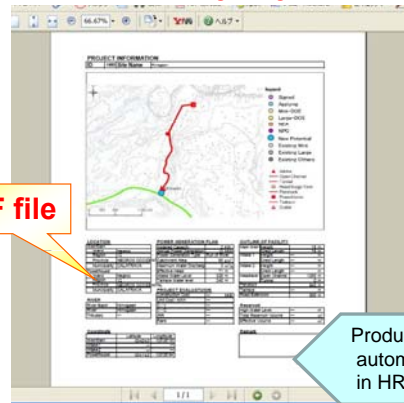
JICA study Potential Sites (Map Study)

Planning the HEP Sites

Layouts on 1/50,000 Topographic Map



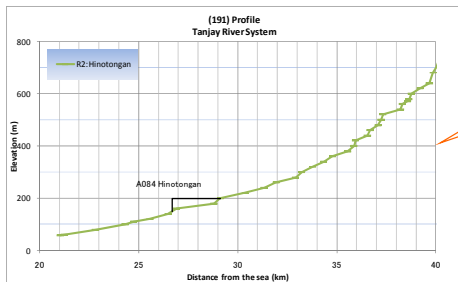
Project Information with Preliminary Layout



PDF file

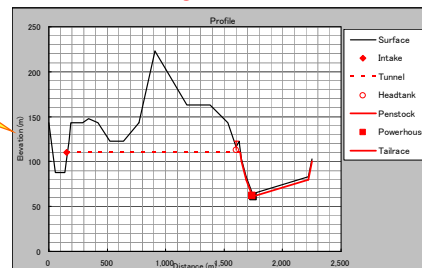
Produced automatically in HRD

Location on River Profiles

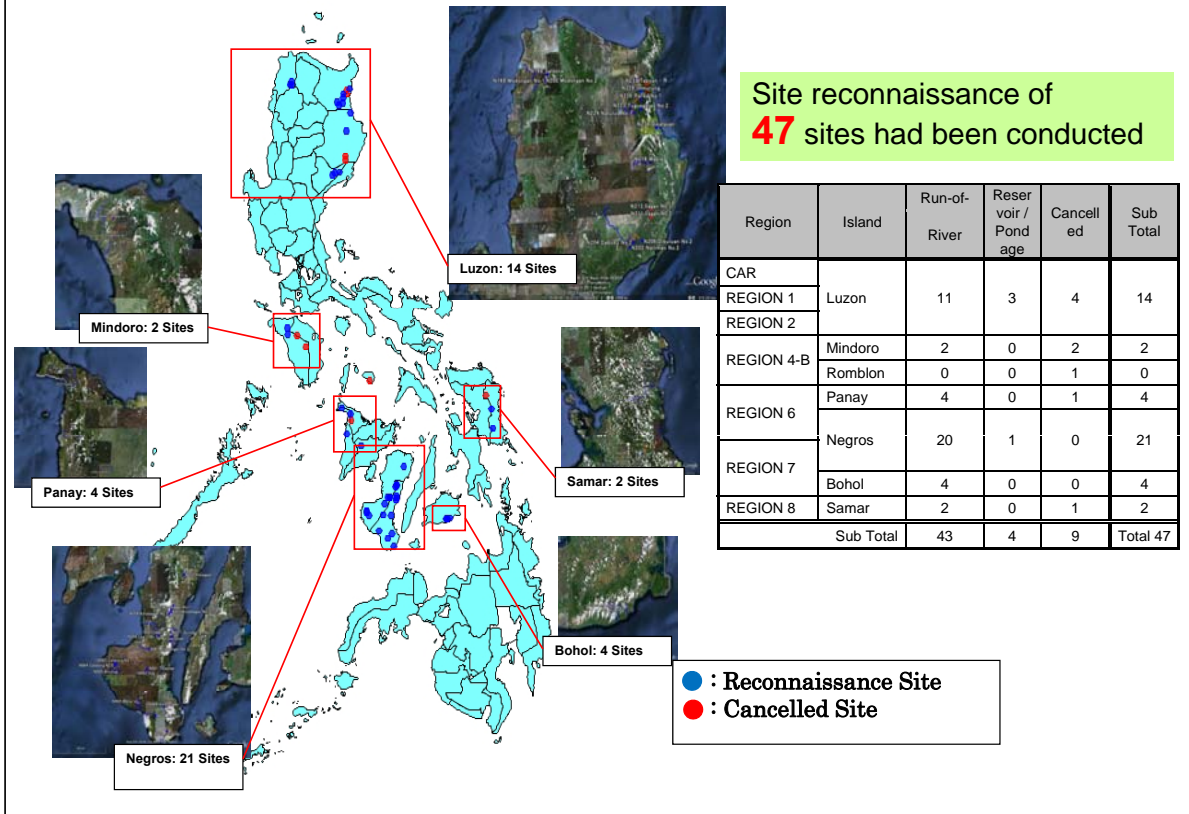


Linked to CSV file

Waterway Profiles



Result of Site Reconnaissance



JICA study Potential Sites (Site Reconnaissance)

Example of Additional Information

Site Reconnaissance Report

PDF file

PDF file

Route Map

