

Minute of Meeting with Sangunian Bayan members in Municipality of Asipulo

Date: February 21, 2011, 13:40-15:00

Venue: Sangunian Bayan Hall of aAsipulo

Present: 16 persons

Mayor of Asipulo: Hon. Eladio Bang-ud

SB members: Hon. Thomas U. Pull (Vice- Mayor)

Hon. Denis P. Gumangan

Hon. Clarence D. Dupingay

Hon. Clarence P. Bahingawan

Hon. Romel D. Pallay

Hon. Christine D. Humiwat

Hon. Florence Piggangay

Hon. Fernando D. Dupingay

Hon. Robert P. Ullani

JICA: Mr. K. Hamaguchi

Ms. Jennifer P. Erice

JICA Study Team: Mr. M. Shimizu

Mr. Y. Miyamoto

Ms. N. Hayashi

Mr. Ignacio N. Bunoluna

Highlights of the meeting/Discussion:

1. Preliminaries

- The meeting started at 1:40pm after the SP meeting finished in Lagawe, the JICA study members proceed to visit Asipulo Sangunian Bayan members to explain the purpose of the Cotcot study.
- PPDC Carmelita Buyuccan introduced the JICA and JICA Study team to the SB members.

2. Presentation

- Mr. K. Hamaguchi, JICA personnel presented the purpose of visit SB members and the back ground of the Cotcot study.
 - Scaling up of mini-hydro projects in Ifugao
 - Support for Rice Terrace Conservation Fund
- Mr. M. Shimizu, the Study Team Leader presented the outline of Cotcot study.
 - Objectives of the project
 - History and background of the project of the project
 - Location of the project

- Schedule and items of the feasibility study
- Basic considerations in the planning and designing of the project

3. Discussion/Open Forum

- Hon. Dennis Gumangan, SB member who joined the JBIC study team in 2004 in Barangay Haliap (Mappit site) before asked the status of previous study and the difference between past study and the study this time.

Mr. Shimizu replied that during JBIC pilot study, the team conducted only pre-feasibility study which was simple visual inspection, but that study was suspended in the middle stage due to UNESCO's opposition and Free Prior Informed Consent for the indigenous peoples rights concern. Since then e8 tried to develop the Mappit site. But there were some opposition due to some speculation and suspicion on the intent of the study team saying it was for the purpose of treasure hunting. They pretended to conduct mini-hydro study but real intention was to find gold. This is why the development of the site was transferred in Ambangal of Kiangang where it is now finished and operational.

- Another SB member asked if the host Barangay had any benefit from the Ambangal project.

PPDC Carmelita Buyucan answered that since Energy Regulatory Committee has not yet approved authority to sell powers, though the operation has started and meter reading of power output sent to IFELCO. Thus none of benefit shares yet. Once it is approved, the sharing will be consult with host municipality of Kiangang and host Barangays.

- How about the impact on the environment?

Mr. Shimizu answered the Study team would conduct Initial Environmental Examination (IEE) and considered the mitigation measure to minimize the impact.

- How about the possibility of affecting upstream of river?

The Study team will examine it.

4. Conclusions and closing.

- Without conducting feasibility study, the JICA study team cannot say anything like impact, economical and financial viability and organizational aspect of the project. During the e8 study, there were some misunderstanding towards the study, but now the SB members accept and support the study.
- 2 SB members were asked to join the community consultation the next day.

**Minute of Meeting with Sangunian Panlalawigan (SP) members
in Provincial Government of Ifugao**

Date: 21 February 2011, 10:00-12:30 AM

Venue: Sangguniang Panlalawigan plenary hall, Provincial Capitol of Ifugao

Present:

Vice Governor: Pedro G Mayam-o, Presiding Officer

SP members: Jose Jordan T. Gullitiw
Robert K. Humiwat
Victor H. Bunnol, Jr.
Robert B. Mangyao
Joseph J. Odan
Frederick F. Dulnuan
Clemente T. Bongtiwon
Victor B. Bunnol, Sr
Gerald D. Luglug
Ronel T. Gayamo

JICA: K. Hamaguchi
Jennifer P. Erice

Project Study Team: M. Shimizu
Y. Miyamoto
N. Hayashi
Ignacio Bunolna (Interpreter)
Wilfrido Palarca (IEE study member)
Martin John S. Morales (IEE study member)

Highlights of the meeting/Discussion:

1. Preliminaries

- Vice Governor Pedro Mayam-o, presiding officer, called the meeting to order at 10 o'clock AM after the secretary declared that there was a quorum.
- Board Member Robert Mangyao moved, and duly seconded, for the suspension of the rules to accommodate the presentation of the visitors.
- The presiding officer acknowledged the presence of the study team and JICA and requested them to proceed with the presentation.
- Before the presentation, PPDC Carmel Buyuccan, thanked the SP for accommodating the request to do a presentation of the proposed feasibility study of the Cotcot mini-hydro power plant. She went on to introduce the members of the study team and the representative from JICA.

2. Presentation

- Mr. K. Hamaguchi, JICA personnel, presented the background and purpose of the visit of the Cotcot feasibility study team.
 - Scaling up of mini-hydro projects in Ifugao
 - Support for Rice Terrace Conservation Fund
- Mr. M. Shimizu, the Study Team Leader, presented the outline of Cotcot feasibility study.
 - Objectives of the project
 - History and goal of the mini-hydro development in Ifugao
 - Basic concept of the project
 - Location of the project
 - Schedule and items of the feasibility study
 - Basic considerations in the planning and designing of the project

3. Discussion / Open Forum

- What the capacity the proposed Cotcot mini-hydro power plant?
 - ↓
 - 1M (1,000 kW)
- How much Rice Terrace Conservation Fund (RTCF) will be generated from the Cotcot project?
 - ↓
 - It will depend on the result of the feasibility study. However, the study team projects it will generate 10 to 15 Million pesos per year.
- Why was the output capacity changed? During the JBIC study and e8 study, every time a study is made the capacity changed. The original plan was 900kW, and 1.5 MW and then 1 MW this time. (Hon. Jordan Gullitiw)
 - ↓
 - The study team has to analyze what scale will be the most feasible. It has to be examined.
- After the study, will it be surely implemented? There were many studies conducted in the past, but none of them was realized. (Hon. J. Gullitiw)
 - ↓
 - JICA funded on a grant basis the Feasibility Study (FS) and is offering through the “Environmental Development Project” (EDP) of Development Bank of the Philippines (DBP) for the implementation as soft loan project.
- Why was the JBIC study suspended? (Hon. J. Gullitiw)
 - ↓
 - UNESCO then has negative perception on mini-hydro power plant thinking that it will adversely affect the landscape of the rice terraces, a UNESCO World Heritage site. But now UNESCO understood what a mini-hydro power is specially after the e8

funded project.

- Consider the impact by the project on the Ifugao intangible culture. Consider the environmental impact on heritage and wild life. It might have an adverse effect on the cultural lifestyle. (Hon. Joseph Odan)

↓

It will be examined in the Feasibility Study.

- Can the Provincial Government of Ifugao (PGI) prevail on the loan?

↓

It depends on the decision of PGI after the result of Feasibility Study.

- How much would be the construction cost?

↓

It is about 100 Million pesos, equivalent to 2 Million US dollar. The PGI had a plan of provincial hospital establish with 50 Million pesos loan project in the past, but it was cancelled. If the Cotcot project will be implemented as a loan project, it is another story if the PGI really can avail a loan. The SP is worried about how the PGI can repay such big loan? The SP would like to ask JICA and TEPSCO to find sponsor and/or any grant scheme for the Cotcot. 100% of loan is very impossible.

↓

The study team will analyze if the project is financially, economically, organizationally, environmentally feasible or not and show the cash flow.

- Does UNESCO still oppose the Cotcot project? (Hon. Robert Mangyao)

↓

It is located outside the heritage sites and they have a good understanding about mini-hydropower projects.

- The name Cotcot is not correct because all facilities will be located in municipality of Asipulo. Cotcot is a sitio and is located in the municipality of Kiangan. We should change that to “Likud”, the proper name of its location.

↓

The suggestion was accepted but it will still be finalized by the end of the study.

- Will the RTCF be allocated only the World Heritage site? (Hon. J. Dulnuan)

↓

As long as there are rice terraces, the municipality can access from it. In case of the Ambangal project, the host barangays and municipality has priority over the RTCF but other barnagays in other municipalities are eligible and have a share in the allocation of the RTCF.

- Will the tourism industry also be able to implement by the RTCF?(Hon. J. Dulnuan)

↓

It could be. PPDO made the draft operation and guidelines of RTCF. It will be finalized soon and copy to be provided to SP members later.

- By who and how will the RTCF management monitored? (Hon. J. Dulnuan)
 - ↓
 - The Ordinance 2010-019 described its management structure and some implementation guidelines. This will be further refined to include the monitoring system.

- Hon. Robert Humiwat thanked JICA and the members of the study team for again initiating the study of the Likud mini-hydro power plant. He informed that this is in keeping with the provincial ordinance on mini-hydro power development in the province. While the study is a 100% grant from JICA, the construction phase will be another story as this is proposed for a loan which brings about some skepticism. He emphasized that the profit to be derived will go for loan repayment before any other.

He asked if the study team and JICA help in scouting for possible grant for the Project. In the meantime he asked that the feasibility study be completed first as it can be offered on a Build Operate and Transfer scheme.

- Hon Humiwat suggested that the executive department of the PGI should look into the application for Water Right permits of all feasible sites to ensure that PGI has right for the development. It should be included in the plan to be presented to the SP and EXECOM.
 - ↓
 - The Water Right application requires annual payment. It depends on the use of water volume for generation power. In case of the Ambangal, it is around 7,000peso per year.

- During the JBIC study, the Cotcot was proposed as grant project. Can it be revive as grant project? (Hon. Robert Mangyao)
 - ↓
 - There is no more grant project for the Philippines under JICA scheme because the Philippine has become a middle income level of country.

- Can JICA help in the conduct of FS for the potential sites?

4. Conclusions and adjournment

- Since it was already getting past noon and there were no more questions, the Presiding Officer thanked the members of the study team and JICA. Likewise PPDC Carmel Buyuccan thanked the SP for accommodating the team to present and for their participation and inputs.

Meeting ended at 12:30.

JICA's assistance for Rice Terraces Conservation and Mini-hydropower Development in Ifugao Province

Mr. Katsumasa Hamaguchi
Representative, JICA Philippine Office
February 21, 2011

Background

“Pilot Study on Rural Vitalization Project for the Conservation of the Ifugao Rice Terraces” by former JBIC (now JICA) in 2004.

Ambangal Mini-hydro Project by e8 thorough TEPCO in 2010.

JICA has been exploring the possibility for supporting this unique project in Ifugao Province.

2 possible areas for cooperation were identified through the series of discussions with the Governor.

- (1) Scaling up of Mini-hydro projects
- (2) Support for Rice Terrace Conservation Fund

(1) Scaling up of Mini-hydro Projects

Background

- Request letter from the Governor dated September 30, 2010 for the support for feasibility study of Cotcot site.

 - Environmental Development Project (EDP)
 - > 2 step loan facility through DBP
 - > Total Amount: 24.8 Billion Yen (approx. 12.4 Billion Pesos)
 - > Target Sectors:
 - 1) Water Supply and Sanitation
 - 2) Renewable Energy
 - 3) Industrial Pollution Control
 - 4) Waste Management
- No hydro projects applied yet.

(1) Scaling up of Mini-hydro Projects

Project Title

Study for Promoting Implementation of EDP

Objectives

- Formulate "Guideline for Evaluating Mini-hydro Project" (DBP)
- Conduct F/S of Cotcot site as a case study (PGI)

Duration

Feb 2011 to Aug 2011 (7 months)

Consultants

Tokyo Electric Power Services Co., Ltd (TEPSCO)
Headed by Mr. Mitsuru Shimizu

(2) Support for Rice Terrace Conservation Fund

Background

- Request letter from the Governor dated November 11, 2010 for the Japanese Overseas Cooperation Volunteers (JOCV) program.

Objectives

To support Provincial Government to manage RTCF

Duration

2 years

Thank You.

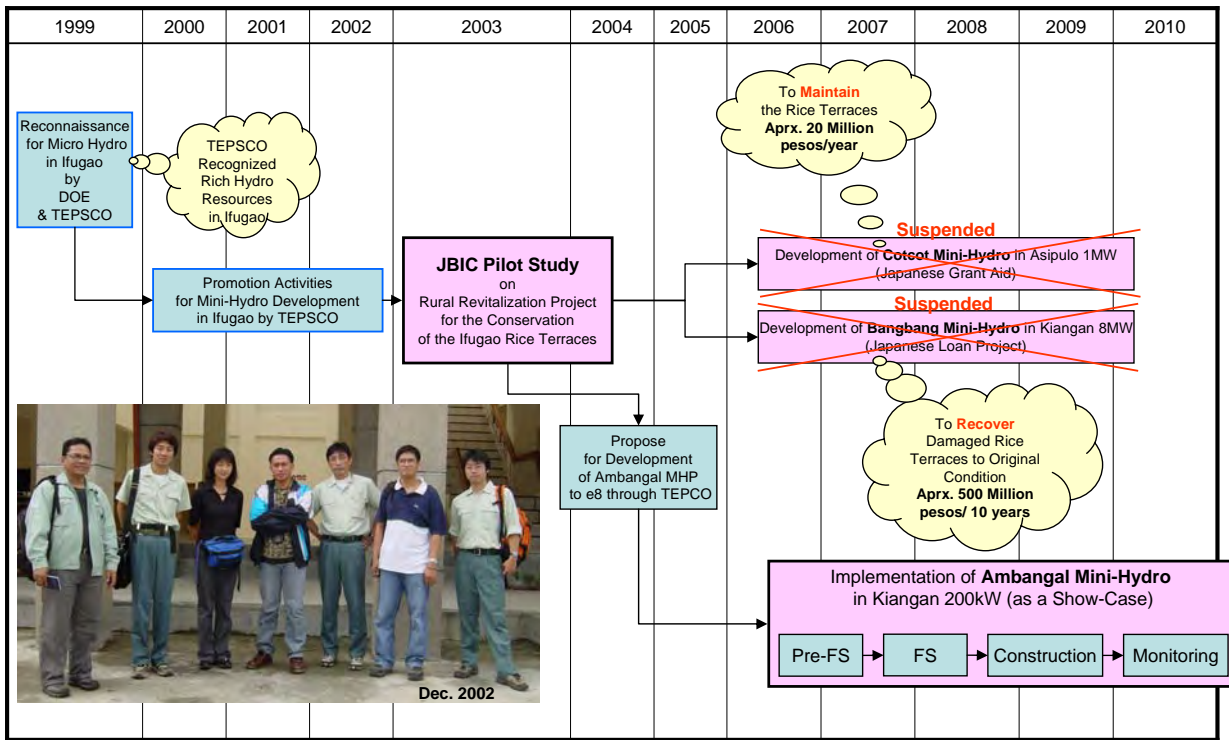
Outline of the Likud Mini-Hydropower Development in Asipulo, Ifugao

Note: "Cotcot" is tentative name for only Feasibility Study period

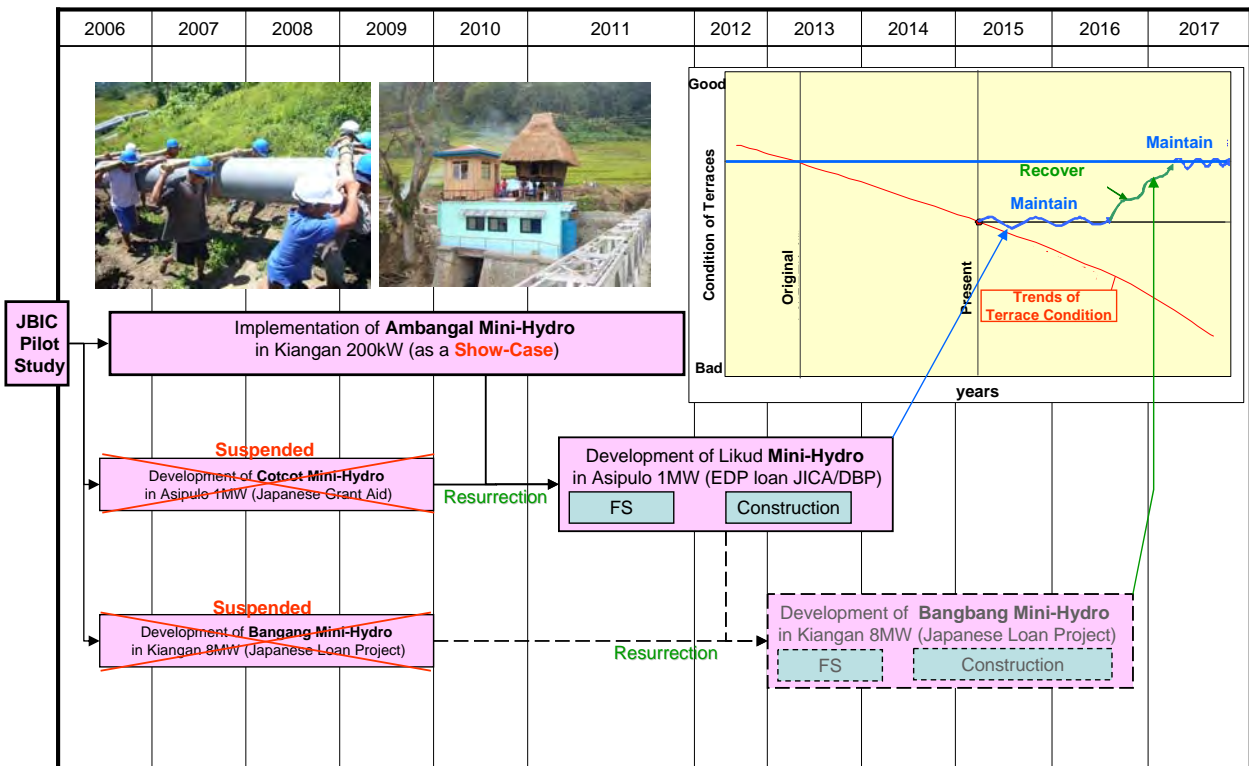
Project Objectives

- Support local activities to conserve the Ifugao Rice Terraces.
- Enhancement of "Rice Terrace Conservation Fund" by making use of electricity sales from the Likud MHP.
- Promote development of the Mini-Hydro Power resources with sustainability in the Ifugao & the Philippines.
- To show Philippines a good reference of regional contribution by Mini-hydropower development and aims to expand the application of the Environmental Development Project.

History and Goal of the Mini-Hydro Development in Ifugao



History and Goal of the Mini-Hydro Development in Ifugao



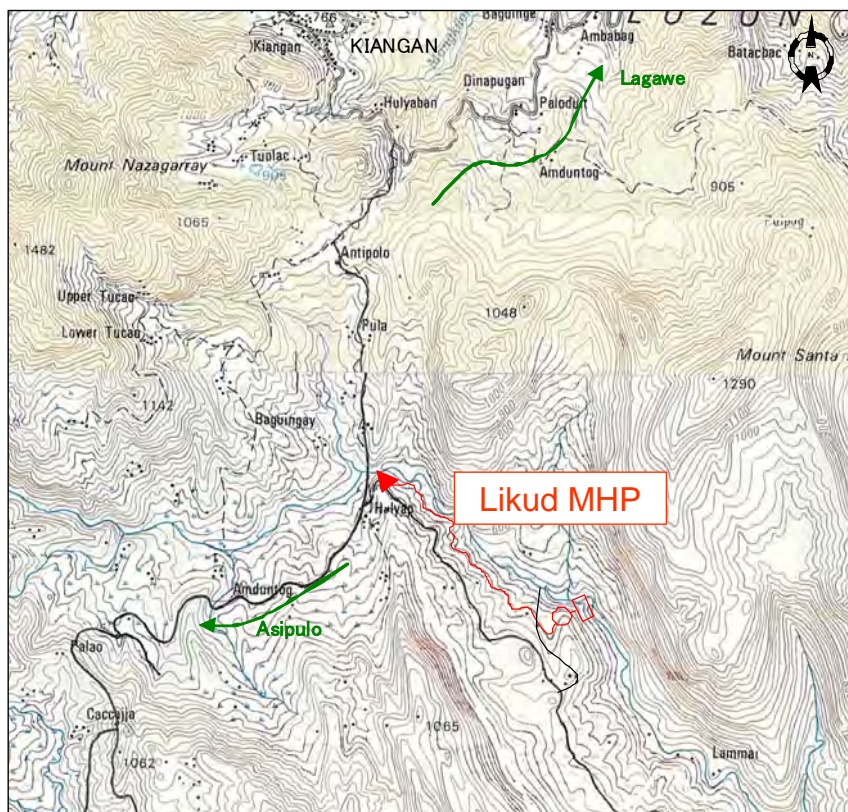
Basic Concept of the Project

- Generated electricity is sold to the electric power cooperative through grid connection.
- Utilizing the revenue of the Project for the conservation of Ifugao rice terraces.



- Repair and Maintenance of Eroded Rice Terraces
- Improvement of Irrigation systems
- Micro Finance
- Reforestation, etc.

Location of Likud Mini-Hydropower Site





Items	Feb.	Mar	Apr	May	Jun	Jul	Aug
Basic Data Collection	■						
Presentation/Community Consultation	■		■		■	■	
Installation of Water Level Gauge	■						
Measurement of River Flow and Water Level	■	■	■	■	■	■	■
Topographic Survey	■	■	■	■	■		
Initial Environmental Examination	■	■	■	■	■		
General Layout Plan		■					
Generation Plan			■				
Design of Civil, Electrical & Mechanical Facilities			■	■	■		
Cost Evaluation				■	■		
Economical & Financial Analysis					■	■	
Preparation of Draft Report						■	■
Final Report							■

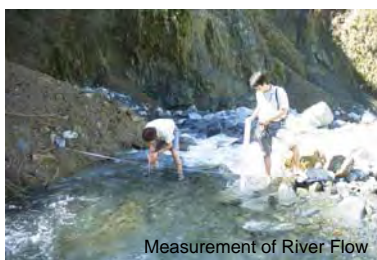
■ : Activities at the Project Site/Manila
 ■ : Activities in Japan



Installation of Water Level Gauge



Water Level Gauge



Measurement of River Flow



Topographic Survey



Social Perception Survey

Site Selection

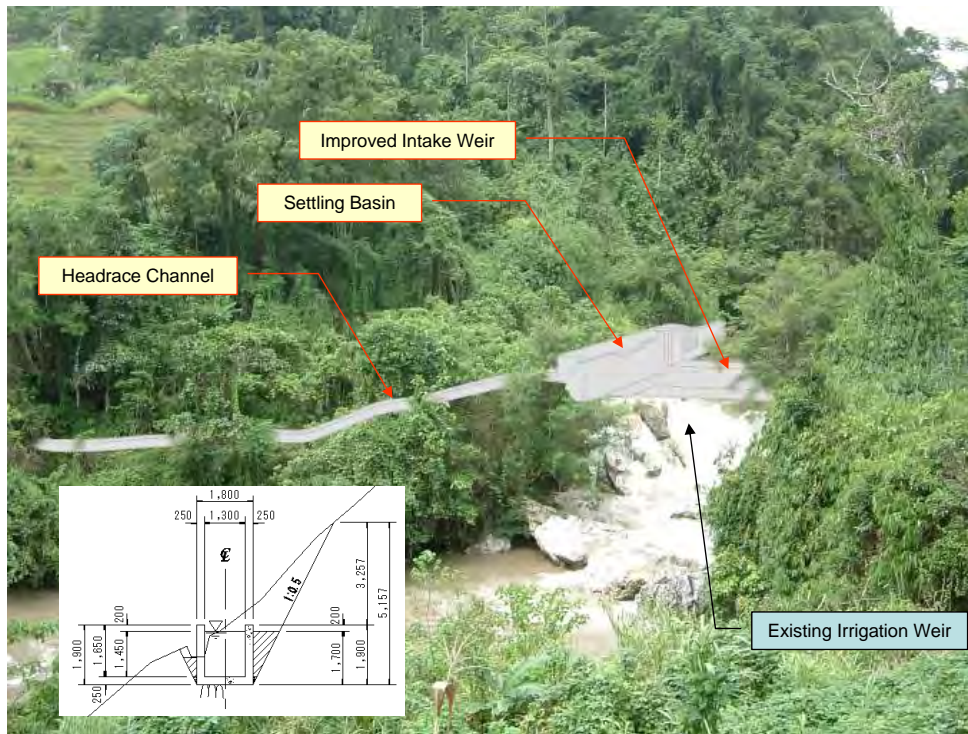
- Enhancement of “Rice Terrace Conservation Fund” for *“Maintain Ifugao Rice Terraces (Aprox. 20 Million pesos/year)”* could be generated in combination with Ambangal MHP. (It is recognized in JBIC Study)
- Power plant must be located outside of World Heritage Area

System Layout

- Irrigation water must be diverted from the Intake/Headrace.
(Water use for irrigation is the higher priority rather than power use)
- Minimize the area affected around the Project Area.

Water Diversion for Irrigation System





People's Comment about Ambangal MHP (Reference)

"At the start when you were coming to consult with us, we were doubtful and suspicious. We were concerned because part of our forest and rice land will be affected. But after the series of meetings and contacts, I began to change my mind, especially when I saw how the team was seriously working even during bad weather. This was also observed by our neighbours. We gave our consent even if we were not 100 percent sure. But it was a good decision and I was happy when the project started construction and the lands affected were compensated. During the inauguration, there were many people who attended. I am convinced that the project, as you have been saying during the many community meetings, is for the benefit of the community."

Eliza Guimbungan, resident of Pindongan, Kiangan.

End of Presentation



Haggiyo !!!

MINUTES OF THE CONSULTATION MEETING WITH THE BARANGAY COUNCILS OF HALIAP AND PANUBTUBAN ON FEBRUARY 22, 2011 HELD AT THE HALIAP BARANGAY HALL AT 9:15 A.M.

PRESENT:

Roger Manghi	Barangay Captain, Haliap
Oscar Lay-o	Barangay Captain, panubtuban
Josephine Bistol	Kagawad, Panubtuban
Moises Dillag	Kagawad, Paunubtuban
Agnes gucmi	Kagawad, Panubtuban
Basilio Bayaona	Kagawad, Haliap
Ernesto Tagtag	Kagawad, panubtuban
Clemente Tenenan	Kagawad, Haliap
Rosemarie Daquel	Kagawad, Haliap
Francis Bummac	Kagawad, panubtuban
Fedelito Rendon	Kagawad, Haliap
Constancio Catama	Kagawad, Haliap
Estela Bagiw	Barangay treasurer, Haliap
Nancy Addangna	Barangay secretary, Haliap
Maria Lad-ao	Kagawad, Haliap
Ernesto Nalliw	Kagawad, Panubtuban
Donato Khablinan	kagawad, Panubtuban
Willie Palarca	Consultant, AECOM
Martin Morales	Consultant, AECOM
Benjamin Panganiban	Haliap
Alfredo Bituwon	Haliap
Jayson Magayanes	Chief of Party, Ularte-Garcia Surveying
Cecilia Garcia	Project manager, Ularte-Garcia Surveying
Mitsuru Shimizu	TEPSCO
Yukio Miyamoto	TEPSCO
Nobuki Hayashi	TEPSCO
Carmelita Buyuccan	PPDC, PPDO
Antonio Linglingon,	Staff, PPDO
James Sawey	Documentor
Ignacio Bunolna	Facilitator

HIGHLIGHTS OF THE MEETING/DISCUSSION:

I – PRELIMINARIES

- The meeting started at 9:15 AM after a video presentation on the e8 Ifugao Ambangal Minihydro power plant
- Opening prayer was led by Barangay Captain Oscar Lay-o
- Kagawad Basilio Bayaona, on behalf of the Barangay Council of Haliap, welcomed the Participants
- PPDC Carmelita Buyuccan acknowledged the presence of everyone and asked each one to do a self introduction starting from the barangay councils. After the self introduction she proceeded to thank the members of the councils for accommodating the request to meet with the study team. She informed that a similar meeting was also done earlier with the members of the

Sangguniang Panlalawigan and the Sangguniang Bayan of Asipulo. And now the team is here to consult with the barangay councils. She encouraged everyone to listen very well and ask questions and comments saying that their participation is important.

II – PRESENTATION

- **NOBUKI HAYASHI, Social preparation expert of the study team , presented and discussed the following:**
 - a. Objectives of the project
 - b. History and goal of the mini-hydro development in Ifugao
 - c. Basic concept of the project
 - d. Location of the project
 - e. Schedule and items of the feasibility study
 - f. Basic considerations in the planning and designing of the project
- To enhance better understanding of the presentation, some items were translated by the facilitator in the local dialect.

III- DISCUSSION/OPEN FORUM

- Barangay secretary Nancy Addangna asked for an assurance of the implementation as she said that the same team conducted a study of the Cotcot minihydro some years ago but it was not pursued. What if this will happen again? This gave some people to suspect of other motives, looking for treasure for instance.

Engr. Buyuccan of the PPDO responded by explaining what happen then during the conduct of the study. The position of the Provincial Government supports the conduct of the feasibility study. Result of the feasibility study will largely determine the implementation.

- Kagawad Ernesto Nalliw recounted what happened to the earlier failed Cotcot minihydro proposal in 2005. He however said that he is supporting the conduct of the feasibility study.

PPDC Carmel Buyuccan thanked the Kagawad for the statement of support.

- Barangay treasurer of Haliap asked if it is a grant since it is foreign funded.

PPDC Carmel Buyuccan explained that the fund for the conduct of the feasibility study is a grant funded by JICA. But fund for the construction and implementation will have to be sourced out. JICA is offering a soft loan from the EDP but it is up to the Provincial Government to decide. The feasibility study result will largely determine the decision.

- Kagawad Tenenan asked what happens if there are some problems on the right of way.

PPDC Carmel Buyuccan explained that acquisition for right of way is part of the feasibility study. The council should help in the negotiation. She informed that in the Ambangal mini-hydro

Council members of both, Haliap and Panubtuban, are unanimous in saying YES, the study should proceed.

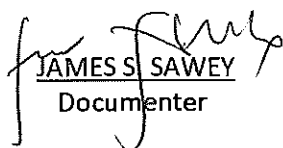
IV. SUMMARY OF AGREEMENTS/ACTION POINTS

1. Both Councils of Haliap and Panubtuban support the conduct of the feasibility study of the Likud Minihydro power plant.
2. Installation of water level gauge will be on Wednesday, February 23, 2011. The Barangay Council of Haliap (c/o Kgd Constancio Catama) will be responsible in recruiting two (2) laborers for the installation. One water level gauge reader will be hired preferably from sitios near the installation site to start immediately. Barangay secretary of Haliap is tasked to scout for a suitable candidate.
3. Household interview for the initial environmental examination will commence by mid March. Ten (10) interviewers (5 male, 5 female) from each barangay will be trained and hired for this activity. Candidate applicants to submit their names to the barangay secretary on or before March 15, 2011. Depending on the number of teams, local guides will also be hired.
4. Topographic Survey team will come on Monday, February 28, 2011, to start the survey. They will coordinate with the Barangay Council for support and possible assistance to the team.
5. To facilitate understanding and appreciation on minihydro power plant, a field trip for the members of the Barangay Councils is scheduled on Monday, February 28, 2011 to visit the Ambangal mini-hydro power plant.

V. CLOSING STATEMENTS/ADJOURNMENT

- Barangay captain Oscar Lay-o of Panubtuban expressed his gratitude and thanked the members of the study team and representatives of the Provincial government of Ifugao for choosing the their barangays for the conduct of the feasibility study. He likewise thanked his colleagues from Panubtuban and Haliap for their presence and support and expressed hope for the success of The project.
- PPDC Carmelita Buyuccan , on behalf of the provincial government, thanked the members of the barangay councils of Haliap and Panubtuban for accepting and supporting the conduct of the feasibility study. She said that the Provincial Government will try its best to look for the fund required for the construction if the project is found feasible.
- The meeting was adjourned at 11:40 AM.

PREPARED BY:


JAMES S. SAWEY
Documenter

CONSULTATION MEETING

Date: February 22, 2011

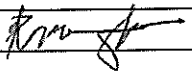
Venue: Haliap Barangay Hall

ATTENDANCE

Name	Position	Office/Barangay	Signature
1. OSCAR ULLA	Bargy Capt.	Panubutan	[Signature]
2. Josephine U. Buitel	Bargy Kagawad	Panubutan	[Signature]
3. MOSES B. DILLAG	Bargy Kagawad	PANUBUTAN	[Signature]
4. Agnes B. Guemi	Kagawad	Panubutan	[Signature]
5. Basilio Bayadera	Kagawad	Haliap	[Signature]
6. Ernesto Fajlag	Kagawad	Panubutan	[Signature]
7. CLEMENTE TEJINAN	BRGY KAGAWAD	HALIAP	[Signature]
8. ROSEMARIE DACQUEL	BRGY KAGAWAD	Haliap	[Signature]
9. Francis N. Bunnisc	"	Panubutan	[Signature]
10. FEDELITO A. RENDON	BRGY. KAGAWAD	Haliap	[Signature]
11. CONSTANCIO Catama	BRGY KAGAWAD	Haliap	[Signature]
12. Leticia P. Balin	Bargy. Treasurer	Haliap	[Signature]
13. NANCY D. ADDANGNA	Barangay Secretary	Haliap	[Signature]
14. MARIA L. LAD-AG	Barangay Halimp	Haliap	[Signature]
15. Ernesto L. Nallin	Bargy Kagawad	Panubutan	[Signature]
16. DONATO B. Khablinan	Bargy Kagawad	Panubutan	[Signature]
17. Willy Palenc	AROM Consultant	AROM	[Signature]
18. Martin Morales	AROM Consultant	AROM	[Signature]
19. Benjamin Panganiban		Haliap	[Signature]
20. Alfredo Bittuwan		Haliap	[Signature]
21. Jason Magayanes	SURVEYOR		[Signature]
22. Mitsuru SHIMIZU	TEPSCO	Tokyo	[Signature]
23. Yukio HIYAMOTO	TEPSCO	Tokyo	[Signature]
24. Carmelita B. Bynucan	PPDC	PPDO	[Signature]
25. Antonio Linghuan	PPDO Staff		[Signature]
26. Nobuki Hayashi	TEPSCO SP	TEPSCO	[Signature]
27. MA. CECILIA U. GARCIA	PROJ. MGR./GEODETIC ENGR	URLARTO-GARCIA SURVEYING	[Signature]
28. JASON MAGAYANES	CHIEF OF PARTY	"	
29. Ignacio Bunolra			[Signature]
30. JAMES STONEY			[Signature]

CONSULTATION MEETING

ATTENDANCE

	Name	Position	Office/Barangay	Signature
1.	ROGER M. MANGIT	BRGY CAPTAIN	HALAP	
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28 February 2011

A BRIEF REPORT ON THE PLANT VISIT OF THE BARANGAY COUNCILS OF HALIAP AND PANUBTUBAN
TO AMBANGAL MINI-HYDRO POWER PLANT

The plant visit to Ambangal mini-hydro power plant was carried out on February 28, 2011. It was participated in by 27 members of the Council and Tanod of barangays Haliap and Panubtuban. This activity was planned earlier during the community consultation held at Haliap, the purpose of which was to enhance understanding and appreciation on the mini-hydro power plant.

As earlier agreed the participants arrived at 9.30 am at the power house and proceeded to register. Engr. Shimizu, project manager, welcomed the participants and introduced the plant operators present (Jonathan Tameray and Rodolfo Ananayo). Mr. Tameray gave a short briefing on the structures of the power plant, their daily activities and duties and responsibilities. At this point, the plant supervisor Engr. Jonathan Padduyao arrived and was asked to give further briefing. The participants were asked for any questions but there was none as they were more excited to see the structures and facilities.

The plant operators and supervisor guided the participants to see the facilities and civil structures of the plant. They explained to group the facilities and structures as they toured starting from the power house to the intake weir and were back at about 11.40 for lunch .

After lunch, the group was convened for an informal discussion as to their observations, learning and concerns. Here are some of their feedbacks:

- ✓ The mini-hydro plant is not destructive as we earlier thought
- ✓ There is no dam, intake weir is just like any irrigation system
- ✓ People who do not understand mini-hydro should come here
- ✓ People in Mappit are asking why they are not included
- ✓ Some people are very suspicious that the real motive of this is
Looking for the treasure.

The group expressed satisfaction and looked forward to the implementation of the agreements made during the consultation in Haliap.

Overall, the plant visit was successful in carrying out its objective of raising positive understanding and appreciation on mini-hydro power plant. I would like however to make an observation. The Operators on duty and who conducted the briefing did well and were helpful. But I suggest that next time they should be in proper attire (not shorts and slippers) to project the good and professional image of the organization.

PREPARED BY:
IGNACIO N. BUNOLNA

AMBANGAL Plant Visit
 FEB. 28, 2011
 ATTENDANCE SHEET

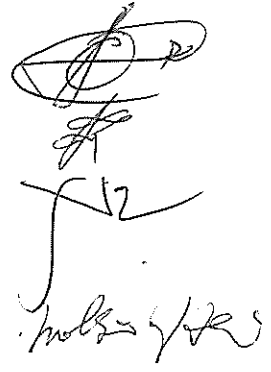


TOKYO
Summit 2010

Name	Brangay/Office	SIGNATURE
1. Rosemarie M. Dacdul	Haliap	[Signature]
2. Jodela P. Pastis	Haliap	[Signature]
3. Stephanie U. Bical	Panubtuban	[Signature]
4. Ernesto L. Mallin	Panubtuban	[Signature]
5. Ernesto Tagtag	Panubtuban	[Signature]
6. CLEMENTE TENENAN	HALIAP	[Signature]
7. Maria Land-ao	Haliap	[Signature]
8. MOISE B. DILLIG	PANUBTUBAN	[Signature]
9. Fedelito Arsdon	Haliap	[Signature]
10. Basilio Bayuona	Haliap	[Signature]
11. Agnes Guini	Panubtuban	[Signature]
12. Francis N. Bummac	"	[Signature]
13. NELSON DING	Panubtuban	[Signature]
14. Donato Khablian	panubtuban	[Signature]
15. Maria Land-ao	Panubtuban	[Signature]
16. OSCAR LAY-O	"	[Signature]
17. Jacqui Torda	panubtuban	[Signature]
18. JOE NAY-IT	Panubtuban	[Signature]
19. Joseph Lay-o	Panubtuban	[Signature]
20. BERNARD NGIDDIT	panubtuban	[Signature]
21. Regie Baming	panubtuban	[Signature]
22. Jimmy Lod-ao	panubtuban	[Signature]
23. Lawrence Putac	Haliap	[Signature]
24. Alfredo Bittion	Haliap	[Signature]
25. Elba Doukiran	Haliap	[Signature]
26. Nancy Admagna	Haliap	[Signature]
27. Pedro Dillig	Panubtuban	[Signature]
28. BERNARD K. PADDUNAO	PPPO	[Signature]

29 Ananayo Rodolfo
30 JONATHAN TAMERAY
31. Ignacio Buzoba
32 MITSUO SHIMIZU
33 Nobuki Hayashi
34 Fidel Karaguez

OPERATOR
OPERATOR
TEPSLO
TEPSLO
TEPSLO



Handwritten signatures and initials, including a large signature at the top, a signature below it, and the initials 'JL' and 'Molles y JRS' at the bottom.

Highlights of the Stakeholder meeting

Date: 14:30-16:30, 27 April 2011
Venue: PPDO office, Lagawe, Ifugao
Participants: PPDO, IFELCO, DOE, DOE Luzon field office, the local topographic surveyor and JICA Study Team
 24 participants (See attendance sheet)
Agenda: Preliminary Power Planning of the Likud Mini-hydropower by JICA Study Team (TEPSCO)

Highlights:

- Project leader, Mr. Shimizu explained the preliminary power planning of the Likud mini-hydropower
 - Available plant discharge in Lamut River was examined by conversion ratio of 6 years data of Hapao gauging station in Municipal Hungduan
 - Topographic survey was done by the local surveyor and established the map 1/2000 scale
 - Demand forecast in Ifugao: 5% increase annually
 - Examined 4 routes of waterway which would be the best location to develop
 The result was Case B
 - Optimum capacity of the Likud power plant must be reflected on the load demand of Ifugao
- Confirmed the planned schedule this time (Civil team, Electrical mechanical and Distribution line team, and social preparation team)
- The local topographic surveyors continues to their activities, particularly, staking the wooden stick along the centerline of waterway route and profile survey

Opinions/Suggestions

- Demand forecast is right that 5% increase annually
- As for the community consultation tomorrow, it is difficult let the communities understand about demand forecast and technical issues on the mini-hydropower development. It is better just described the potential affected area, and where the waterway route pass through in there area.
- The PGI will apply the pre-development contract for the Likud mini-hydropower project, but the Sangunian Panlalawigan (the Ifugao Council members) Resolution has not yet issued.
- ERC finally issued the provisional approval for the selling rate P3.61 peso/kWh for the Ambangal mini-hydropower plant, so the PGI will bill to IFELCO the total generated power of last year 2010 soon. The amount is around P3.7 Million pesos.

PROVINCE OF IFUGAO
ATTENDANCE SHEET

Office: Ifugao Provincial Government
 Title of meeting/seminar/workshop: Meeting w/ JICA Study Team
 Venue: PPDO Date: April 27, 2011
 Expected number of participants: _____ Scheduled time: _____

Name	Agency, Position	Signature
1 WANCY GAWO - IUNLUNIL	PPDO - PO-1	
2 Wenefredo Malabanan	DOE - HOEMP	
3 Rey V. Salvania	DOE - HOEMP	
4 GOICHI KANEBA	TEPSCO TEAM	
5 DOBIT CABAZON	STUDY TEAM	
6 YPZ TUGUIVAY	IFELCO	
7 NELSON FASATRO	DOE - LFO	
8 RUSSELL G. PANGALANAN	DOE - LFO	
9 Nobuki Hayashi	TEPSCO	
10 Yukio Miyamoto	TEPSCO	
11 MA. CECILIA GARCIA	UGSES (SURVEY TEAM)	
12 JASON MACAYANES	UGSES (CUTTING TEAM)	
13 MASATO SHIMIZU	TEPSCO	
14 Ignacio Bunaha		
15 RICARDO BUTALE JR		
16 KATHRINE ANN CAGAT	SITHD	
17 KRISTINE N. GUAZON	PPDO	
18 Margie Ngiti	PPDO	
19 Jeannette Dulawan	PPDO	
20 Brian John Tubarban	PPDO	
21 Manuel Linares	PPDO	
22 Epifania B. Manglan	PPDO	
23 Gemma B. Tanyag	PPDO	
24 CARMELITA B. BUYUGAN		
25		

CERTIFIED CORRECT:

29

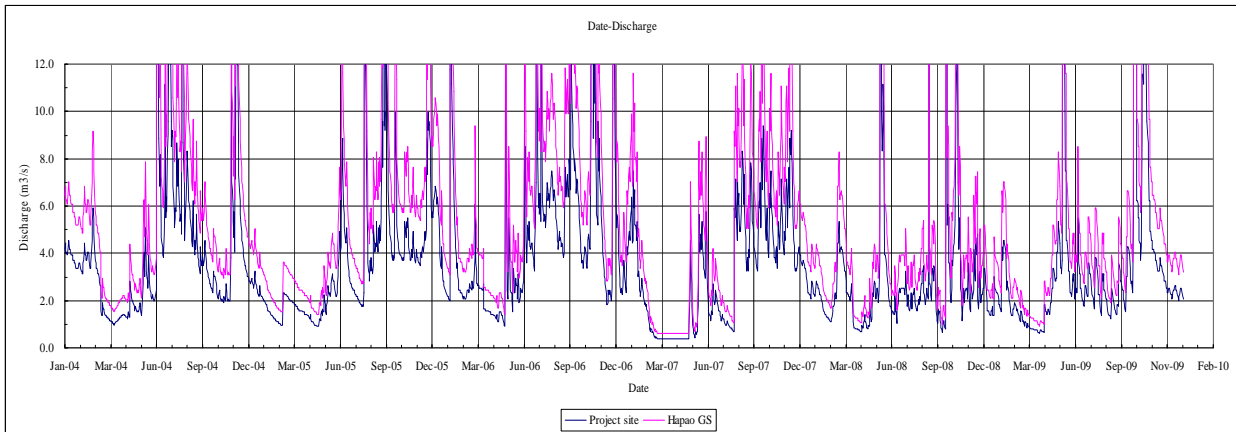
Activity Secretariat

Preliminary Power Planning of Likud Mini-Hydropower

Contents of Preliminary Power Planning

1. Estimation for the available plant discharge
2. Examination and selection of the general layout
 - Result of the Topographical Map (1/2,000)
 - Selection of the location of the main civil facilities
 - Comparison study between waterway routes
3. Next examination
 - Site works
 - Internal Works

Estimation for the available plant discharge

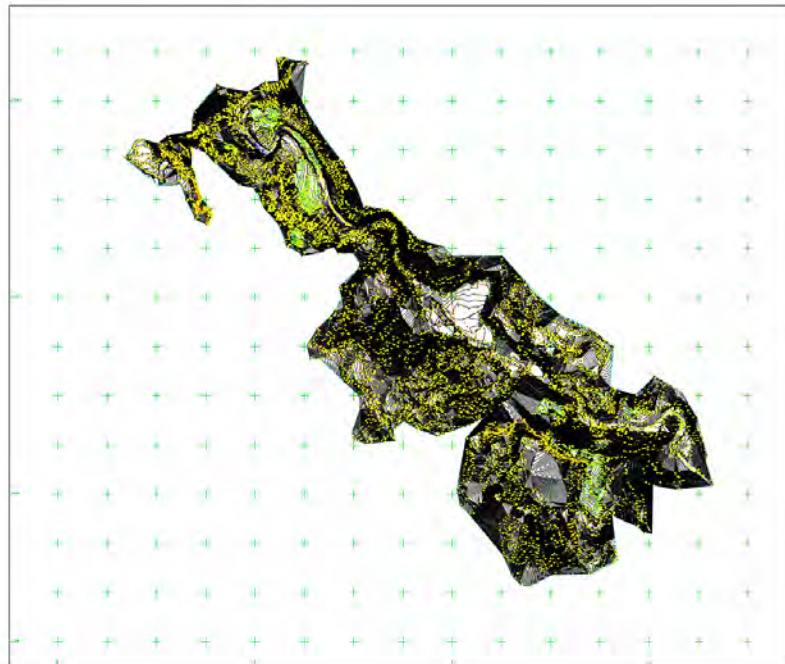


1. Observation record of the daily river flow
 Hapao gauging station: 6 years from Jan. 2004 to Dec. 2009

2. Conversion from Hapao GS to Project site
 Annual precipitation (excluded evaporation)
 Project site: 2,125mm / Hapao GS: 3,219mm = 0.660
 Catchment area
 Project site: 44km² / Hapao GS: 45km² = 0.978

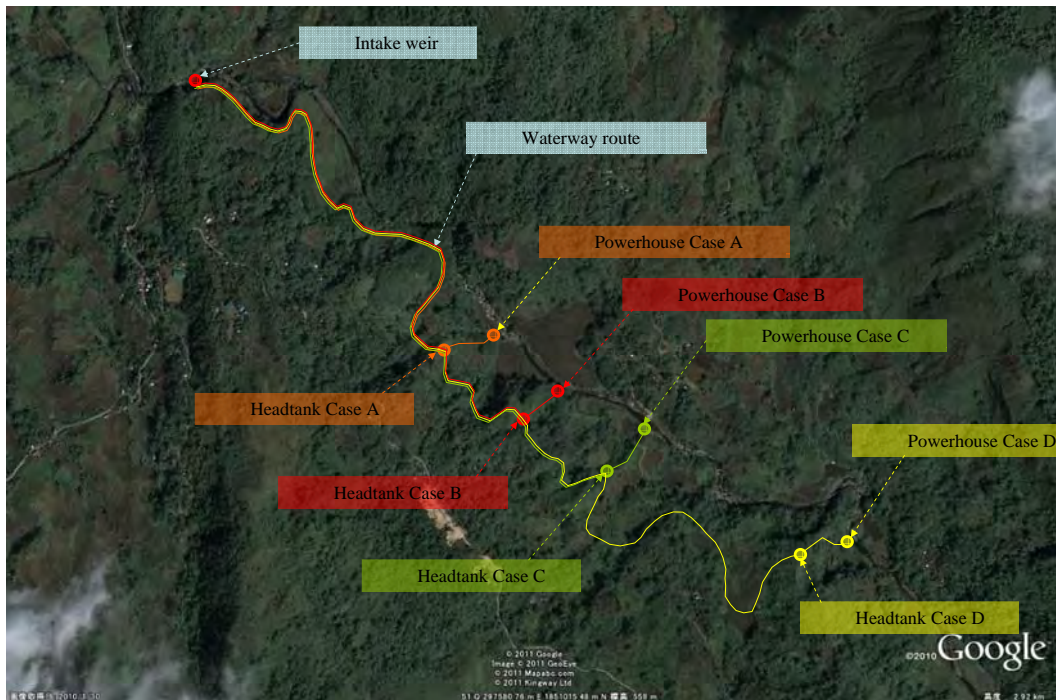
Examination and selection of the general layout

- ✓ Result of the Topographical Map (1/2,000)

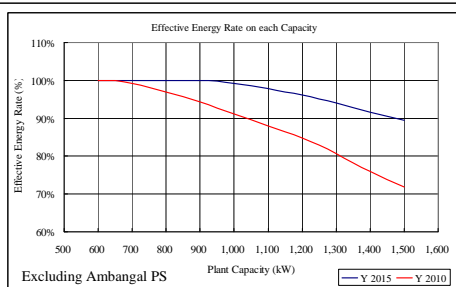
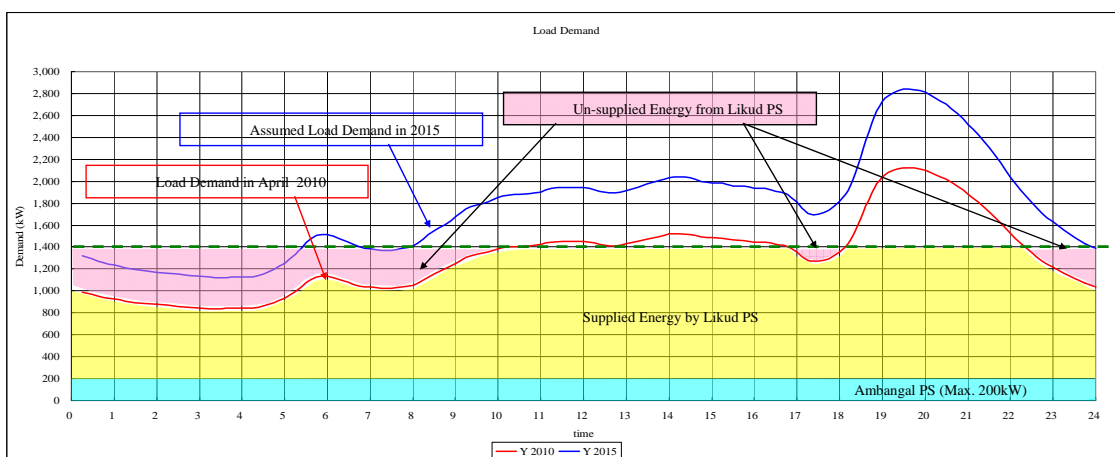


Examination and selection of the general layout

- ✓ Selection of the location of the main civil facilities



Examination and selection of the general layout



Issue on the load demand

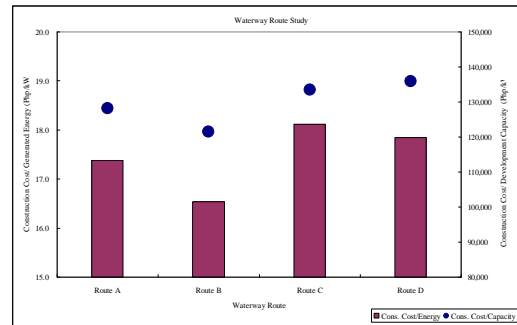
For example; Likud PS has 1,200kW capacity.
 Total supply capacity including Ambangal PS : 1,400kW
 Load demand from 22:30 to 10:00 is lower than total supply capacity.
 Energy supply is limited based on the load demand.

Effective energy : 91% in 2011, 99% in 2015 (1,000kW)
 85% in 2011, 96% in 2015 (1,200kW)

Examination and selection of the general layout

✓ Comparison study between waterway routes

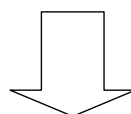
Item	unit	Route A	Route B	Route C	Route D
Intake water level	El.m	600.0	600.0	600.0	600.0
Headtank water level	El.m	597.0	596.0	595.0	589.0
Tail water level	El.m	545.0	541.0	540.0	510.0
Capacity	kW	730.0	800.0	770.0	970.0
Plant discharge	m ³ /s	2.00	2.00	2.00	1.70
Generated Energy	MWh	5,360	5,873	5,662	7,404
Gross head	m	55.0	59.0	60.0	90.0
Effective head	m	48.1	52.9	50.8	75.7
Head loss	m	6.9	6.1	9.2	14.3
Headrace length	m	1,554.0	1,940.0	2,382.0	3,858.0
Penstock length	m	210.0	110.0	230.0	180.0



Items		Unit	A	B	C	D
Feature of Generation Plan	Gross Head	m	55.0	59.0	60.0	90.0
	Effective Head	m	48.1	52.9	50.8	75.7
	Plant Discharge	m ³ /s	2.0	2.0	2.0	1.7
	Install Capacity	kW	730	800	770	970
	Total Length of Waterway	m	1,764	2,050	2,612	4,038
	Length of Waterway / Effective Head (L/H)	-	36.7	38.8	51.4	53.3
	Annual Generated Energy	MWh	5,360	5,873	5,662	7,404
	Constriction Cost	Pesos	93,186,000	97,132,000	102,554,000	132,137,000
	Unit Cost	Pesos/kWh	17.4	16.5	18.1	17.8
Feasibility	Technical Issues	-	Non Length of Access Road: 0.51km	Non Length of Access Road: 0.33km	Non Not Necessary Access Road	Long Headrace Long Distance Access Road: 2.38km
	Environmental Issues	-	No Significant Impact	No Significant Impact	No Significant Impact	Wide Affected Area Including Rice Field
	Financial Aspect	-	Low Financial Feasibility caused by Small Scale	No.1 Financial Feasibility	Low Financial Feasibility caused by Big L/H	Low Financial Feasibility caused by Long Headrace
	Comprehensive Feasibility	-	2	1	4	3

Next Examination

- Site works
 - Detail Topographical Survey (Scale 1/200) around Intake weir and from Headtank to Powerhouse
 - Centerline and cross section survey on the waterway route Sticking toward the centerline of waterway
 - Parcellary survey for the confirmation of land owners
 - Social Survey (Focus Group Discussion, Key Informant Interview) for gathering socio-economic data
- Internal works
 - Examination for the optimum development capacity



Facility Design
Construction Plan and Schedule, etc

MINUTES OF THE SECOND COMMUNITY CONSULTATION MEETING ON THE FEASIBILITY STUDY OF THE PROPOSED LIKUD MINI-HYDRO POWER PLANT PROJECT HELD AT THE BARANGAY HALL, HALIAP, ASIPULO ON APRIL 28,2011 AT 9:20 A.M.

PRESENT :

1. OSCAR LAY-O	Barangay Captain, Panubtuban
2. ROGER MANGHI	Barangay Captain, Haliap
3. NANCY ADDANGNA	Barangay Secretary, Haliap
4. MARIA LAD-AO	Kagawad, Haliap
5. ROSEMARIE DAQUEL	Kagawad, Haliap
6. FEDELITO RENDON	Kagawad, Haliap
7. ERNESTO TAGTAG	kagawad, Panubtuban
8. MOISES DILLAG	Kagawad, Panubtuban
9. DONATO KABLINAN	Kagawad, Panubtuban
10. JOSEPHINE BISTOL	Kagawad, Panubtuban
11. LEON DONATO	President, Haliap Farmers Ass'n
12. BALTAZAR DAMMIT	Farmer, Haliap
13. JOSE BIMMUCAL	Farmer, Haliap
14. PAQUITO ANGIHAN	Farmer, Mappit
15. CHRISTINE NGABIT	Women, Haliap
16. NELSON FAJARDO	DOE, Luzon Field Office
17. RUSSELE PANDARACAN	DOE, LUZON Field Office
18. WINIFREDO MALABANAN	DOE, Luzon Field Office
19. REY V. SALVANIA	DOE, Luzon Field Office
20. CECILE U. GARCIA	Project Manager, Ularte Garcia Surveying
21. JAYSON MAGAYANES	Surveyor, UGSES
22. CARMELITA BUYUCCAN	PPDC, PPDO
23. NANCY G. NALUNE	PO, PPDO
24. TONY LINGLINGON	Staff, PPDO
25. RAMON CABAZOR	Member, Study Team
26. RICARDO BUTALE	Asst., Study Team
27. IGNACIO BUNOLNA	Asst., Study team
28. NOBUKI HAYASHI	Member, Study Team
29. YUKIO MIYAMOTO	Member, Study Team
30. KANEDA	Member, Study Team
31. MITSURU SHIMIZU	Study Team Leader

HIGHLIGHTS OF THE MEETING

1 – OPENING PRAYER

The meeting started at 9:20 in the morning with an opening prayer led by Ms. Nancy Addangna, barangay secretary.

11- WELCOME REMARKS

In behalf of Barangay Captain Roger Manghi, who came in late, Kagawad Fidelito Rendon welcome remarks. He expressed gratitude for the support of both communities and to the study

team for continuing the activities since the first community consultation. He expressed confidence that the activities will successfully push through until the study is completed.

111- ACKNOWLEDGEMENT OF PARTICIPANTS

Provincial Planning and Development Coordinator Engr. Carmelita Buyuccan acknowledged the presence of everyone and asked each one to introduce himself/herself. Each one stood up and introduced himself/herself starting with the barangay representatives of Haliap and Panubtuban, Department of Energy, Survey Team, project study Team and from the Provincial Government.

After the introductions, she thanked everyone especially the barangay representatives for their support and encourage them to continue to support the conduct of the study.

1V – MEETING OVERVIEW

Engr. Mitsuru Shimizu, study team Leader, gave a brief outline of the activities for the day. The main purpose of the meeting is to present the proposed routes and to select the best route, where to place the head tank and power house. This will be the reference for the topographic survey team to conduct the detailed survey. After the meeting, the team will go to the proposed location of head tank and power house which will be revisited again tomorrow starting at the intake weir.

He informed that the study team will go back to Manila on Monday and will be back by the end of June to present the result of the study. The survey team however will continue to finish the topographic survey. He said that the final draft will be finalized in July for submission in August.

He ended by saying, we need your support, please support us.

V- BRIEF REVIEW OF THE AGREEMENTS MADE DURING THE PREVIOUS MEETING

The facilitator recounted some of the agreements and action points made during the previous consultation meeting held last February 22, 2011, like the following:

- Installation of water level gauge on February 23,2011
- Start of topographic survey on February 28,2011
- Household interviews initial environment examination to commence by mid march
- Hiring of local guides and interviewers
- Field trip to Ambangal power plant on February 28,2011

V1 – PRESENTATION

Unfortunately, there was a sudden brown out, Engr. Mitsuru Shimizu, study team leader made use then of the handout. He explained the following:

- Selection of the location of the main facilities
- Comparison study between waterway routes

From the presentation, it was clear that power house case B is the best option considering the technical, environmental and financial feasibility. He asked if there were any comments/ objections but there was none.

The facilitator asked where the power case B is located and the answer was that it is a part of barangay Haliap.

V11 – OPEN FORUM

- Kagawad Donato Kablinan asked if the water diverted will be for irrigation.

The facilitator responded that the main purpose of the proposed project is power generation and not for irrigation. He explained however that irrigation has a higher priority in the use of water. So that when there is low level of water supply, power generation will have to stop. This particular project is intended however for power generation.

Mr. Jose Bimmucal asked if outlet/spillways are provided in the design so that rice fields located below the headrace can avail of water. Engr. Shimizu said it is possible.

- Mr. Jose Bimmucal raised the issue of compensation for road right of way.

PPDC Carmelita Buyuccan responded saying that yes, compensation for road right of way can be paid based on the assessment and negotiation. She said that the owners of land affected by road right of way can only be identified after the survey. Possibly, the project will utilize 4 to 5 meters width. Claimants should also see to it that the ownership of the land they claim are duly transferred under their names to avoid delays in the transaction.

- Barangay secretary Nancy Addangna raised the problem encountered during the topo Survey where one Mr. Joseph Belingon did not allow surveyors to enter his property. She however hinted that should the property owner be given a work, like being one of the meter reader, he might allow entry to his property.

The facilitator, after referring to the study team leader, said this can be arranged and requested Ms. Addangna to make arrangement with Mr. Belingon and inform the study team leader on Saturday, April 30, 2011.

- The facilitator asked how many irrigation systems are found between intake weir and the proposed power house.

There are 3 irrigation systems, namely; a) Cotcot CIS with 13 farmer beneficiaries, b) Napuh Haliap CIS with 15 beneficiaries and c) Napuh Mappit CIS.

- Ms. CECILLE GARCIA of the topo survey team asked if it is needed that the lot owners be present during the staking.

There is no need provided that a community representative is present to identify who owns the lot. Mr. Baltazar Dammit who is guiding the team will act as the representative.

V111 – NEXT STEPS/ACTION POINTS

- Engr. Kaneda together with IFELCO will conduct a connection line route check tomorrow morning. They need a guide.

Kagawad Moises Dillag was asked to make arrangement for a guide. The guide will be picked up at the entrance to Napuh access road tomorrow morning at about 9.30.

- MS. Nobuki Hayashi informed that the conduct of interview to key informants and focus group discussions will be done after the topographic survey has been finished. This will be in June. Household interviews as earlier planned will not be done.
- The study team and topo survey team will undertake walk through from the intake weir to the proposed location of the forebay tomorrow. In this regard, laborers to guide and clear the route will be needed. Mr. Baltazar Dammit will contact the laborers.
- Staking will start on Monday. A local guide is needed. He should be able to identify the owners of the lot. The stakes once installed should not be transferred or removed.

1X – CLOSING STATEMENTS

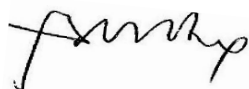
- PPDC Carmelita Buyuccan thanked the participants for their support and asked the barangay councils and representatives to continue to support the project.
- ENGR. Mitsuru Shimizu, Study Team Leader, said, “Please continue to support us”.
- Kagawad Rosemarie Daquel of barangay Haliap expressed gratitude for the project.
- Kagawad Josephine Bistol expressed her gratitude and support saying that even if barangay Panubtuban is now “sabit” because it is outside the project as option B was selected, we will still support the project provided you inform and invite us.
- Barangay Captain ROGER MANGHI, who came in late, expressed apologies for coming late.
He said he came even if he was very late, because of other equally important business to attend to, to show his support to the project.

X – CLOSING PRAYER AND ADJOURNMENT

Kagawad Fidelito Rendon gave the closing prayer thanking God and asking for blessings for the successful realization of the project for the benefit of the communities.

The meeting ended at 11.30 in the morning.

PREPARED BY:



IGNACIO N. BUNOLNA

**PROVINCE OF IFUGAO
ATTENDANCE SHEET**





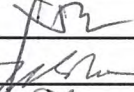
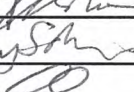
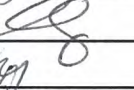
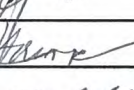
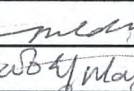
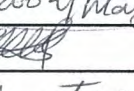
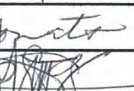
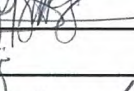
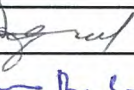
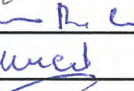
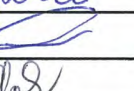
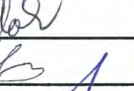
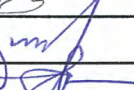
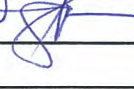
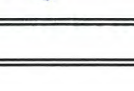

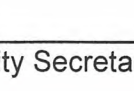
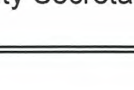



Office: Ifugao Provincial Government

Title of meeting/seminar/workshop:

Venue: Hallap Brgy. Hall

Date: April 28, 2011

Expected number of participants: _____ Scheduled time: _____

	Name	Male	Female	Agency, Position	Signature
1	<u>Oscar Ag. O</u>	/		<u>Brgy Capt. - P</u>	
2	<u>NANCY GAWO - NALUNWE</u>		/	<u>PO-1</u>	
3	<u>Ramon Cabazon</u>	/		<u>STUDY TEAM</u>	
4	<u>Nelson FASARDO</u>	✓		<u>DOE-LFO</u>	
5	<u>Russ G. Pringuloman</u>		✓	<u>DOE-LFO</u>	
6	<u>Ignacio Buroka</u>	/		<u>Intermed. for Shilgum</u>	
7	<u>Winifredo Malabanan</u>	✓		<u>DOE-HOEMB</u>	
8	<u>Rey V. Salrama</u>	/		<u>DOE-HOEMB</u>	
9	<u>MA. DECUA U. GARCIA</u>		✓	<u>NGSES - SURVEY</u>	
10	<u>Jason Macasanes</u>	✓		<u>UG SEC - SURVEY</u>	
11	<u>NANCY ADDANGOS</u>	✓	✓	<u>Brgy. Secretary - H</u>	
12	<u>Mama Lad.ao</u>		✓	<u>Brgy. Kgwad - H</u>	
13	<u>RICARDO L. BUTALE</u>	✓			
14	<u>ERNESTO B. TAH. TAG</u>	✓	✓	<u>Brgy. Captain Kgwad.</u>	
15	<u>LEON DONATO</u>	✓		<u>HFA - PRES' P</u>	
16	<u>DILLAG, MOISEO B.</u>	/		<u>Brgy. Kgwad. P</u>	
17	<u>BAUTAZAR DAMMIT</u>	/			
18	<u>Prosemerie Dequel</u>			<u>Brgy. Kgwad</u>	
19	<u>Ferdie Rendon</u>	✓		<u>Brgy. Kgwad</u>	
20	<u>Jose R. Burreal</u>	✓		<u>Farming</u>	
21	<u>Papito Angilan</u>	✓		<u>"</u>	
22	<u>Wendy N. Butal</u>		✓	<u>Brgy. Kgwad</u>	
23	<u>Donato Khablian</u>	/		<u>Kgwad</u>	
24	<u>Tony Linghison</u>	/			
25	<u>Roder M. Manghi</u>	/		<u>Captain</u>	

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29

Activity Secretariat

**PROVINCE OF IFUGAO
ATTENDANCE SHEET**

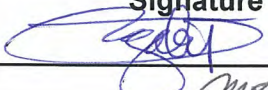
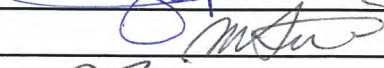
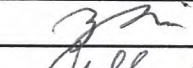
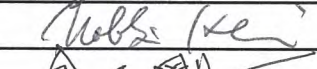
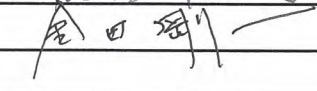
Office: Ifugao Provincial Government

Title of meeting/seminar/workshop: _____

Venue: _____

Date: _____

Expected number of participants: _____ Scheduled time: _____

	Name	Male	Female	Agency, Position	Signature
1	Christina Ngabit		F	Farmer	
2	SHIMIZU Mitsuru	M		TEPSCO/JICA	
3	Yusuro MIYAMOTO	M		TEPSCO/JICA	
4	Nobuki Hayashi	M	✓	TEPSCO/JICA	
5	GOICHI KANEH	✓		TEPSCO/JICA	
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Activity Secretariat

Preliminary Power Planning of Likud Mini-Hydropower

Contents of Preliminary Power Planning

1. Estimation for the available plant discharge
2. Examination and selection of the general layout
 - Result of the Topographical Map (1/2,000)
 - Selection of the location of the main civil facilities
 - Comparison study between waterway routes
3. Next examination
 - Site works
 - Internal Works

Highlights of the Meeting with the Local Authorities (Budget, Account and Treasury Office)

Date:	15:00-17:00, 30 June 2011
Venue:	GAZEBO, Lagawe, Ifugao
Participants:	Budget office, Account office and Treasury Office of the Provincial Government of Ifugao, PPDO, DOE, JICA Study Team, 9 participants (See attendance sheet)
Agenda:	Progress update on the feasibility study on the Likud mini-hydropower project by JICA Study Team (TEPSCO)

[Highlights]

- JICA Study Team explained the status of feasibility study on the Likud mini-hydropower project.
 - Location of the Project area
 - General lay-out of the Likud mini-hydropower plant
 - Construction cost
 - The result of financial analysis

(Q&A)

1. River water level in dry season in Ifugao becomes very low. Was this considered in the power generation of the Project and also considering the present situation of climate change.
 - A: The Study team installed two staff gauge. The one is in Municipality of Hungduan since 2004, and the other one is in the Project site, at Haliap, Municipality of Asipulo since last February 2001. The Study team monitors the level of water and the data is examined conservatively.
2. Can another mini-hydropower develop at the upstream of the Ambangal blook?
 - A: It is possible, but it maybe very small capacity such as pico-hydro. It is out of the scope under JICA Study this time, the Study team concentrates on the Likud hydropower project.
3. Not all the dividend shall be used for the rice terraces conservation fund because there is no

return from the farmers. Some portion of the dividend shall be used for another income generating project so that the Provincial Government of Ifugao (PGI) can avoid of the risk of collateral.

4. The PGI has no experience of having a loan project which generates income, but if it is really feasible, it is worth to invest. Many of the political leaders of the province tend to take just shortsighted approach for their point, but they should see long term vision to improve our life until our next generation.
5. Based on the latest guideline of LGU code, 20 % of IRA can be utilized for a loan project.

Closing Statements:

Ms Virginia Farro, Provincial budget officer gave the closing statements. She thanked the donor and study team for the project. She said that the mini-hydro power project, referring to the e8 Ambangal, is the first PLGU enterprise project and expressed hope it will be replicated in the proposed Likud mini-hydropower project.

**PROVINCE OF IFUGAO
ATTENDANCE SHEET**

Office: Ifugao Provincial Government
 Title of meeting/seminar/workshop: *MEETING RE: LIKOD MHPP*
 Venue: *Gazebo Garden Restaurant* Date: *June 30, 2011*
 Expected number of participants: _____ Scheduled time: _____

	Name	Male	Female	Office	Signature
1	Virginia D. Parro		✓	PBO	<i>[Signature]</i>
2	STEWART P. PACHA	✓		PTO	<i>[Signature]</i>
3	Tommy Ling Jingon	✓			<i>[Signature]</i>
4	Maribel B. Ligab		✓	PAO	<i>[Signature]</i>
5	Camelita B. Bunucan		✓	PPDO	<i>[Signature]</i>
6	Nobuki Hayashi		✓	TEPSO/JICA	<i>[Signature]</i>
7	MITSUO SHIMIZU	✓		TEPSO/JICA	<i>[Signature]</i>
8	ARNEL CARACUEL			II	<i>[Signature]</i>
9	Ray V. Salvana	✓		DPF	<i>[Signature]</i>
10	Ignacio Buelna	✓			<i>[Signature]</i>
11					
12					
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[Signature]

Highlights of the Meeting with the Sangunian Panlalawigan members who are in charge of Public Works & Utilities

Date:	9:30am-12:30pm, 30 June 2011
Venue:	Provincial Livelihood Center, Lamut, Ifugao
No. of Participants:	The PGI officials include PPDO staff, DBP officer, DOE, and JICA study team. Total number is 12 (See attendance list)
Agenda:	<ul style="list-style-type: none"> a. Progress update on the feasibility study on the Likud mini-hydropower project by TEPSCO b. Environmental Development Project (EDP) scheme by Development Bank of the Philippines (DBP Solano branch)

[Highlights]

a. The Likud mini-hydropower project

Before starting the presentation, e8 documentary film was showed to the participants.

Mr. Shimizu of JICA study team presented the result of feasibility study at this time for the Likud mini-hydropower project. The case B with maximum capacity of 810kW was recommended to the best option from an overall technical, environmental and financial feasibility. The total construction cost was about 113 million pesos.

(Q&A)

1. Board Member Humiwat asked if case D is possible to develop.

→ A: Technically possible, but it would be costly considering the length of the headrace is about 4km and environmental damages would cause.

2. Page 12, when we look at the Unit Construction Cost/kWh, the cheapest is Case B, but look at the Unit Construction Cost /kW, Case D is the cheapest. Can we not develop it?

→ A: If you look at Page 12, the graph of comparison of construction cost per capacity, the construction cost per kW is almost same among case A to D. But when you look at by construction cost per kWh, case B is better compared with the other cases. Even though the maximum output is big, if you cannot generate power with maximum output due to lack of water through full-year, it is very costly. It means the plant factor is low. JICA study team set the plant factor as high as 80% in case B, meaning, you will have full operation period of around 248 days per year.

3. I understood the spirit of development scale is met with the base load of Ifugao, but we don't want to miss opportunity that we might generate more power and sell it to other electric cooperative or spot market.

→ A: Look at page 11, the demand of Ifugao is small, you cannot sell when you want to sell it. And in order to sell the power outside of Ifugao, you need bigger capacity of transmission line which entails more construction cost.

4. Can we not develop more than 1000kW capacity at point of B?

→ A: Technically possible, but this is also very costly.

5. We (the SP member) would like to examine all case of Return of Investment (ROI), not only case B but the other case A, C and D.

→ A: will do by next visit

6. Engr. Salvania of DOE informed on the need of a Memorandum of Understanding as one requirement. Board member Humiwat also informed that they have requested the governor a Memorandum of Agreement for the undertaking of the feasibility study. He asked PPDO to coordinate with DOE regarding development requirements but first the pre-development.

b. EDP scheme by DBP

- The two officer of DBP Solano branch explained the EDP scheme, standard loan package in terms of, loanable amount, repayment period, interest and fees and charges, security and insurance of machineries and equipments.
- Technical assistance from central office is available.
- The loan terms and conditions will largely depend on the negotiation and agreement of both parties.

c. Closing Statements

Board member Humiwat, chairperson of the SP Committee on public works and utilities gave the closing statements. He thanked everyone for their participation especially the JICA study team and apologized for the many questions he raised but with the purpose of better understanding and decision. He asked DOE to help PGI secure the permit. Although there is yet no MOA regarding the conduct of the study as the SP required, he feels happy with the feasibility study nearing completion.

**PROVINCE OF IFUGAO
ATTENDANCE SHEET**

Office: Ifugao Provincial Government
 Title of meeting/seminar/workshop: MEETING OF PGI W/ TEPSCO RE: LIKOD MHRPP
 Venue: PLC, LAMUT, IFUGAO Date: JULY 1, 2011
 Expected number of participants: _____ Scheduled time: _____

	Name	Male	Female	Office	Signature
1	Catalina Lumang		✓	Provl Lga office	
2	SHIMIZU Mitsunori	✓		TEPSCO/JICA	
3	Rev. V. Salinas	✓		DOE-REMB	
4	Emelita B. Bongmacan		✓	PPDO	
5	Ignacio Benche	✓			
6	Nobuki Hayashi	✓	✓	TEPSCO/JICA	
7	EMIL CALMAG	✓		DBP	
8	IMELDA F. EISMA		✓	DBP	
9	Jordan T. Gullatiw	✓		S-P	
10	Robert K. Hernandez	✓		SPI	
11	Nancy Nalonne		✓	PPDO	
12	Kristine Guazon		✓	PPDO	
13	Roly Bolmaro	✓		PLC	
14	Clifford Bauwang	✓		PLC	
15	Roxito Tuquiran			PLC	
16	Jacinto Mariano	✓		PLC	
17	Orly Wapu		✓	" "	
18	Nora M. Martinez		✓		
19	Nancy Batangay		✓	PLC	
20	JOEL TALIBO	✓		PLC	
21					
22					
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Contents of Presentation

1. Hydrological Analysis for Development Planning
2. General Layout of Hydropower Plant
3. Development Scale (Installed Capacity)
4. Outline of the Civil Structures
5. Selection of Electrical & Mechanical Equipment
6. Electric Power Generation and Development Cost
7. Financial Analysis
8. Next Activities

Reliable Rive Flow Data: Hapao Gauging Station in Municipality Hungduan

Location ; 18km away from Likud project Site

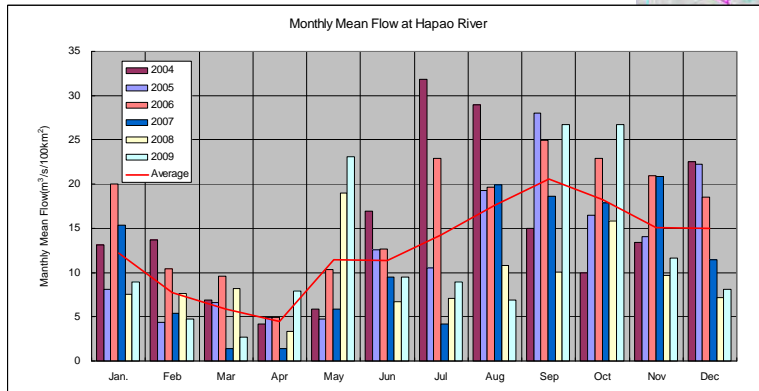
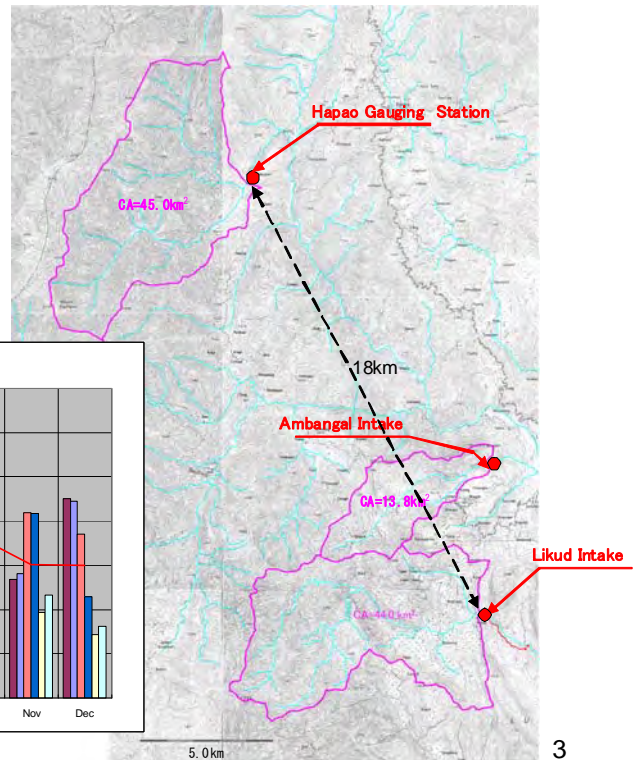
Brgy. Hapao, Hungduan

Observation Period ; Jan. 2004 – Dec.2009

6years

Catchment Area ; 45.0km²

Observed by ; TEPSCO

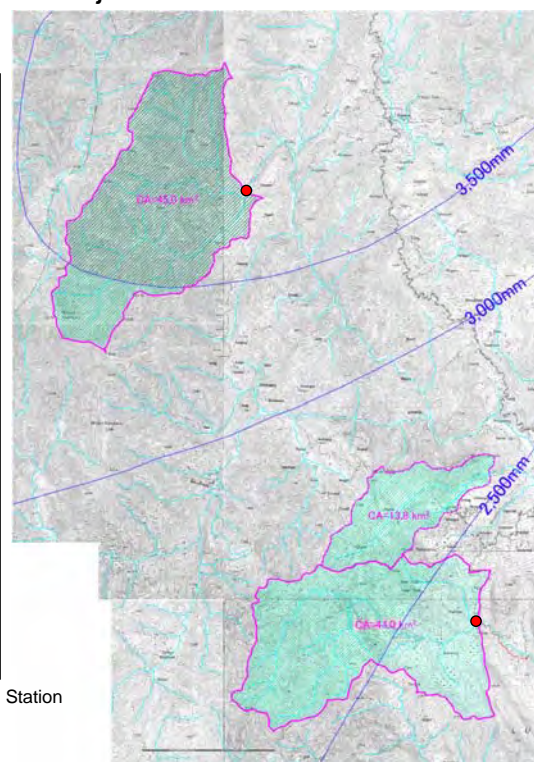


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Annual Rainfall and Effective Precipitation at Project Site

Items	Hapao	Likud
Catchment Area	45.01 km ²	44.02 km ²
Conversion Ratio (CR1)	1.000	0.978
Mean Annual Rainfall	3,671 mm	2,575 mm
Mean Annual Runoff	3,219 mm	-
Loss of Precipitation	452 mm	452 mm
Effective Precipitation	3,219 mm	2,123 mm
Conversion Ratio (CR2)	1.000	0.660

Note; Mean Annual Runoff based on Observed River Flow at Hapao gauging Station



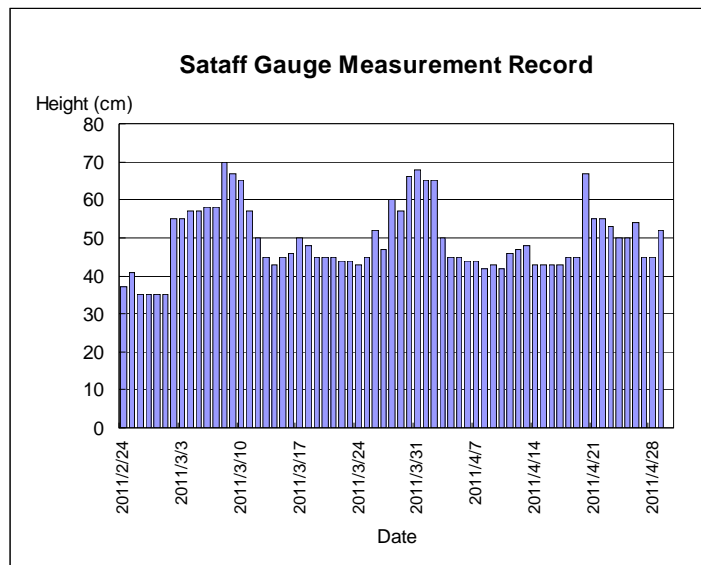
1. Conversion from Hapao GS to Project site
 River Flow of Project Site = CR1 x CR2 x River Flow of Hapao GS
 = 0.978 x 0.660 x River Flow of Hapao GS
 = 0.645 x River Flow of Hapao GS

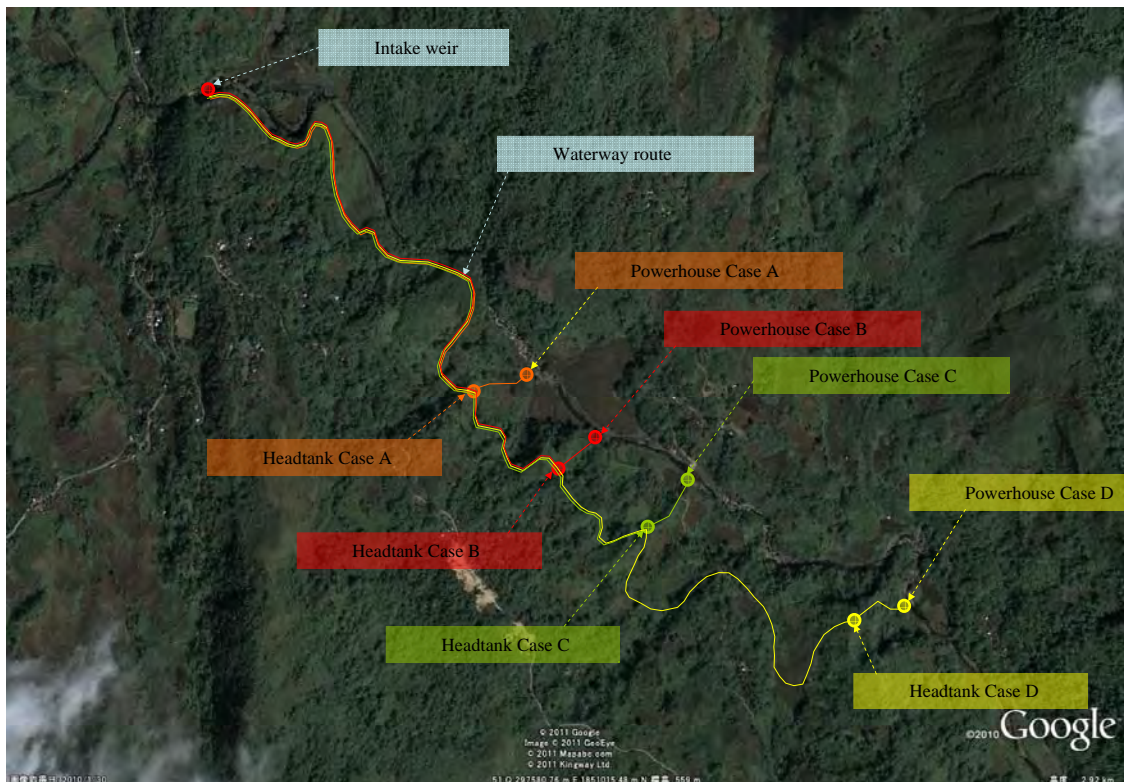
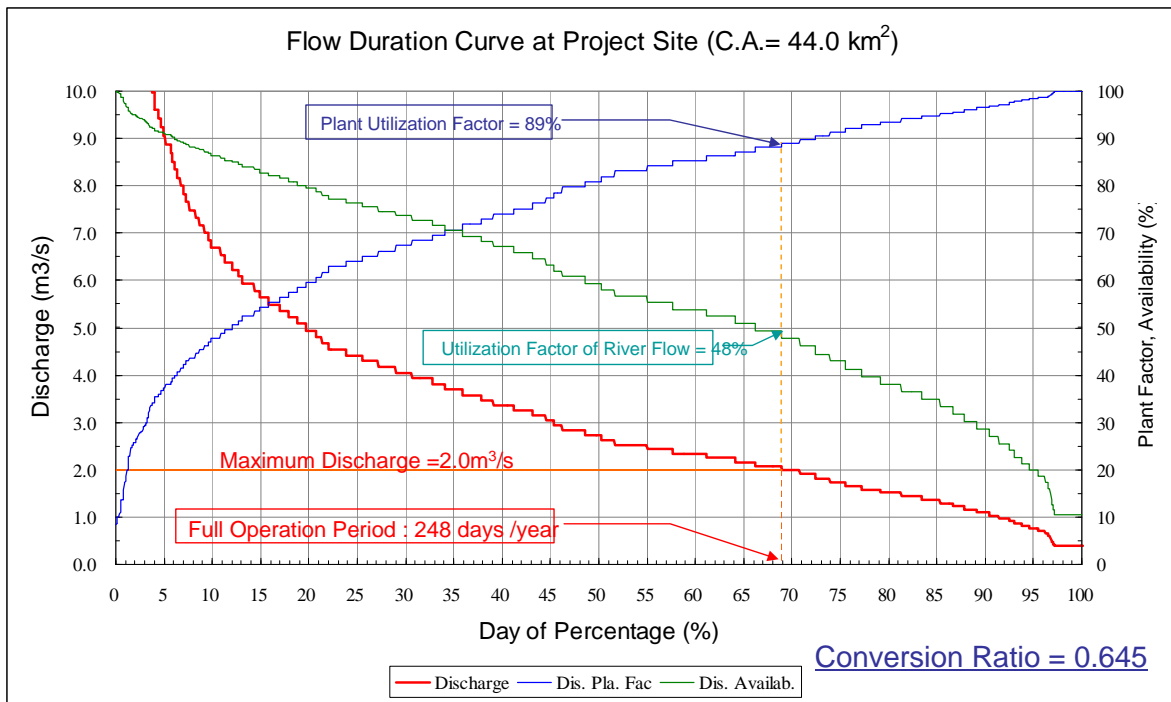
2. Comparison of Actual River Flow Measurement Record
 Study Team measured river flow at Hapao GS and Project site on same day
 (Apr.30, 2011)
 Hapao GS ; 2.40 m³/s }
 Project Site ; 1.83 m³/s } 1.83 / 2.40 = **0.763**

3. Variation of Conversion Ratio in the Study
 The conversion ratio (0.645) is Conservative, It will be validated in the study finally, based on additional river flow measurement at Hapao GS and Project Site during 3rd mission

4. Water Volume for Irrigation will be considered in the Study

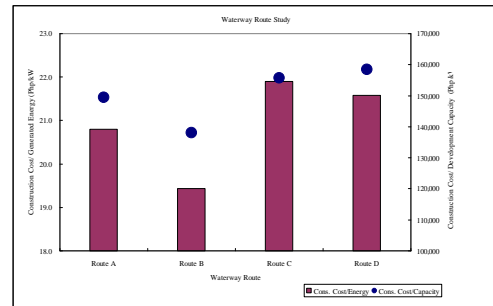
0.645 was selected in this Report





Comparison study of Waterway Routes

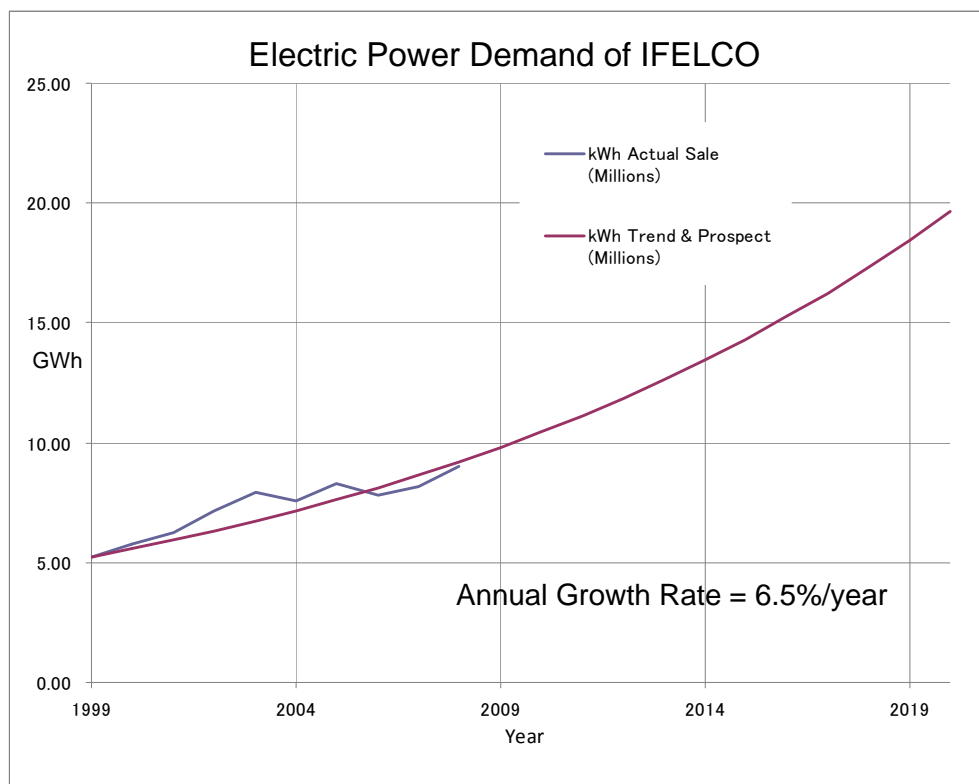
Item	unit	Route A	Route B	Route C	Route D
Intake water level	El.m	600.0	600.0	600.0	600.0
Headtank water level	El.m	597.0	596.0	595.0	589.0
Tail water level	El.m	545.0	541.0	540.0	510.0
Capacity	kW	740.0	820.0	790.0	1,000.0
Plant discharge	m ³ /s	2.00	2.00	2.00	1.70
Generated Energy	MWh	5,317	5,826	5,616	7,345
Gross head	m	55.0	59.0	60.0	90.0
Effective head	m	48.1	52.9	50.8	75.7
Head loss	m	6.9	6.1	9.2	14.3
Headrace length	m	1,554.0	1,940.0	2,382.0	3,858.0
Penstock length	m	210.0	110.0	230.0	180.0



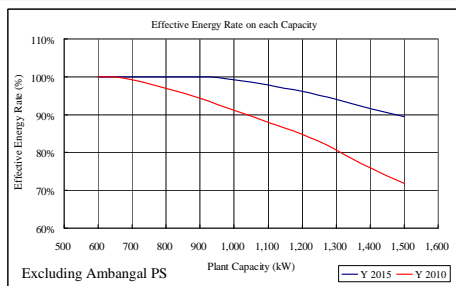
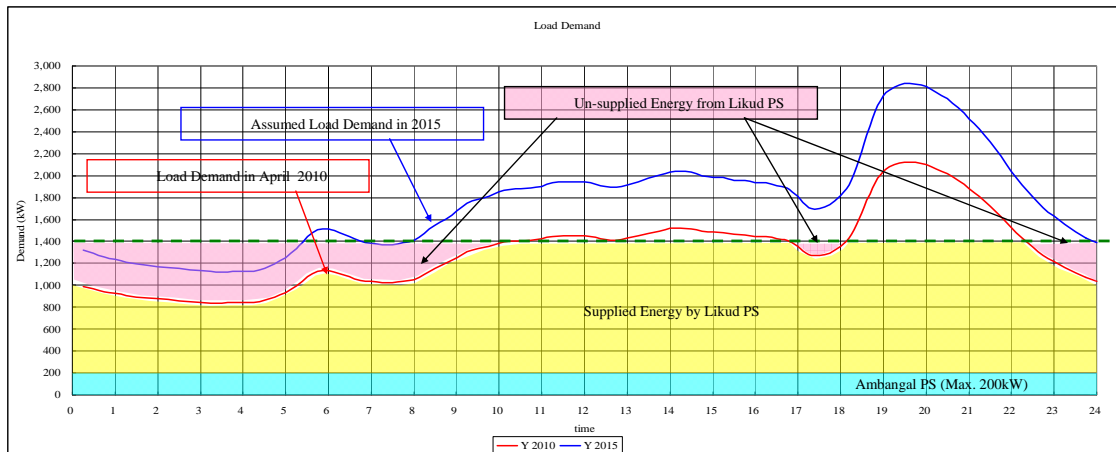
Items		Unit	A	B	C	D
Feature of Generation Plan	Gross Head	m	55.0	59.0	60.0	90.0
	Effective Head	m	48.1	52.9	50.8	75.7
	Plant Discharge	m ³ /s	2.0	2.0	2.0	1.7
	Install Capacity	kW	740	820	790	1,000
	Total Length of Waterway	m	1,764	2,050	2,612	4,038
	Length of Waterway / Annual Generated Energy	-	36.7	38.8	51.4	53.3
	Construction Cost	Pesos	110,592,037	113,250,000	122,996,954	158,501,748
	Unit Cost	Pesos/KWh	20.8	19.4	21.9	21.6
Feasibility	Technical Issues	-	Non Length of Access Road:	Non Length of Access Road:	Non Not Necessary Access Road	Long Headrace Long Access Road: 2.2km Wide Affected Area Including Rice Field
	Environmental Issues	-	No Significant Impact	No Significant Impact	No Significant Impact	Low Financial Feasibility caused by big L/H
	Financial Aspect	-	Low Financial Feasibility caused by Small Scale	No.1 Financial Feasibility	Low Financial Feasibility caused by big L/H	Low Financial Feasibility caused by Long Headrace
	Comprehensive Feasibility	-	2	1	4	3

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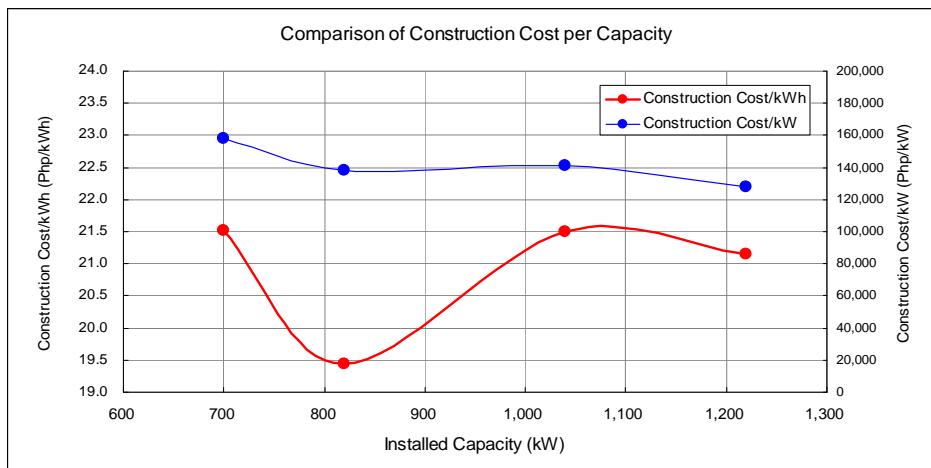
10



Issue on the load demand

For example; Likud PS has 1,200kW capacity.
 Total supply capacity including Ambangal PS : 1,400kW
 Load demand from 22:30 to 10:00 is lower than total supply capacity.
 Energy supply is limited based on the load demand.

Effective energy : 91% in 2011, 99% in 2015 (1,000kW)
 85% in 2011, 96% in 2015 (1,200kW)



Installed Capacity	kW	700	820	1,040	1,220
Maximum Discharge	m ³ /s	1.70	2.00	2.55	3.00
Number of Turbine Unit	Unit	2	2	3	3
Annual Effective Generation	MWh	5,142	5,826	6,821	7,377
Effective Plant Factor	%	83.9	81.1	74.9	69.0
Construction Cost	M.pesos	110.684	113.250	146.608	156.057
Unit Construction Cost / kW	Php/kW	158,120	138,110	140,970	127,916
Unit Construction Cost / kWh	Php/kWh	21.5	19.4	21.5	21.2

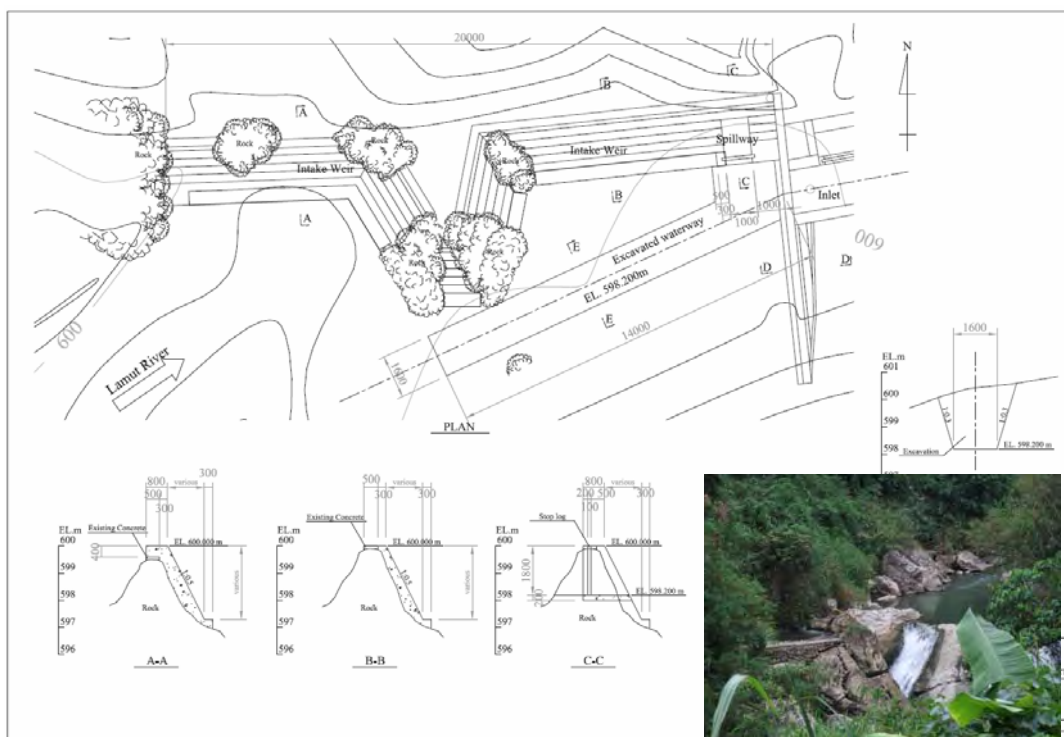
General Layout



13

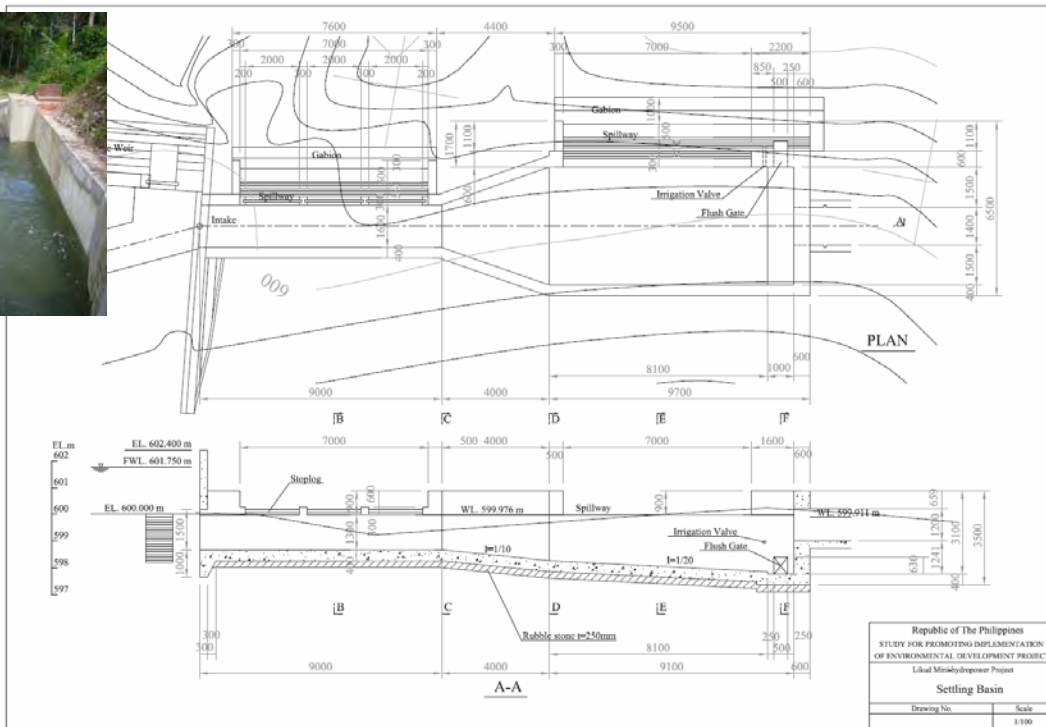
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Intake Weir (Improvement of Existing Weir for Irrigation) :Height=about 3.0m



14

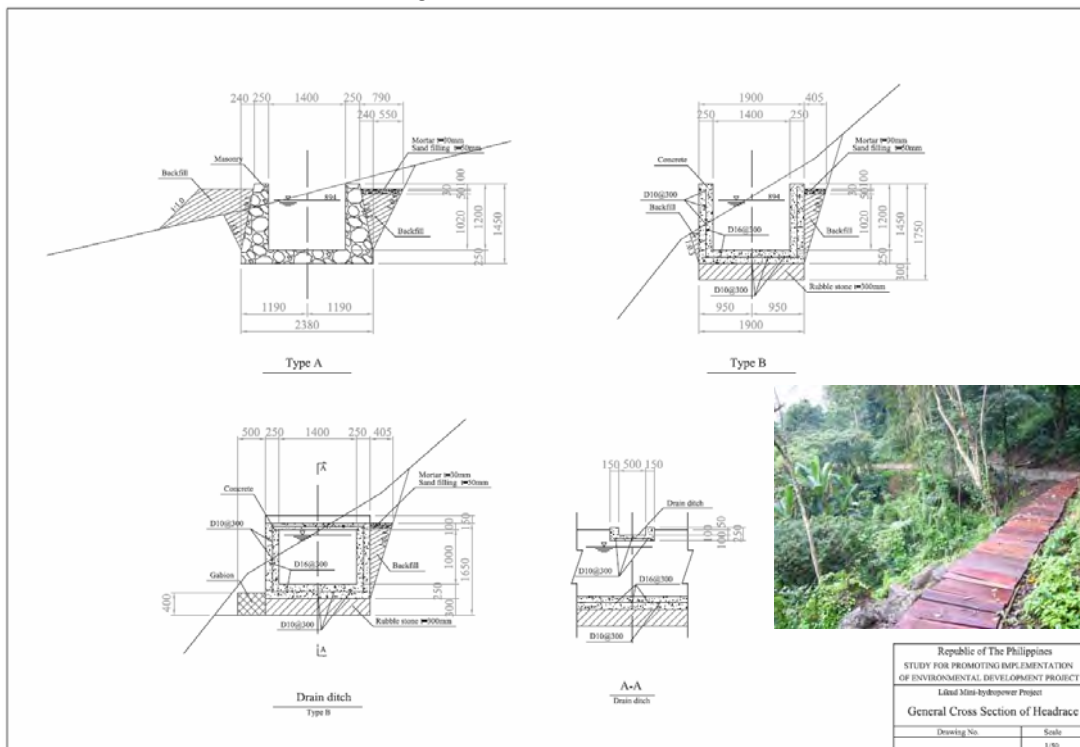
Settling Basin



15

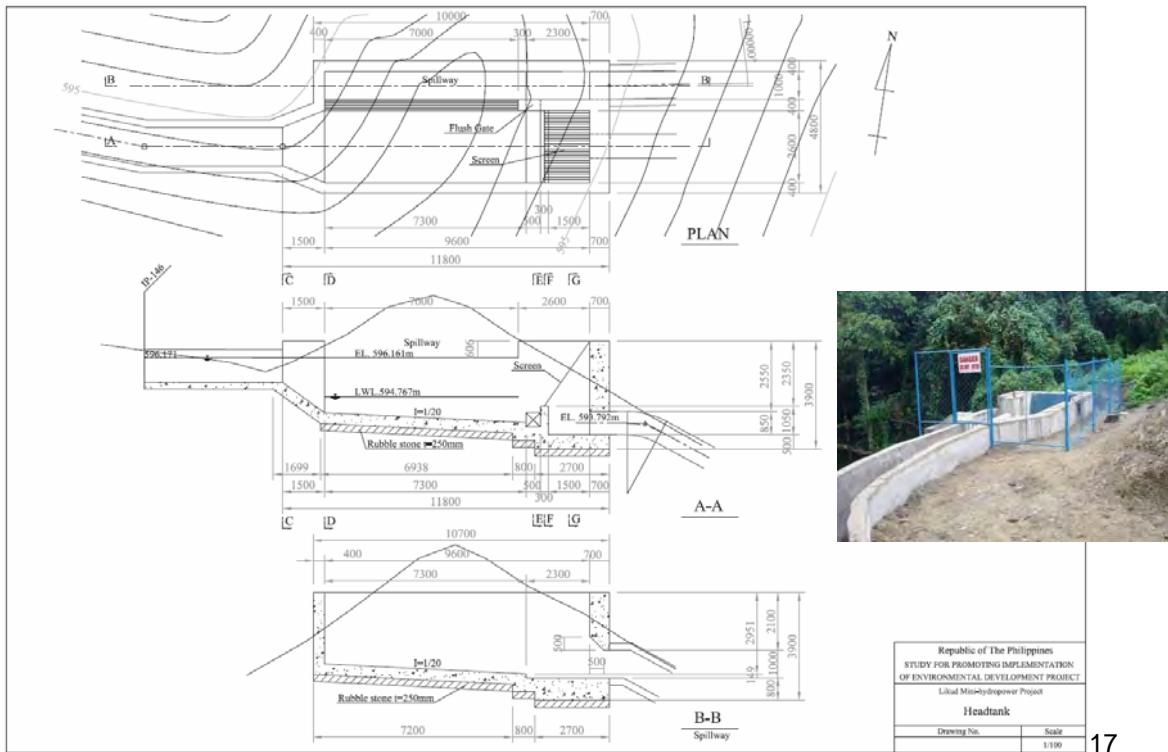
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Headrace Channel Total Length=1,875 m



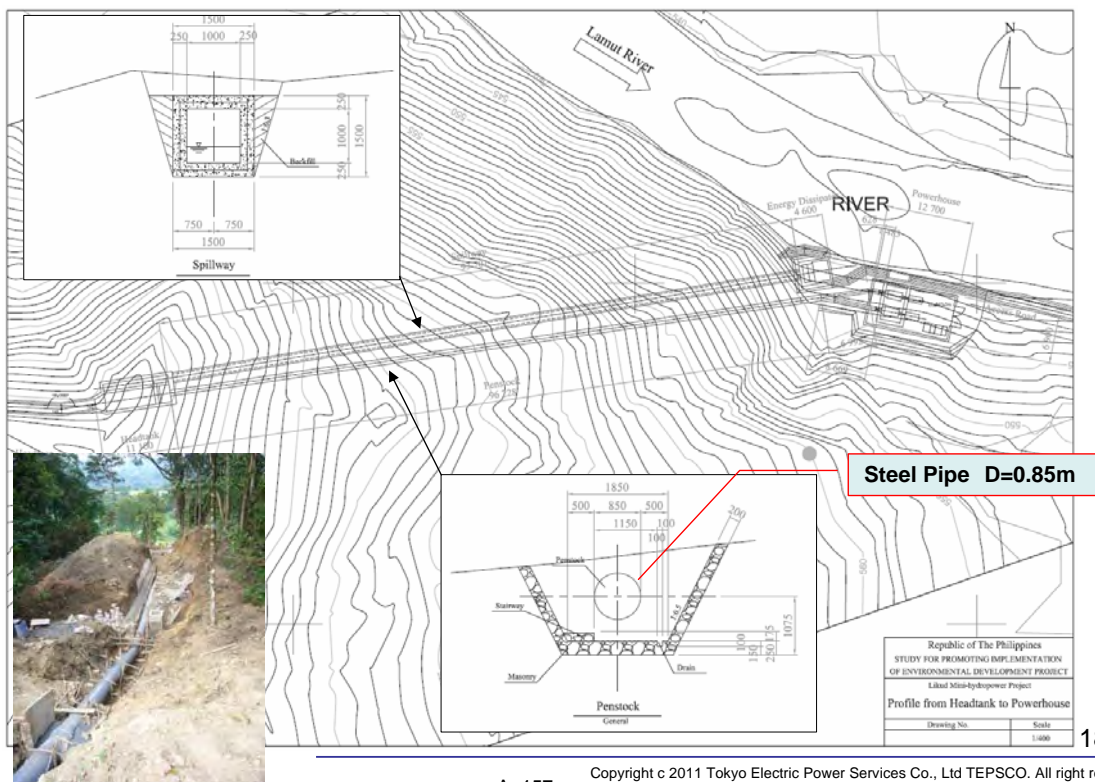
16

Head-Tank



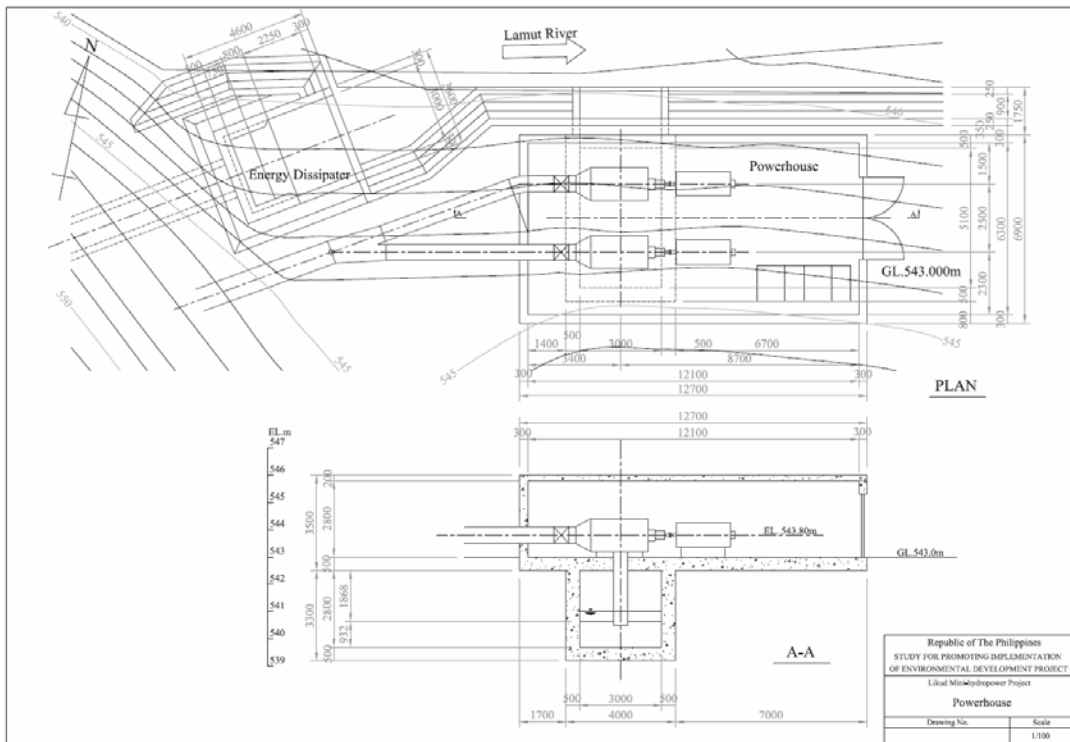
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Penstock ; Length=116.5m Spillway ; Length=106.5m



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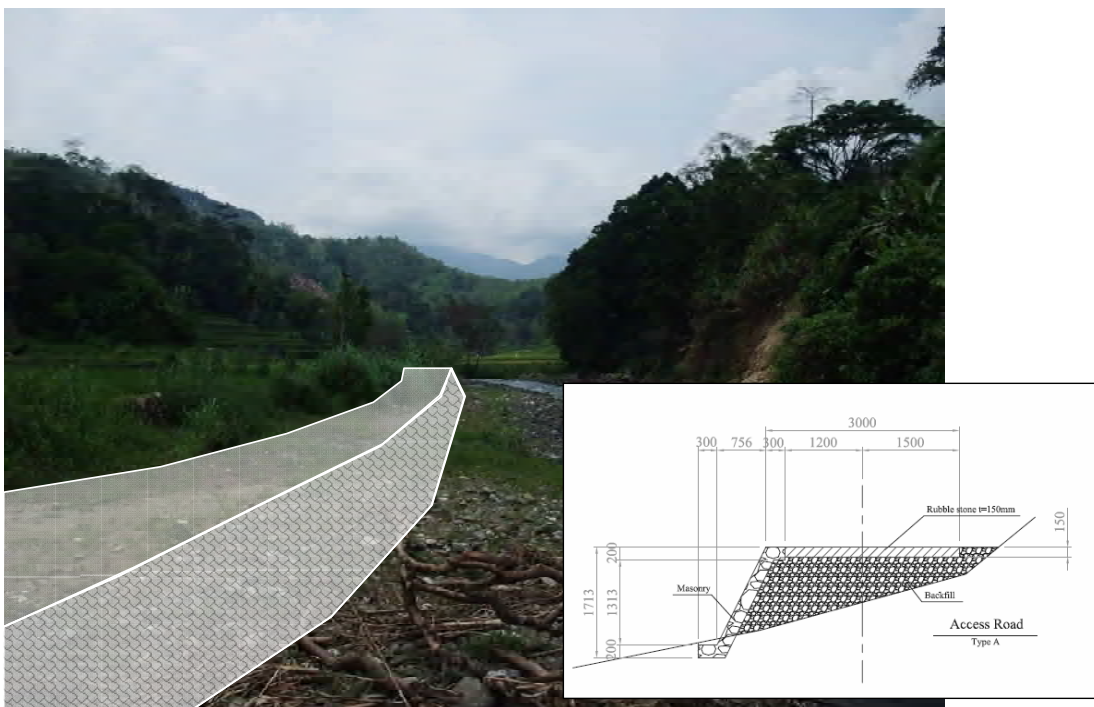
Powerhouse



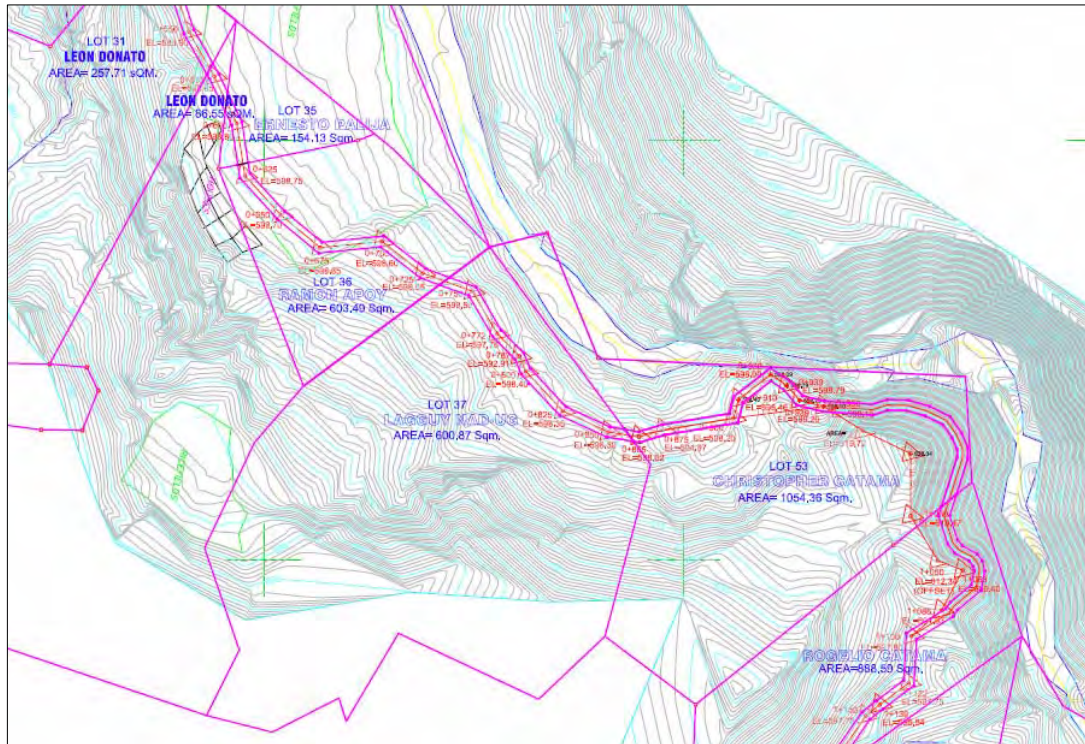
19

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Access Road to Powerhouse from Washed-out Bridge

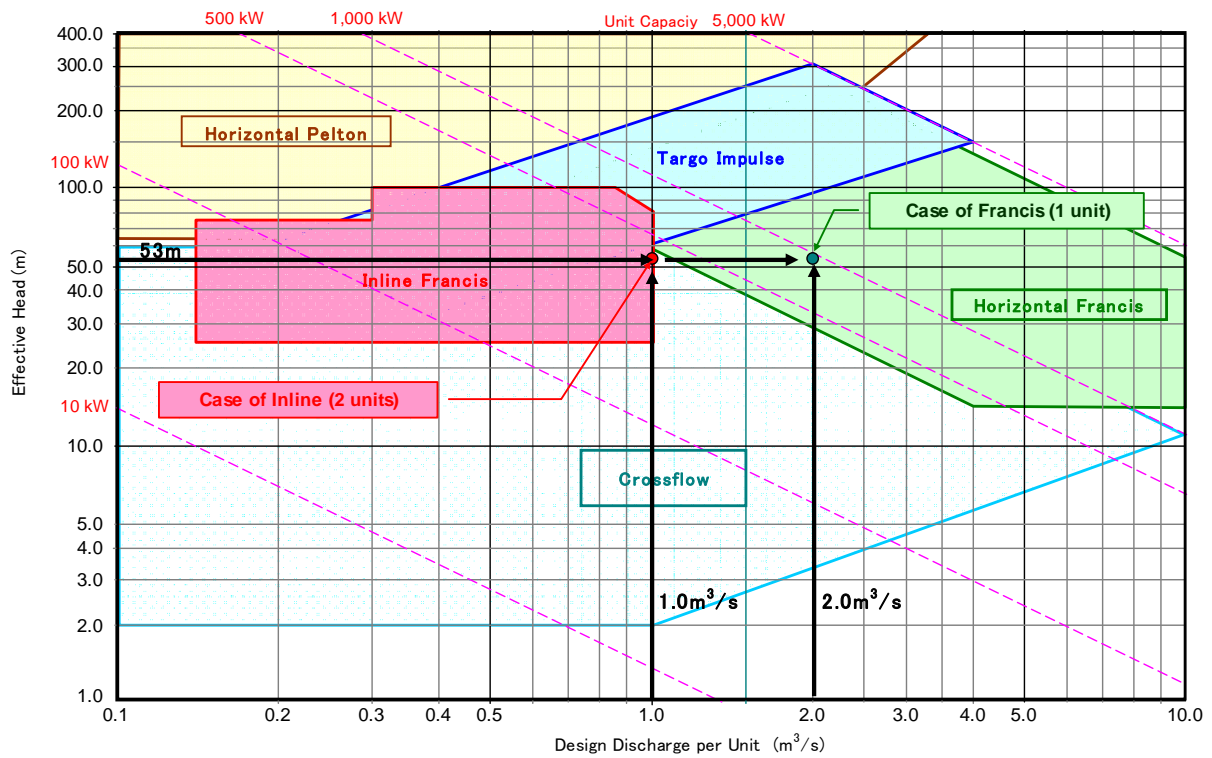


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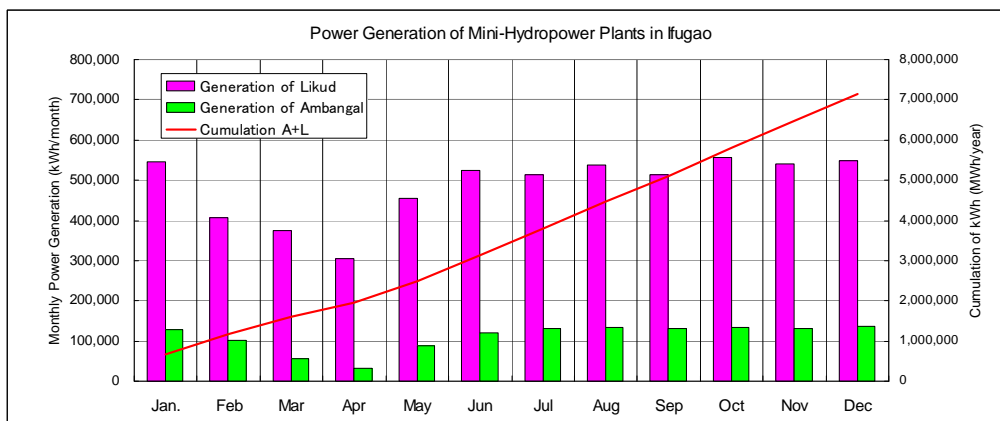
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Items	Francis Turbine	Inline Francis Turbine
Outline		
No. of Unit	1 (2)	2
Maximum Output	820kW (820kW)	820 kW
Firm Output	318 kW (410kW)	410 kW
Annual Effective Generation	5,755 MWh (5,826MWh)	5,826 MWh
Cost of T&G&C	Php 114,750,000 (Php 142,750,000)	Php 113,250,000
Cost T&G&C /Generation	19.9 Php/kWh (24.5Php/kWh)	19.4 Php/kWh
Operation	Easy But newly training will be necessary	Easy Already Trained in Ambangal MHP
Maintenance	Complex During maintenance work, the operation should stop completely	Easy During maintenance work, 1 unit can be operated
Result	-	Selected for Likud MHP

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Items	Unit	Ambangal MHP	Likud MHP	Total	Remarks	
Maximum Output	kW	200	820	1,020		
Annual Generation	MWh	1,443	6,333	7,776		
Annual Effective Generation	MWh	1,327	5,826	7,153	Loss=8%	
Account Rate for Demand	as of 2010	%	12.7	55.8	68.5	Demand 10,450 MWh
	as of 2015	%	9.3	40.7	50.0	Demand 14,327 MWh



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Contents	Quantity	Unit	Cost (Peso)	Remark
Direct Cost				
Civil Works				
Intake Weir	1.0	Ls	677000	
Settling Basin	1.0	Ls	1098000	
Headrace	1.0	Ls	21955000	
Headtank	1.0	Ls	1366000	
Penstock	1.0	Ls	3268000	
Spillway	1.0	Ls	1549000	
Powerhouse	1.0	Ls	1441000	
Access road	1.0	Ls	1201000	
Sub total	1.0	Ls	32555000	
Architectural Works	1.0	Ls	599000	
Electro-mechanical Works				
Turbine/Generator	1.0	Ls	64000000	Manufacturer supply
Transformer & Others	1.0	Ls	4000000	Local supply
Sub total	1.0	Ls	68000000	
Transmission	1.0	Ls	5250000	Local supply
Direct Cost Total	1.0	Ls	106404000	
Indirect Cost				
Engineering Cost	1.0	Ls	2605000	8% of Civil Works
Administration	1.0	Ls	326000	1% of Civil Works
Contingency	1.0	Ls	3256000	10% of Civil Works
Indirect Cost Total	1.0	Ls	6187000	
Others				
Right of Way	1.0	Ls	659000	
Total			113250000	

25

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Items	Decision process	Values
Construction	Direct cost + indirect cost + other expenses Pre-operation interest	113 million Php 8 million Php
O/M expenses	1% of Construction cost * Escalation	1.21 million Php
Wages	6 persons * 8,000Php/month * 12months * Escalation	0.576 millionPhp / year
Capacity		820 k W
Operation load	Annual average operation load	84 %
Power generation	Capacity*1.05 * Load * 8,760 hours	6,333 MWh/year
Losses	5% to10% referred by the past experiences	8% (5% in Gen 3% in T/D)
Power sales	Generation * (1 - Losses)	5,826 MWh/year

Note) O/M expenses: According to "Q&A small hydro power business(March 2005)" edited by Study panels for Clean Energy, O/M expenses (including overhaul cost, operation detection system) is calculated with 0.9% to the construction cost.

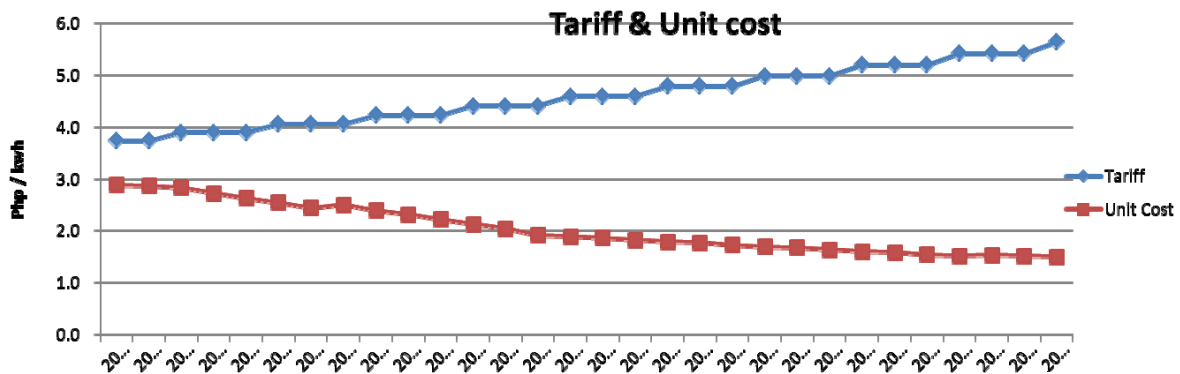
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Items	Decision process	Values
Equity	10% of construction cost	12.1 million Php
Long term loan	90% of construction cost	109.0 million Php
Interest rate of LTL	Nominal interest rate is 8% to 10%. Therefore it is the average of 9% with fix interest rate.	9%
Repayment conditions	According to EDP advantage, Grace term of repayment is 5 years, term of repayment is 15 years, no repayment of interest rate is during the grace term.	Repayment : 15years Grace term : 5years
Depreciation conditions	Depreciation term	30 years after operation
	Residual rate	5% of construction cost
	Depreciation method	Straight line

Items	Calculation process
Value added tax	10% of (Sales – fuel cost - O/M expenses)
Fixed asset tax	1% of booked assets
Electricity tax	10% of Income but deferred term is 7 years
Business tax	0.5% to Sales
Corporate tax	10% to profit before tax , but deferred term is 7 years
Dividend	Target of the dividend is 100% for rice terrace protection fund, but it is decreased during none profit term.

When tariff is 3.7 Php/kWh at the first year of the operation and the tariff is escalated with 4.2 % per three years after three years of the operation, FIRR reaches 15%.

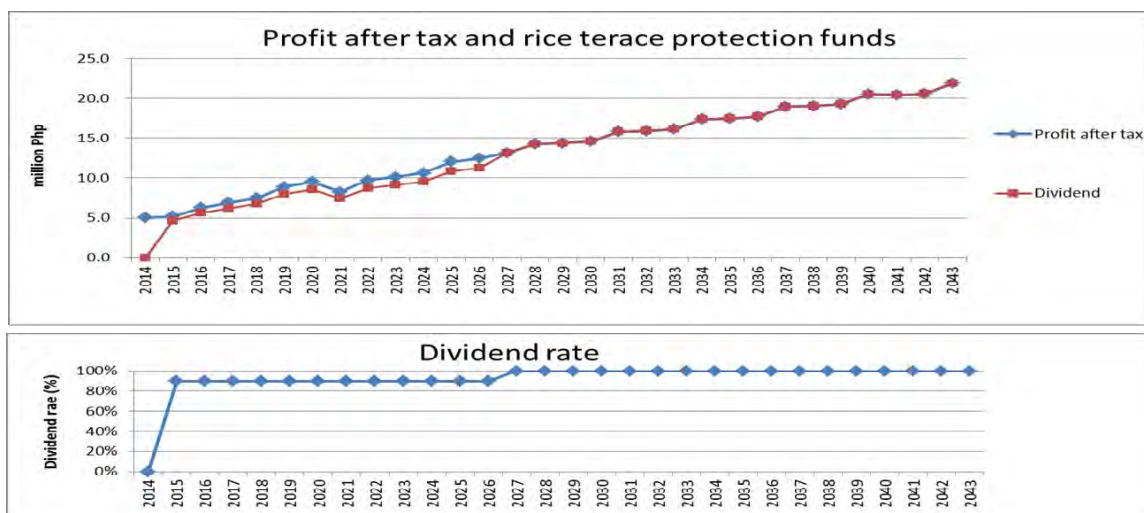
And the generation unit cost is 2.9 Php/kWh at the first year. The average generation cost in the calculation term is 2.4 Php /kWh due to increase wages and O/M expenses.



Rice terrace conservation fund is appropriated by dividend of the project, the dividend is decided by profit after tax and dividend ratio.

It is possible that the dividend ratio is 90% for rice terrace protection fund during the repayment of LTL, after that, it can be that the dividend ratio is 100% for creating rice terrace protection fund.

13 million pesos will be obtained as annual average Conservation Fund for the project period.



Next Activities

1. Review and Finalize result of the Study
2. Issue Draft Final Report : end of July, 2011
3. Issue Final Report : end of August, 2011

Thank you Very Much !!

MINUTES OF CONSULTATION MEETING WITH THE BARANGAY COUNCIL HELD AT THE BARANGAY HALL, HALIAP, ASIPULO ON JULY 1, 2011 AT 9.45 AM.

PRESENT:

ROGER MANGHI	Barangay Captain, Haliap
ROSEMARIE DAQUEL	Kagawad
CHRISTOPHER CATAMA	Kagawad
CONSTACIO CATAMA	Kagawad
BASILIO BAYAONA	Kagawad
MARIA LAD-AO	Kagawad
NANCY ADDANGNA	Barangay Secretary
ESTELA BASILIO	Barangay Treasurer
BALTAZAR DAMMIT	Irrigators Ass'n officer
LILIAN TENENAN	Haliap
CARMELITA BUYUCCAN	PPDC, Ifugao
NANCY NALUNNE	PO 1 – PPDO, Ifugao
JONATHAN PADDUYAO	PPDO, Ifugao
IGNACIO BUNOLNA	Interpreter Study Team
REY V. SALVANIA	DOE
NOBUKI HAYASHI	TEPSCO/JICA
SHIMIZU MITSURU	TEPSCO/JICA

- The meeting started at 9.45 AM with a prayer led by Kagawad ROSEMARIE DAQUEL.
- Barangay Captain ROGER MANGHI warmly welcomed everyone saying that this is already the third consultation meeting with the barangay council. He expressed apologies for having missed the presentation during the second consultation meeting as he came in very late. Anyhow, he reiterated his position supporting the project and hope that this endeavor will indeed push through.
- Engr. CARMELITA BUYUCCAN, PPDC, acknowledged and thanked the presence of everyone especially the members of the barangay council. She said that the study team is here for the third consultation meeting to present progress of the study especially the affected land areas. She informed that after the meeting, she would like to have a walk through to the project site to see for herself the actual situation. She said that the study is still ongoing and hopefully be finally completed by end of August.
- PRESENTATION/DISCUSSION

NOBUKI HAYASHI of the study team presented and discussed the development plan of the the proposed Likud Mini-Hydropower Plant. She discussed the following:

- Hydrological analysis for development planning
- General lay-out of the hydro-power plant
- Development scale (installed capacity)
- Outline of the civil structures

- Selection of electrical and mechanical equipment
- Financial analysis
- Next activities

After the presentation, the facilitator asked the body for questions, clarifications and or comments. The following were raised.

- Barangay Captain Manghi informed that there was a reading to measure the riverflow conducted sometime in the late 90's. However, when asked if the data are available, he said none.
- Barangay secretary Nancy Addangna asked when will the meter reading end. Ms Hayashi said that the reading continue until end of the study which will be in August.
- Mr. Baltazar Dammit informed that some of the listed owners of the affected Lots are erroneous. The facilitator responded saying that one of the purpose of the meeting was to confirm the list of landowners. This is the opportunity to update and correct it. The council went through the list and made some corrections.
- Barangay captain Roger Manghi requested to have a separate meeting with the lot owners and the barangay council during the community consultation meeting for the final presentation. Engr. Carmelta Buyuccan said the suggestion will be Considered.

- CLOSING STATEMENTS

Engr. CARMELITA BUYUCCAN, PPDC, gave the closing remarks. She thanked the Presenter, Ms. HAYASHI, for ably presenting and discussing the technical contents. She also expressed appreciation to the members of the council for their presence and support. On the part of the provincial government, she expressed high hope that the officials will decide favorably and bring this endeavor to fruition. She asked that the community continue to support the project.

Kagawad Maria Lad-ao led the closing prayer. Meeting was adjourned at 11.45.

PREPARED BY :



IGNACIO N. BUNOLNA

Consultation Meeting

Date: July 1, 2011
 Venue: Haliap, Azeputo

Attendance

	Name	Position	Office/Barangay	Signature
1	ROSEMARIE M. DALCOUR	BRGY KAGAWAD	HALIAP	
2	CHRISTOPHER CATAMB		HALIAP	
3	CONSTANCIO CATAMB	Brgy. Kag.	HALIAP	
4	Basilio Bayarona	Brgy Kagad	Haliap	Bayarona
5	ROGER MANGH	BRGY KAGAD	—	R Mangh
6	NANCY ADDANGNA	Brgy. Secretary	Haliap	
7	WANT GAND-WAWANE	PO-1	PPDO	
8	Emelita B. Bayarona	PPDC	PPDO	
9	Maria L. Lad-ao	Brgy Kagad	brgy Haliap	
10	BLITZAR DAMMIT	Inspector	MAPPIT	
11	Julia P. Basilio	Brgy. Treasurer	Haliap	Julia Basilio
12	Jonathan K. Pardo	PPDO	Lagawe	
13	Lilian Tenenan		Haliap	
14	Tony Linglingon		PPDO	
15	Ignacio Bunobra		TEPCO-Local	
16	Ray V. Salvana	DOE		
17	SHIMIZU Mitsuru		TEPCO/JICA	
18	Nobuki Hayashi	TEPCO/JICA		
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Highlights of the Sangunian Bayan member

Date:	13:50-15:30 , 8 th August 2011
Venue:	Municipal Hall, Asipulo, Ifugao
No. of Participants:	Sangunian Bayan (SB) members:9 PPDO: 2 JICA: 1 TEPSCO: 3
Agenda:	Result of feasibility study on Likud Mini-hydropower plant

[Highlights]

- Mr. Shimizu of JICA project leader presented the results of the feasibility study around 30 minutes to the Sangunian Bayan members.
 - 1) There is no significant problem in terms of technology and environment for the implementation of the mini-hydropower project
 - 2) The case B which is maximum output is 810 kW is most feasible among 4 cases
 - 3) The total construction of cost is around 118 million pesos
 - 4) If The Provincial Government of Ifugao will implement the project, they will have to prepare 10% equity which is around 12 million pesos and 90% of construction cost will be borrowed from the Development Bank of the Philippines under EDP scheme.
 - 5) If the selling rate sets P4.55 pesos/kWh, annual average net profit, such as the RTCF will be around 11.6 million pesos.

[Q&A]

- Hon. Dennis Gumangan, the SB members asked what the PGI said about their equity of 12 Million pesos.
 - The PGI has not decided yet if the project would pursue or not. After the examination of the FS report, they will decide.
- The provincial officer of National Commission of Ingenious People (NCIP) came to the Municipal of Asipulo the other day, and said the necessity of implementation of Free Prior Informed consent (FPIC) for the Project and also issuing of the SB resolution and Barangay resolution for the Project. What is the direct benefit for the local people? How can SB members encourage the people? How about the case of the Ambangal project? Did the host communities get any benefit from the project?
 - As the host community, the local people has a priority to access the Rice Terraces Conservation Fund for rehabilitation of communal irrigation system (CIS) and the repair of damaged rice fields. And they also could receive a percentage share of the local

government share being the host community.

- Can the Likud mini-hydropower plant do isolated operation?
 - No, it will not be isolated operation due to the present small capacity of distribution line. Since the Likud's capacity is big as 810kW, the IFELCO line cannot manage the fluctuation of load. For the isolate operation, the additional cost will be taken for enhancement of distribution system. In case of the Ambangal power plant, since it is small capacity, the dummy load can cover the fluctuation.
- Vice Mayor, Tomas Pulupul, SB chairman said that as far as the SB Asipulo is concerned, they are supportive of the project and expressed hope that the PGI would pursue it.

**PROVINCE OF IFUGAO
ATTENDANCE SHEET**

Office: Ifugao Provincial Government

Title of meeting/seminar/workshop: _____

Venue: ASIPULO Date: _____

Expected number of participants: _____ Scheduled time: _____

	Name	Male	Female	Office	CP Number	Signature
1	TOMAS B. PULLUPUL	/		SP		
2	DENIS P. GUMANGAY	/		-do-		
3	CLARENCE P. DATINGAYAN	/		-do-		
4	ROMEL D. PALLAY	/		-do-		
5	CHRISTINE D. HUMWAT		/	-do-		
6	FLORENCE B. PICCANAY		/	-do-		
7	FERNANDO D. DUPINGAY	/		-do-		
8	ROBERT P. ULLANI	/		-do-		
9	CHARLES T. HUMWAT (ABCD)	/		-do-		
10	CLARENCE D. DUPINGAY	/		-do- (on leave)		
11	JANE B. ANUDON (SKF REG)		/	-do- (on leave)		
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CERTIFIED CORRECT:

MINUTES OF THE COMMUNITY CONSULTATION MEETING HELD AT THE BARANGAY HALL, HALIAP,
ASIPULO
ON AUGUST 9,2011 AT 9.30 AM.

PRESENT : Pls see attached attendance sheet

I – PRELIMINARIES

- The meeting started with a prayer led by Mr. Alfredo Lobyoc
- The participants were acknowledged by representation as members of the barangay council, Lot owners, community elders, project study team and provincial government.
- The facilitator briefly recounted the number of community consultations already conducted and informed the body that this is now the final presentation of the feasibility study results. It was already presented to the members of the Sangguniang Panlalawigan and the Sangguniang Bayan of Asipulo. The final report will be completed this month for submission to JICA.

11- PRESENTATION

Ms. Nobuki Hayashi of the study team presented results of the feasibility study, content of which are as follows :

- Project purpose
- Electric power demand in Ifugao
- Hydrological analysis
- Water diversion from intake weir
- General lay-out
- Outline of the structures
- Selection of turbine type
- Construction cost
- Financial analysis
- Conclusions and Recommendations

The presentation was done in English and translated to the vernacular language for better understanding.

111- OPEN FORUM

1. Mr Ernesto Paliya, a lot owner, asked what would happen to the damages?

At this point the route of the headrace showing affected lot owners was shown and there were some corrections made as to the owner of the lot. Example, Jose Bimmucal et al was changed to be part of Nido Lumaho. Unfortunately, there was sudden brown out.

Engr. Carmelita Buyuccan informed the body that before any construction activities commence should the provincial government decide to pursue, the route and locations of the structures will be revisited to determine the real owners, hence, the lot owners will be part of

the activity negotiation meetings shall be undertaken to include the municipal and provincial assessor office. And that compensation for the right of way will be determined. Payment for right of way is included in the construction cost.

2. Barangay Captain Roger Manghi asked if there will be another consultation meeting.

As was said earlier, this is the final presentation as far as the feasibility study is concerned. Should the project continue, series of community meetings will be undertaken to secure the Free Prior and Informed Consent which is a requirement under the IPRA law.

1V – IMPRESSIONS AND FINAL REMARKS

1. Barangay captain Roger Manghi said that although this is the only time he stayed on for the meeting from the start to the end, he understood the project and hope that the participants also understood as the presentation was done both in English and vernacular. He expressed his high hope for the provincial officials to agree and pursue this endeavor for the good of the province. He thanked the members of the study team and the provincial government who have been coming to consult with the community.
2. Engr. Mitsuru Shimizu, project team leader, thanked the barangay council and participants for their friendship and support since the first community consultation in February.
3. Engr. Carmelita Buyuccan, Provincial Planning and Development Coordinator, thanked the members of the Barangay council, the lot owners and the study team and so with the national and international agencies who supported this project. She thanked TEPCO, JICA and DOE for their support.

On the part of the Provincial Planning and Development Office(PPDO), they will try their best to contribute whatever they can to the provincial government to be able to implement the project by finding other means and sources to reduce the loan component.

“Thank you for all your support and cooperation.”

V – ADJOURNMENT

The meeting ended with a closing prayer led by Kagawad Rendon to include blessing of the food. The meeting adjourned at 12.00 noon.

PREPARED BY:



IGNACIO N. BUNOLNA

**PROVINCE OF IFUGAO
ATTENDANCE SHEET**

Office: Ifugao Provincial Government

Title of meeting/seminar/workshop: Community Consultation

Venue: Haliap, Anepulo

Date: August 9, 2011

Expected number of participants: 30

Scheduled time: 9:30 a.m.

	Name	Male	Female	Office	CP Number	Signature
1	ROGER M. MANGH	-		BRGY HALIAP	09156715261	R M Mangh
2	Constancio Catama	✓		"	09265886922	Constancio
3	Benito Duppong	✓		Haliap		Benito Duppong
4	Guest, Palje	✓		Panabitan		Palje
5	Hool Bas-lan	-		Tangngadon		Hool Bas-lan
6	Romeo Apog	-		Licod Haliap		Romeo Apog
7	CHRISTOPHER CATAMA	-		Licod, Haliap	09262866460	Christopher
8	Ayuta Vaggoz		✓	Licod, Haliap		Ayuta
9	Mula P. Bahito		✓	Tangngadon	09069014582	Mula P. Bahito
10	Calixto Catama	-		Licod	09069711899	Calixto
11	Pablo Bittuwan	✓		Tangngadon		Pablo
12	MAXIMO PAD-O	-		MAPPIT, Kiangon		Maximo Pad-o
13	ALFONSO LOBYOC Sr.	✓		Haliap, Eldaw		Alfonso
14	Rosemaria M. DeCruz		✓	Haliap		Rosemaria
15	NANCY ADDANGNA		✓	Haliap		Nancy
16	Roy V. Salvana	✓		DOF-MLA		Roy Salvana
17	Barilo Bayagood	✓		HALIAP		Barilo Bayagood
18	CLEMENTE TERIBAN	✓		HALIAP, Kagawad		Clemente
19	PETE ANGIHAN	✓		MAPPIT		Pete Angihan
20	Joseph Otano	✓		Tangngadon		Joseph
21	Maha Lad-oo		✓	Kagawad		Maha Lad-oo
22	BATAZAR DAMMIT	✓		MAPPIT		Batazar
23	PEIPE ADDANGNA	-		Eldaw, Haliap		Peipe
24	Rogelio Catama	-		Licod Haliap		Rogelio
25	Susan Pulog	-	✓	Tangngadon, Haliap		Susan
26	Jimmy Bimmucal	-		MAPPIT, Kiangon		Jimmy
27	Robert Apog	✓		MAPPIT Kiangon		Robert

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[Signature]
Activity Secretariat

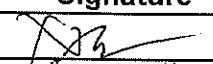
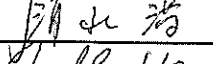
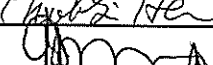
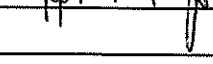
**PROVINCE OF IFUGAO
ATTENDANCE SHEET**

Office: Ifugao Provincial Government

Title of meeting/seminar/workshop: _____

Venue: _____ Date: _____

Expected number of participants: _____ Scheduled time: _____

	Name	Male	Female	Office	CP Number	Signature
28	Ignacio Benolag	✓				
29	MITSURU SHIMIZU	✓		TEPCO		
30	Nobuki Hayashi		✓	TEPCO		
31	Carmelita Buryucan		✓	PPDD		
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Activity Secretariat