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CAREPI

Contributing to poverty Alleviation through Regional Energy Planning in Indonesia

Intelligent Energy – Europe (IEE)

COOPENER action

Key action: VKA11,VKA12

Technical Progress report (PR)

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Acknowledgment

This first progress report refers to the COOPENER project 'Contributing to poverty Alleviation through Regional Energy Planning in Indonesia(CAREPI)'. The CAREPI project aims to develop institutional and technical capacity in selected regions in Indonesia for conducting energy policy analysis and providing improved energy services to mpoor communities, in order to alleviate poverty and contribute to sustainable development.

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1. Progress Report Summary

1.1 Objectives of the period

The progress period runs from 11 December to 30 September 2007 and has covered the inception phase, assistance of regional technical team, capacity development and facilitation of access to energy services.

1.2 Achieved results of the period

The main achievements during the report period are:

- Opening seminars attended by all stakeholders launched the CAREPI project in the four target regions North Sumatra, Yogyakarta, Central java and West Nusa Tenggara.
- Completion of inception phase and production of inception report.
- CAREPI website has been created, launched and updated
- CAREPI leaflet in Bahasa Indonesia and English established and distributed in the regions
- Energy data collection and assessment process has started and progresses well
- Training courses given on LEAP model and on the development of concrete micro hydro projects
- Locations for the development of micro hydro projects have been selected in each target region

Lessons learnt from the activities implemented so far include:

- Energy and socio-economic data availability is poor, especially information on transport
- The current electricity crises in Indonesia warrants the inclusion of the development of grid connected micro hydro systems in the CAREPI project

1.3 Identified problems and corrective actions taken in the period

No major problems encountered so far. The implementation of activities during the report period progressed in accordance with the work plan.

1.4 Main activities in the next period

The next report period which will run until month 19 when the interim report is due the following main activities are planned:

- Completion of energy needs assessment in the four target regions
- Production of draft regional energy outlook
- First meeting of the energy forums
- Capacity development activities

2. Consortium management in the period

The consortium management tasks during the reporting period included the organisation and implementation of the inception phase, the settlement of administrative and financial matters, arranging project team meetings and communication between partners and with the EACI project officer.

Inception phase

The inception phase started with the 2-day kick off meeting held in November 2006 in Jakarta, even before the official start of CAREPI project. The main aim of this phase was to launch the project, to establish the Project Advisory Committee (PAC), to get a good insight in the current status of the decentralisation process and to discuss among the consortium partners the methodology and work plan. The meeting also aimed to bring all project partners together to enhance future experience and information exchange between them. Detailed information on this phase can be found in the inception report.

Communication between partners

During the report period efficient communication channels have been established among the project team members. Three team meetings were held during the report period, including the kick off in November 2006 (minutes can be found in Appendix B, C and D). Most frequent communication channel used so far is the email.

Communication with the EACI project officer

A good working relationship has been established with the EACI and a meeting was held in July 2007 with the project officer responsible for CAREPI to discuss the inception report.

Co-operation with other projects/programmes

Co-operation with other projects has been very limited during the report period. ECN had a meeting with the European Delegation in Jakarta to present the objectives of the CAREPI project and to learn about other relevant ongoing activities in Indonesia. No links have been established yet with other ongoing Coopener projects in Indonesia.

3. Progress of work plan in the period

3.1 Progress on work packages against initial objectives

The CAREPI project commenced in December 2006. The progress achieved during the report period in general is satisfactory and in accordance with the agreed time schedule.

3.1.1 WP 1: General Management

The emphasis for this WP during the reporting period has been on initiating and completing the inception phase and on more general management activities.

The inception phase ran from November 2006 to March 2007 and resulted in the production of the final inception report (deliverable No. 1). The purpose of this phase was to

- update good understanding of the energy situation in Indonesia, especially the decentralisation process in the four target regions
- launch the CAREPI project in the four target regions
- establish the Project Advisory Committee
- discuss the proposed approach among the project team members and prepare a revised work plan, if needed

The more general management activities carried out during the report period included the establishment of working relationships with other ongoing relevant initiatives in South Africa, producing the first progress report and regular communication with the COOPENER project officer.

A Project Advisory Committee (PAC) has been established comprising the following members:

- Dr.-Ing Agus Maryono, Central Java/Yogyakarta
- Mr. Washington Nainggolan, North Sumatra
- Mr. Heryadi Rahmat, West Nusa Tenggara
- Mrs Nenny Sri Utami, Advisor the Minister of MEMR
- Mr Roman Ritter, GTZ
- Mr Pim Kieskamp, SenterNovem
- Nico van der Linden, ECN
- Koen Smekens, ECN

The draft inception report has been sent on September 6, 2007, to the PAC members for comments.

3.1.2 WP 2: Identification of energy-related needs and priorities of poor communities

Limited progress has been made in this WP. The methodology to assess the energy needs of poor communities has been discussed within the project team and potential locations for targeted action have been identified. During the report period the focus clearly was on WP3 and WP7 related activities and not much time could be spent by the regional teams on assessing the energy needs of the poor communities in the region.

3.1.3 WP 3: Assistance of Regional Technical team

The activities carried out during the reporting period for WP 3 involved the collection of energy and socio-economic data necessary to develop regional energy scenarios. Progress achieved in the target regions is summarised below:

- North Sumatra: data collection activities have started and some 70% of the data has been collected. Areas that are troublesome include oil data, refinery data and aviation fuel data (in particular the split between international and domestic flights). It is expected that the data collection activities can be finished before the end of 2007.
- Yogyakarta/Central Java: Data collection goes well except for rail and air transport data which are hard to find. In Central Java reliable data on air and shipping are lacking and causing the main problems.
- West Nusa Tenggara: Main concern is how to fit the LEAP structure into the specific regional structure (island structure). It was agreed to use a structure for LEAP based on the existing electricity grids (separate grids for the sub regions Lombok, Sumbawa and Bima).

3.1.4 WP 4: Institutional strengthening of Regional Energy Forum

WP 4 has not yet started.

3.1.5 WP 5: Capacity Development

Two training courses have been conducted during the period 9 April to 24 May 2007 as part of this WP.

Training course on regional energy planning and development of regional energy profile

Between April 9 and April 28 2007 four training courses on regional energy planning have been given at the University Sumatra Utara, Medan, University of Mataram, University Muham-

madiyah, Yogyakarta and Institute for Quality Assurance of Education in Central Java. The duration of each training course was 3 days and the program was as follows:

- Day 1: Introduction to energy planning, including the energy database and energy balance.
- Day 2/3: Regional energy planning using the LEAP energy model.

In total, some 130 people attended the four training courses. More detailed information on the training courses can be found in the summary report on identified capacity building needs (deliverable No. 12).

Training course on the development of concrete micro hydro activities

Four training courses have been held on the identification, evaluation and development of concrete micro hydro projects. Training courses were held during the period 30 April to 24 May at the University Sumatra Utara, Medan, Universitas Mataram, Universitas Muhammadiyah, Yogyakarta and Universitas Diponegoro, Central Java. The training approach and basic contents was identical for all four training courses. Training was conducted in the class room as theoretical lessons, complemented with a 1-day practical on-site session where practical application of the survey and data collection techniques was practised. The training took three to four days at each University and the program was as follows:

- Day 1: classroom session on feasibility of a mini hydro project including aspects such as factors influencing the feasibility, site assessment (survey and data collection), initial design, cost estimating and economic and financial analysis.
- Day 2: site assessment at the pre-selected sites including selection of suitable location for MHP components, flow measurements, head measurements, topographic survey, socio-economic data collection and GPS survey of the proposed distribution network.
- Day 3/4: class room session covering the analysis of field data & initial preparation of the pre-feasibility studies

In total, some 65 people attended the four training courses. A detailed description of the training courses can be found in the summary report on identified capacity building needs (deliverable No. 12).

3.1.6 WP 6: Regional Energy outlook and Development Regional Pro-poor Strategy

During the report period no activities have been carried out for this work package.

3.1.7 WP 7: Facilitation of access to energy services

The main activities carried out in this WP concern the identification of potential sites in each region for the development of micro hydro projects. During the report period the CAREPI team has visited a number of potential sites in the four target regions and has discussed the various selection criteria such as potential for providing access to electricity through micro hydro, accessibility of the sites, quality of current electricity and energy services, estimation of energy demand and potential application of electricity for productive uses. After an evaluation of these criteria for each identified potential site, the following five sites have been selected for the development of a micro hydro installation in CAREPI:

- North Sumatra: Tanjung Morawi (grid connected)
- Yogyakarta: Saluran Semawung (grid connected)
- Central Java: Pekuluran: (off grid)
- West Nusa Tenggara: Teres Genit (off grid) and Oi Marah (off grid)

In the next phase of the project, for each of the above sites a feasibility will be conducted including an initial technical design, community preparation, construction and operationalisation of the micro hydro installation.

3.1.8 WP 8: Communication and Dissemination

This WP addresses the essential need for ongoing dissemination of results throughout the duration of the project, as well as the need for effective communication between all key market actors or associated with the work

One key deliverable of this WP is the establishment of the CAREPI project website. The website was launched in February 2007 and it contains a brief description of the project, description of the partners, project outputs and project calendar & events. The web address is <http://www.carepi.info>

During the report period, a CAREPI project leaflet was produced (see Appendix F). The leaflet contains the key project information such as objectives, approach, deliverables and composition of the project team. The leaflet is available in Bahasa Indonesia and in English. The leaflet has been handed out to the participants of the opening seminars in the four target regions.

3.1.9 WP 9: Common Dissemination activities

No activities have been carried out during the report period for this WP.

3.2 Deviations from the project work plan

No major delays have been encountered during the report period. A minor delay concerns the implementation of WP 2: identification of energy needs and priorities. According to the CAREPI project time table this WP was supposed to start in month 4 but in fact started only in

month 8 due to the fact that most efforts had to be put into data collection for energy scenario development WP3 and micro hydro development WP7. It is expected that WP 2 can not be completed in month 12 as envisaged but probably will extend until month 18 before the final deliverable can be produced.

3.3 Progress regarding deliverables

The following deliverables have been produced:

- D1: Inception Report
- D2: First progress report
- D7: ToR for regional technical team
- D12: Summary report on identified capacity building needs

3.4 Progress regarding performance indicators

WP	Indicator	Progress
WP1	-Project Advisory Committee in place	PAC in place
	-Timely and appropriate reporting	PR and Deliverables produced as planned
WP 2	-Energy needs and priorities assessed	
	- The quality and appropriateness of the 'best practices 'identified and demonstrated for poor people	
	-Degree of learning from other projects and areas outside Indonesia	
WP 3	-Regional technical team established	Regional teams established
	-regional technical team trained and able to conduct energy planning analysis	Training provided
WP4	Regional Energy Forums established	Forums in Yogya, Central Java and WNT established
WP5	Degree of capacity developed in different groups	No progress
WP6	Energy outlook produced for three target regions	No progress
WP 7	Access to energy services is improved through development of energy supply/efficiency projects	No progress
WP 8	Quality of communication and dissemination at a national, regional and international level	No progress

4. Work plan for the next period

The next period for the CAREPI project will run from October 2007 to June 2008 when the interim report is due.

4.1 Planned activities in the next period

The planned activities for the next period are presented below by work package:

WP 1: General Management

- Organising project team meetings to discuss the progress
- Coordinating the various activities that are carried out by the project partners
- Strengthening the collaboration with other relevant ongoing activities in Indonesia
- Preparing the interim report
- Communication with the technical officer in Brussels

WP 2: Identification of energy needs and priorities

- Selection of target location in the region for needs assessment
- Establishing working relationship with stakeholders in target location
- Organising community meetings and workshops to discuss the energy needs
- Assessing the energy needs and priorities
- Producing final report

WP 3: Assistance of regional team

- Completion of data collection and development of energy database
- Development of regional LEAP version
- Development of regional energy scenarios
- Producing draft Regional Energy Outlook

WP 4: Institutional strengthening of Regional Energy Forum

- Convening regional energy forum meetings to discuss the energy scenarios produced by technical team

WP 5: Capacity Development

- Follow up training on regional energy planning issues, especially on developing a regional LEAP model and energy scenarios
- Training activities for the regional energy forums on regional energy planning issues

WP 6: Regional Energy Outlook and pro-poor Strategy

- Organising workshops with the regional energy forum to discuss the energy objectives and policy measures to achieve these objectives.
- Development of regional energy outlook
- Development of pro-poor strategy

WP 7: Facilitation of access to energy services

- Organising community meetings to discuss the micro hydro project
- Conducting feasibility study to assess the viability of the project
- Construction of the micro hydro installation

WP 8: Communication & Dissemination

- Organising and implementing a (inter)national workshop for other regions in Indonesia that are not covered by CAREPI.
- Organising and implementing a coordination meeting to be attended by the key actors from all regions in Jakarta

WP 9: Common Dissemination Activities

- Participating in the annual COOPENER contractors meeting

4.2 Planned meetings and dissemination activities

The tentative schedule of project team meetings and workshops is indicated in the following Table

Tentative date	event	Location
November 2007	Joint project team meeting	Jakarta
March 2008	Regional Team meetings	Medan, Yogja, Mataram
June 2008	National Conference	Jakarta

5. Other issues

No further issues are reported at this stage.

Appendix A Tables 1,2 & 3

Table 1: Updated list of submitted deliverables since starting date

Del. N ^o 1	WP N ^o 1	Deliverable name ¹	Month of completion ¹	Submission with report ²	Deliverable uploaded at website? ³
1	1	Inception Report	May 2007	PR 1	No
2	1	First progress report	September 2007	PR 1	No
7	3	ToR for regional technical team	August 2007	PR 1	No
12	5	Summary report on identified capacity building needs	September 2007	PR 1	No

Table 2: Indicative state of advancement of hours spent (in %) since starting date per partner and per work package

Work package	Actual/Planned Achievement	Total partners	ECN	GTZ	ITB	UoS	UoY	UoM
WP1	Actual	35	40	30	30	30	30	30
	Planned	35	40	30	30	30	30	30
WP2	Actual	5	10	0	2	2	2	2
	Planned	18	20	0	10	10	10	10
WP3	Actual	40	40	40	40	40	40	40
	Planned	40	40	40	40	40	40	40
WP4	Actual	0	0	0	0	0	0	0
	Planned	0	0	0	0	0	0	0
WP5	Actual	40	40	40	40	40	40	40
	Planned	40	40	40	40	40	40	40
WP6	Actual	0	0	0	0	0	0	0
	Planned	0	0	0	0	0	0	0
WP7	Actual	20	20	20	20	20	20	20
	Planned	20	20	20	20	20	20	20
WP8	Actual	20	20	20	20	20	20	20
	Planned	20	20	20	20	20	20	20
WP9	Actual	0	0	0	0	0	0	0
	Planned	0	0	0	0	0	0	0
Total Action	Actual	28	22	20	30	30	30	30
	Planned	30	24	20	35	35	35	35

Table 3: Updated list of main persons in charge of the action

Parti- pant N°	Parti- pant short name	Family name, first name	Telephone N°	Fax N°	E-mail	Date of change
1	ECN	Van der Linden, Nico	+31 224 564433	+31 224 568339	n.vanderlinden@ecn.nl	No change
2	GTZ	Ritter, Roman	+62 81 381102124		roman.ritter@gtz.de	No change

Appendix B Minutes of the CAREPI kick-off meeting

Minutes of CAREPI kick off meeting

Jakarta, Menara Peninsula hotel 21-22 November 2006

Present:

DICEMR : Sukma (partial), Sutijastoto (partial), Etna (partial), Arafin(partial)

ITB: Oetomo

GTZ: Roman Ritter, Chayun

Puspener (Yogya/Central Jawa): Sri Atmaja, Bledug Kusumu P., Lilies Setiartiti, Joko Windarto

EED-USU (Medan): Usam Baafai, Soeharwinto

UNRAM (Mataram): Rosmaliah, Hadisutrisno

ECN: Nico van der Linden, Koen Smekens

Tuesday 21 November 2006

This kick off meeting was intended to enable the technical teams from the 3 regions (North Sumatra, Yogyakarta/Central Java and West Nusa Tenggara) to discuss the proposed programme and timeline of work and to give an update of region specific information relevant to the CAREPI project (see also Annex A – the agenda).

The meeting opened at 09.10 am with opening remarks by Mr Sukma, head of DICEMR in which he welcomed the participants and stressed the importance given to this project by the Ministry. He hoped for a successful meeting, but excused him for not staying on since he needed to leave for another meeting.

As this was the first time that the people from the regional teams met each other – the previous meetings were held in each region separately – the meeting continued with a personal presentation round by each of the participants.

After this, Mr Nico van der Linden started the actual meeting with a presentation introducing the CAREPI project, its purpose and the major elements, its composition and the major expected outcomes (see Annex B).

Next Mr Koen Smekens introduced the work related to the ultimate delivery of the Regional Energy Outlook (delivery D14 of the project). This work covers both work package WP 3 on the regional technical teams, on WP6 (outlook) and on WP5 (capacity building) (Annex C). Following this presentation, clarification was asked between D9 (a report on the energy situation and selected scenarios) and D14 (the regional energy outlook). The D9 report is rather technical in kind, describing the regional energy situation (detailed energy balance), the energy planning tool developed during the project (the LEAP model, which was agreed upon to be used in CAREPI) and some illustrative scenarios showing what is possible in using the tool. The D14 outlook report covers much more than only the technical planning description, it includes the regional energy policy implementation plans and the pro poor strategies.

Also a clarification was requested for the consumption patterns needed for the model, what they are and for which end use levels they should be provided.

Although the bulk of the work for WP3 falls in the first 20 months of the project, this does however not mean that the effort by the technical teams ends at that time. It is expected that the maintenance and application of the by then developed energy planning tool will continue under

the auspices of the Regional Energy Forum, also beyond the CAREPI project final date. In the latter case, hopefully being funded by allocated regional budget.

Next the 3 regions presented their prepared work on the current status in their respective regions – as asked before the meeting. The team from Yogyakarta started by giving an overview of their activities so far (Annex D):

- they have collected energy and energy related data for 5 districts in Yogya and for 35 districts in Central Java;
- they held a meeting with the regional energy office;
- only electricity data is easily available (up to 2004 so far), but the data still need to be analysed for quality and completeness;
- have contacted Pertamina (state oil company) to gather fuel consumption data;
- they have identified the regional potential for wind, biomass and waste, solar PV, mini hydro applications.

The Central Java participant continues with a presentation on his region (Annex E) in which he also mentioned some socio-economic figures. As in Yogya, also here non electricity fuel consumption data are more difficult to gather. He also explained that the region had an own electrification ratio target of 75% by 2014, from the 66% currently. There is a difference between the electrification ratio at village level and the one on household level. Apparently a village is called electrified if 20 houses are connected, even if other parts of the village are not.

The Medan team explained that in contrast to the other regions, no electricity or energy forum was in place yet. Therefore they foresee that they will need more effort to set up the energy forum.. Nevertheless they had already contacted the team of Mataram to inquire how to identify which persons should be contacted as data sources. However they have a detailed composition of the technical team (Annex F), on the potential for hydro and on the identified capacity building needs within the region and the technical team.

Finally, the team from Mataram presented their prepared work (Annex G), including a potential estimate for renewables, the fact that a regional energy forum is in place (FORKENDA) which will facilitate the communication and outreach and the composition of the technical team which includes people from outside the university as well, including people from the local governmental departments.

In the afternoon, Mr Roman Ritter presented the history and current status of the work by GTZ regarding mini hydro projects (MHPP) in Indonesia (Annex H). Especially the approach to implement mini hydro projects could also be used for other appropriate renewable projects in the regions. Since the mini hydro approach is quite well developed and GTZ is a project partner, CAREPI will primarily focus on pro poor energy access implementation by identified mini hydro projects. Quite a lot of the potential is still untapped and could easily be implemented seen the experience and material available. However, mini hydro will not be exclusively approached in the project, but renewables (like wave energy which was mentioned by one of the participants) may be far from market implementation and need much more development and research before they could become an option for the targeted communities (remote, poor villages).

His second presentation covered the specific tasks under WP 7 (facilitation of access to energy) which is coordinated by GTZ and which will focus on the implementation of some MHPP in the selected regions (Annex I). His experience is that it take about 1 year from site identification to actual production, so the work plan will be adjusted accordingly as well as that from WP 2 (energy needs assessment) since there the potential sites are to be identified and selected.

Finally, Mr van der Linden explained some details on the administrative part of the project, namely the contracts ECN will have with each of the local partners (Annex J). Draft contracts were handed out to the partners for further discussion and in order to enable them to comment

on the proposed text. Also the financial scheme was explained, which is based on the EC common approach of having an initial lump sum payment of 15%, a first payment of 55% halfway the project and the remainder at the end of the project, when the final report has been approved. The regional teams however would favour a more evenly spread payment of 15% at the start, 25% after month 8, 30% halfway and the remaining 20% at the end. This will be taken up with the financial department of ECN which will have to approve such a scheme since it puts the risks on ECN in the case of non-delivery by the teams.

Wednesday 22 November 2006

Mr Sutijastoto from MEMR/DICEMR presented an overview of the national energy situation and outlook as well as on the policy towards the regional energy planning development. (Annex K). He did not cover how the ministry will cover WP4 (regional energy forums).

Next, Mr van der Linden covered the energy needs and pro poor activities within CAREPI (Annex L). It would be preferential to combine the locations or sites identified in WP2 and WP7. However one should avoid creating high expectations from the beginning of the selection process, many more steps and elements are needed before a successful project implementation can be achieved.

Regarding poverty, each region has another threshold level based on BPS, which is furthermore differentiated for urban and rural areas. It is expected that the technical teams will be able to collect sufficient data to distinguish these different categories.

How and how intense to survey the selected locations is difficult to estimate at this moment, practice will show.

Finally Mr Oetomo presented a more detailed approach he and the regional technical teams agreed for WP3 and WP6. This triggered some questions about what kind activities in this fields the teams are supposed to do after the end of WP6 (month 26). It was explained that they should be prepared to update their energy database and – when requested by the energy forum – also update the energy scenarios.

As additional information, Mr Ritter and Chayun gave an overview of the content of the community survey forms they apply for a potential MHPP site and installation. These forms exist in English as well as in Indonesian, reducing the application barrier. Of course, these forms are focusing on MHPP, but ECN will see if with the experience gained in EC-South Africa APPLES project – where a similar survey form has been developed – a new more general and common applicable form can be made up, enabling the outreach to more forms of renewable energy.

Appendix C Mission Report CAREPI inception mission

Mission report CAREPI inception mission February 26-March 06, 2007

The visit started on Monday, 26 February 2007. Table 1 gives an overview of the itinerary of the mission and the purpose of the visits. Next, brief descriptions are presented of the main points discussed during the visits and meetings.

Table 1 *Overview of the mission's itinerary*

<i>Day</i>	<i>Host/Location</i>	<i>Purpose of the meeting/visit</i>
26 February Morning	GTZ/ENTEC (DGEEU offices), Jakarta	- Brief discussion with Mr Hayton about the implementation of the micro-hydro work package in CAREPI
Afternoon	DICEMR offices, Jakarta	- Meeting with Mr Arifin and Mrs Etna (DICEMR) - Brief discussion of the programme and logistics for the visits. - Collection of flight tickets for visits
Evening		- Flight to Medan
27 February Morning	University of North-Sumatra, Medan	Regional opening seminar
Afternoon		- Technical team meeting.
Evening	Hotel Polonia, Medan	- Diner with technical team
28 February Morning		- Flight to Mataram via Jakarta and Yogya
01 March Morning	Hotel Lombok Raya, Mataram	Regional opening seminar
02 March Afternoon		- Technical team meeting - Flight to Yogya (with diversion to Surabaya due to bad weather)
03 March Morning	Regional government offices, Yogyakarta	- Regional opening seminar
04 March Afternoon		- Technical team meeting
05 March All day		- Road trip to Semarang
05 March Morning	Regional government offices, Semarang	- Regional opening seminar
06 March Morning		- Flight to Jakarta
Evening		- Return flight to Amsterdam Koen

		Smekens
07 March	-	
08 March	-	
09 March	Evening	- Return flight to Amsterdam Nico van der Linden

26 February, Jakarta

Meeting with Mark Hayton, Entec

Briefly over objectives and practical arrangements to carry out WP7.

Apparently Yogya and Mataram have put up a preliminary list of about 10 sites for MHPP (according to Chayun). Nothing has been heard of North Sumatra at that time, in the meantime, contacts were made and information exchanged

It would be good if the regional teams could reduce this list to 2-3 really interesting sites for which the whole assessment and feasibility study could be carried out. GTZ/Entec hope to be able to visit the teams around April/May 2007. By then, the forms A of the MHPP procedure should and could be completed. The forms should be made available to Chayun and GTZ/Entec. Chayun will act as primary contact for this part of WP7.

During their visit GTZ/Entec will train the regional team in the further full completion of a MHPP project track. The training material is in the phase of being finalized and will be ready for the planned training sessions. The participants should consist of persons with a background in:

- Civil engineering
- Survey
- Mechanical engineering
- Electric engineering
- Socio-economics

Ideally, by the end of the year 2007, a complete (financial) proposal could be submitted to the (local/regional) government or financiers in order to have it included in the 2008 budget. If all proceeds well, by mid 2008, the project could start and taking into account a construction period of 6 months, the MHPP could be up and running by early 2009. This timeframe differs considerably from the one presented by Roman during the November meeting, there, a timeframe of 9 months between site selection and implementation was presented.

In the meantime a second round of projects could be processed for financing in 2009, with possible implementation in 2010.

27 February, Medan, North Sumatra

Meeting venue: University of North Sumatra (USU)

About 60-80 attendants

At 9h15 the meeting (agenda, see Annex I) started with the introductory speeches by Mr. Usman, the focal point for the CAREPI team at the university, the rector of the university and a presentation by Mr. N. van der Linden (Annex II). After these speeches, the head of the regional energy office, Mr. Tambunan, which we also met on our first visit in January 2006, opened officially the regional energy seminar and future activities. In his speech he mentioned the fact that two potential sites for micro hydro have been identified.

After the coffee break the meeting continued chaired by Mr. Ucok Siagian, Head of the Center for Energy Policy Studies – ITB. Presentations were given by DICEMR and Bappeda, the regional planning office (Annex III and IV).

The discussion following the presentations comprised of 7 interventions which were quite lengthy answered by DICEMR, Bappeda and ITB. One question related to ECN and concerned the reason why micro-hydro was explicitly part of the CAREPI project. The reply was that firstly GTZ is part of the project team and they have a large experience with micro-hydro projects and secondly there is still a large potential, including “low hanging fruits”, of hydro untapped in Indonesia.



Regional opening seminar at USU, Medan



Presentation N. van der Linden at Regional Opening Seminar Medan



Press coverage and interviews during seminar

In the afternoon, a meeting with the technical team was planned in order to discuss in detail a number of CAREPI related issues (Annex V).

- they have received the contract and returned it signed, also the first payment was received;
- since there is a time lag between efforts by the team and future payment, Mr. Nico will try to see if the cofinancing from SenterNovem can be paid to all teams in advance of the EC payment in order to secure sufficient funds for continuous working;
- the regional teams are asked to nominate a person to become part of the CAREPI Project Advisory Committee (PAC). This person should not be directly involved in the project but be on the level about its contents and objectives. This person can have a governmental or scientific affiliation; we do not have a preference and would like to leave the assignment to the regional teams. The PAC will be asked to comment on CAREPI project documents send around electronically, no formal (physical) meetings of the PAC are foreseen. Ideally the person should be known soon so his name can be included in the inception report;

- the technical team is not yet formally set up, they want to await the LEAP training session before doing so; also some external (non USU) people will be cont(r)acted to be involved in the data collection;
- also the regional energy forum (REF) has not be established; however a proposal about its structure and composition was submitted to the regional government, based on material they have received on the Lombok situation where such a forum is already in place;
- PLN and Pertamina have regional corporate plans, also Bappeda has regional forecasts and DINAS (the regional energy office) has regional energy consumption forecasts;
- data will be mainly based on available material from PLN and Bappeda, however, other sources or studies will be needed; the structure of the energy model will guide them in the collection of data;
- the training on the energy model (LEAP) is foreseen round the 2nd week of April and will be given by ITB, as said the attendants will be both from the technical team as from outsiders involved in data collection; the course will consist of a three day course on the use of the LEAP model and on data collection as well;
- they foresee about one month needed to complete the energy profile, after that they can start working on the model;
- a detailed concrete action plan for the coming months will be set up;
- regarding micro hydro, two possible locations have been identified: one round Tapian Nauli (some 450 km south of Medan near the west coast of North Sumatra) and one round Kabanjahe, some 150 km south-southwest of Medan in the highlands round Lake Toba. Apparently both locations are difficult to reach and this was a (budgetary) concern of the technical team; it was agreed that GTZ will follow up on the site visits and studies; at the same time as the site visits, the needs assessment will be done;
- it was agreed that the technical team will provide a short (couple of pages) summary of the seminar including something on attendance, the discussions and a conclusion.

1 March, Mataram, West Nusa Tenggara

Meeting venue: hotel Lombok Raya in Mataram city

About 80-100 attendants

The meeting started later than planned because the organisers waited for the provincial secretary (sort of vice-governor) to arrive. The chair of the meeting was formed by the mentioned secretary, the vice rector of the university of Mataram, Mr. N. van der Linden, Mr. Sukma Hasibuan of DICEMR and the head of the regional energy office. Prof Hadi, the focal point for CAREPI, opened the meeting (agenda see Annex VI).

After the introductory speeches and after the press conference (see Annex VII), the meeting continued with the DICEMR presentation and very informative presentations from the regional economic bureau, Bappeda and DINAS/Distamben (the regional energy office) (Annex VIII).

These presentations were followed by a broad discussion with 4 lengthy interventions, replied by the presentors.

Prof Hadi closed the meeting round 13h00.



Regional Opening Seminar, Lombok



Regional Opening Seminar, Lombok



Press interview, Lombok



Impression of potential micro-hydro site on Lombok

In the afternoon, the technical team meeting took place according to the same agenda (Annex V).

- all administrative matters are settled;
- a person for the PAC will be nominated;
- the region has already a technical team agreed by the governor (see Annex IX), and has already met;
- also the REF has been approved; based on the existing electricity forum; they meet about twice a year but can be called upon to meet when needed;
- a regional electricity plan already exists, it should be integrated in the CAREPI scenario studies;
- central Lombok has already a programme to install solar PV and micro hydro;
- data collection is available for electricity, for the other energy carriers there is a problem since currently data collection is now a district responsibility and quality and even collection is diverse (non existing) across districts;
- ITB will provide a template for data collection based on the proposed structure for the energy model (Annex X);
- the energy model training is scheduled to take place in the 3rd week of April;
- on February 28 they met with Mr. Chayun of GTZ and visited 4 selected micro hydro sites: 2 on Lombok island (round Batukliang in central Lombok, about 30 km east of Mataram) and round Batukoq in north Lombok about 55 km north-east of Mataram) and

2 on Sumbawa island (one around Riuatas (Tepal) about 130 km east of Mataram and one around Kawinda on the north coast of central Sumbawa). The three first mentioned sites did have already a micro hydro system in the past but due to various reasons they broke down and were never repaired. This means that quite a lot of the needed infrastructure is still in place (canals, pump houses, ...), nevertheless new turbines and grid systems are needed. All of the sites are in the range 20-40kW. A start has already been made in filling the GTZ forms for the feasibility study of the sites. The sites on Lombok are the most likely ones to be completed within the CAREPI project.

3 March, Yogyakarta, DIY

Meeting venue: Bangsal Radya Suyoso Meeting Hall, Kepatihan Regional Administration Complex

About 90-100 attendants

The introductory part of the meeting (agenda see Annex XI) was chaired by Mr. Sukma, Mr. Nico, PUSPER and the head of the regional office for industry, trade, and cooperative (2 levels above regional energy office).

The second part of the seminar consisted of the DICEMR presentation followed by Mr. Setyoso, the head of Bappeda (regional office for regional development planning) and Mr. Hardjoko, executive staff of regional office for industry, trade, and cooperative (Disperindagkop) (see Annex XII).

The discussion afterwards, guided by PUSPER resulted in 3 interventions where now the replies were much longer than the questions.

At the meeting, we were approached by a member from another university in Yogya, Dr-Ing., Agus Maryono, (Universitas Gadjah Mada) which had a master programme for (energy, including micro hydro) technology and they would like to include more on energy. They should be put in contact with the TUE within the EWG programme to develop further cooperation.



Regional Opening Seminar Yogya



Regional Opening Seminar Yogya

The technical meeting in the afternoon combined both the Yogyakarta and Central Java team.

- all administrative matters are settled, there are no questions;
- a person for the PAC will be nominated;
- the technical teams, since they were also present at the kick off meeting in November 2006 with 2 persons from Yogya and 1 from Central Java, will consist for Yogya of 2

- PUSPER members and 1 from the regional energy office and for Central Java of 3 from a local university and 1 regional official, the coordination of both teams will be done by 4 members of PUSPER;
- for the REF in Yogya, a budget request has been forwarded to the regional parliament (DPRD Province of Yogya) which will discuss it in March 2007, hopefully the REF can be in place by June the same year; After June, some seminars will be held in order to take some energy issues in Yogya and will be followed with the regional meeting for REF deregulation (it is planned that REF will be legalized by a governor decree); for Central Java a general energy forum existed in 2006, but they are not sure if the same forum will also exist in 2007, perhaps with different composition or not even at all, the team will discuss the necessity to continue with all stakeholders;
 - Yogya has already an electrification policy in place, a valuable element for future CAREPI scenarios;
 - the Yogya team has already collected most data according to the model structure (Annex X) but transportation data may be a problem, both ITB and ECN will support the team in completing the gaps into useful data for the model;
 - the Yogya team has short listed about 25 sites for micro hydro of which 3 or 4 are prioritized; disadvantage of this region is that it is already highly electrified (to Indonesian standards), this may hamper the socio-economic feasibility of the projects; the 3 sites are around Kalibawang, in the north-west of the region, 20 km north west of the city of Yogya, of which one is about 200 kW, the other two about 40 kW in size; in central Java one site around Banjarnegara, about 90 km south west of Semarang has been identified but not yet visited.
 - Mr. Toto of DICEMR raised the issue of extending the micro hydro feasibility studies to other energy sources (especially Jatropha based biofuels); so far the existing methodology can be extended it will be investigated, but the project funds are insufficient to perform a complete large scale study

5 March, Semarang, Central Java,

Meeting venue: regional energy office meeting hall

About 80-100 attendants

Before the meeting, the visiting team (ECN, DICEMR, ITB, and PUSPER) was received by the head of the regional energy office.

During the introductory part, thanks were expressed by Mr. Eddy Haryono, the head of the regional energy office, because Central Java is part of the CAREPI undertaking. Central Java has already made a good start, there is e.g. an energy outlook 2006-2016 just published (Annex XIII) with an energy profile and forecasts by energy carrier for three scenarios (low-medium-high). As mentioned before, they also have a regional energy forum in place.

The seminar continued with presentations from Mr. Sujarwanto, staff of the regional energy office (Distamben) and Mr. Hendro Pratomo, staff of Bappeda after the DICEMR presentation (Annex XIV).

The discussion led to 4 interventions of which one regarded the possibility to investigate bio-gas energy produced from the domestic manure (such as dairy cow, beef cattle, etc.) in Boyolali, geothermal in Banjarnegara (beside the micro-hydro potential) and coal waste products within CAREPI.



Regional Opening Seminar, Semarang



Regional Opening Seminar, Semarang



Press interview head of regional energy office, Semarang



CAREPI team invited by the head of regional energy office (far right)

Appendix D Minutes of the 3rd CAREPI team meeting

Mr Nico van der Linden and Koen Smekens toured Indonesia between July 30 and August 6 2007 on behalf of the CAREPI project. They visited the regional technical teams in each region selected within CAREPI (North Sumatra, Yogyakarta and Central Java and West Nusa Tenggara). Before and after the regional meetings, there were meetings in Jakarta with the ministry (DICEMR) and with the project partner GTZ (and Entec).

Monday 30 July

Visit to DICEMR. We were told that Mr Sukma, the previous head of the unit had moved to another department, more related to mineral resources than to energy. Mrs Farida Zed has succeeded him recently – since June 2007. Perhaps she can be met on Monday August 5. Also Mrs Etna is going to leave the CAREPI team since she is going to follow courses for about 3 years. She will be replaced by Mr Catur, who now also joined on the trip to the regions to make him familiar with the project and participants. Mr Catur did only join the DICEMR recently – since a couple of weeks only.

In the afternoon, the flight to Medan, North Sumatra (Sumatera Utara or SumUt), was taken.

In the evening Mr Oetomo from ITB and Mr Usman and one of his students were met, while working on CAREPI for North Sumatra. They were jointly working on detailed energy consumption data for households. Apparently, all information to provide a figure with energy use per income class would be possible

A dinner in a local “padang” (10 plates) restaurant closed the end of this day.

Tuesday 31 July - Medan

The technical meeting took place in the faculty buildings of Electrical Engineering Department of the USU. Mr Usman and 2 of his students were present as well as about 9 persons from other offices, of whom 1 from PLN, 1 from the Regional Transportation Office and 1 from an industry organization.

Agenda item 1

Mr van der Linden gave a brief introduction on the current status regarding administrative and financial matters. The most important element being the agreement from SenterNovem to allow and provide a spread payment of the local teams in order to ensure that they don't have cash flow problems. However ECN has not yet received a signed contract for 2007/2008 from SenterNovem.

The Regional technical Team has been completely identified and figures in name on a draft list, but unfortunately, Mr Washington Tambunan, the Head of the Regional Energy Office hasn't signed it yet. His major reason – as told by Mr Usman - is that in his view CAREPI focuses too much on poverty alleviation and not on regional energy planning (also in the CAREPI title)

Luckily a short meeting with Mr Washington could be arranged on the spot, so Mr Usman and van der Linden left the meeting shortly after this agenda item.

Also DICEMR will be asked to gently convince Mr Washington about the necessity to establish the RTT. According to Mr Usman little cooperation from other departments or external persons is received since their involvement is not required without signed list. Such problems would be resolved once the RTT is officially in place, however, according to Mr Usman, some persons

figuring on the draft list have already changed position and it is not clear how and who will succeed them.

The same is more or less valid for the Regional Energy Forum, which is also not yet established in SumUt. Mr van der Linden and DICEMR will approach the regional energy office to sensitise them make haste with this process.

The Project Advisory Committee (PAC) is now fully identified and ECN will invite the members officially by the end of August 2007. They will also receive the – by then – consolidated version of the inception report.

At this point in time, Mr Usman and van der Linden leave for their meeting with Mr Washington.

Agenda item 2

Mr Smekens gave a brief introduction (see Annex 2) with some open question for the RTT about data collection and the energy modelling process. Apparently, the presentation, which was emailed the week before the meeting has not reached all attendants, the frequent black-outs (as experienced on the spot) in Medan could be at the basis of this. Luckily ECN did bring printed copies of the material so it could be circulated to the audience.

During the requested feedback on the LEAP training session that was hold in April 2007, it became clear that many of the attendants were for the first time present at a CAREPI event, so they couldn't say anything about it.

Therefore Mr Oetomo gave a brief presentation about the objectives and structure of CAREPI. The lively discussion that followed again focused on the issue if CAREPI was only a poverty alleviation project, especially the PLN and industry representative aired their concerns.

Once this solved, the discussion continued in a lively manner on technical issues like energy and energy related data, how to collect, centralize, exchange and maintain them between and in the RTT.

At this moment, Mr Usman and van der Linden returned, so Mr Usman could reply directly to the concerns and comments of the other participants. Hopefully this meeting will facilitate future data collection now that many more key persons are informed about the CAREPI project and its needs.

For the energy data collection, the following areas are recognized to be troublesome: oil data from Pertamina, refinery data, aviation fuel data (in particular the split between international and domestic flights).

Regarding the proposed timeframe from the introductory presentation, there was no objection from the RTT, in so far that they are even confident that they can finalise the data collection by the end of August. A formal LEAP follow training was not deemed necessary, although they admit they will need further support and coaching from ITB, but this could be done by email or so.

Ideally by the next EWG meeting – planned for 25 and 26 November 2007 in Palembang, South Sumatra – some preliminary results from the regional models could be presented. This is considered to be feasible as well as desirable by ITB and USU.

Agenda item 3

During the training session in May a site visit to the MHP sites has been organised and also the GTZ forms are almost complete. Nevertheless the need was expressed by Mr Usman to be able to sit with GTZ/Entec for a couple of days in order to complete the feasibility study. In particular, Mr Usman felt the need for the support for the design and hardware specifically of the project since they lack experience in this matter. When this additional meeting will take place is dependent of GTZ/Entec's agenda, but soon.

A suitable location has been fully identified: Tanjung Morawa in the sub district of Tiganderket, district Karo (south of Medan, north of Lake Toba), in the neighborhood of Brastagi on the ECN map of SumUt. The site lies at about 750 m altitude, in a village that is already electrified. The village wants to sell the electricity to PLN. They are thinking of a 350 kWe installation.

Agenda item 4

Mr van der Linden gave an introduction on a possible approach and implementation of the needs assessment study (see Annex 3).

Since the pressure for the project is now more at a successful completion of the energy data collection and a first energy model, the timeframe of this work package is less urgent at the moment.

The original idea within the CAREPI project to combine the MHP and the needs assessment for the same site is not feasible here since the two potential sites are too far away. But Mr Usman has available a large poor-community survey the USU performed for the WorldBank recently. About 25 poor communities in the South Tapanuli district, (near Padang Bolak) were surveyed on the same issues interesting for CAREPI. The data are still in raw form and need further elaboration. Question is if CAREPI may use these data.

Agenda item 5

The next CAREPI meeting will be held on November 22 and 23 in Jakarta. This is just before the next EWG meeting and a joint presentation will be prepared. It is expected that 2 or 3 persons per region will attend this meeting.

At 12h00, the meeting was closed in order to enable the participants to continue their discussion on data needs and cooperation with the USU team.

In the afternoon, the flight to Yogyakarta was taken, where at the stop in Jakarta, Mrs Etna and Mr Toto of DICEMR joined us.

Wednesday 31 July - Yogyakarta

The CAREPI meeting took place at the UMY University and was attended by 11 participants (except DICEMR, Mr Oetomo and ECN). There were 4 persons from Central Java, of whom 1 from the regional energy office, and the rest was from Yogyakarta with also a representative from the regional energy office.

Agenda item 1

A hard copy of the agenda was distributed in order to allow all participants to follow the meeting.

The same message as in Medan regarding administrative and financial matters was given by Mr van der Linden.

Regarding the progress about the RTT and REF, PUSPER had prepared a presentation with the events and planning. The most important element is that PUSPER, together with the Gadjah Mada university has been asked to set up the preparation for the REF. For this purpose a regional budget of 25 million Rpa (~2000 €) has been made available. They foresee a first meeting in September 2007, but expect that the REF will become active in 2008, including budgetary provision.

For Central Java, PUSPER will coordinate a workshop to revive the REF over there.

For the PAC, the same information as in Medan was given.

Agenda item 2

After the introduction by Mr Smekens, PUSPER presented all elements as listed in the agenda. Regarding the LEAP modelling, all goes well, for the data collection rail and air transport still cause problems as well as the commercial sector, and not only for energy data, also for activity data. In Central Java, rail, air and shipping are the main problem sectors.

At this point, Central Java indicated that they would like to have a dedicated LEAP training on result analysis using their own data, and not the exemplary ones.

Regarding the time frame for completion, Yogya foresees no problems and Central Java's time frame was very much coinciding with the proposed one.

The representatives of the regional energy offices gave the following remarks: for Central Java, their own developed energy plan in RUPED (2006) could do with a better demand side analysis, they hope that CAREPI can help and support them in this matter. For Yogya: also here is demand side analysis the most important since Yogya has no own resources and hence everything is imported from outside the region and the region is highly electrified. Therefore, the regional government wants to stimulate the use of domestic renewable resources. They indicate that the BPS statistics do not cover all energy use and would like to see a survey on wood and biomass consumption under CAREPI. They also would like to see that within CAREPI a minimum energy use per household is calculated which could be used as threshold (the term used was "milestone", but milestone for what was not clear).

Agenda item 3

The Yogya team had prepared a presentation on the MHP training they received last April from GTZ/Entec both in Yogya and in Central Java. There was not only a theoretical part, but also a field visit where instruments were demonstrated and used (this part would experienced to be the most interesting one and the participants regretted that it could not last longer (also to give all attendants the opportunity to handle the instruments)).

In Central Java, the MHP training was so successful that all 35 districts in the region would like to have such a training. Unfortunately, this can not be achieved within CAREPI, but perhaps that GTZ in its own project portfolio has room to undertake action.

The location in Yogya is the one identified earlier, Saluran Semawung in the north west of the region. In Central Java, a new site has been selected because the original one, Banjarnegara, was in an electrified area. The new site is Pekuluran located in the Doro district (in the middle north of the region) and the nearest PLN connection is at 6 km from the site, so clearly non-electrified. There used to be an installation, but that one broke down after a couple of months after installation in 2004. Since then, the villagers have built about 25 small wooden watermills with car generators (150 W per installation). This allows them to provide to two households some electricity, but only at night in order to save the generators from excess wear.



Current situation in Pekuluran, Doro district, Central Java, the location of the CAREPI MHP site



Field measurements underway during MHP site visit and training session (Yogya)

The representative of Central Java stated that of the somewhat 15 villages and 1000 sub villages which are currently not yet electrified will become so in 2007/2008.

In Yogya, there are still about 83 sub village not electrified, so some realisations can still be made. However, the potential for MHP in Yogya is small, therefore the regional government wants to include also other local renewables in the supply. As such they have plans to develop a local wind farm of 80 kWe. They mentioned the example of PLN which plans a 300 kWe wind farm in West Java. Estimated average copsts for wind amount to 30 million Rpa/kWe (~2400€/kWe). For municipal waste they have a potential supply of 500m³/day which they would like to use. As general comment it was stated that it remains difficult to sell MHP generated electricity to PLN in electrified areas.

The discussion that followed was initiated by Mr Toto and handle the possibility to include in CAREPI other than MHP renewable energy projects. Especially about the investor analysis, what GTZ is doing for MHP, they could do with more support. According to Mr van der Linden there is indeed room within CAREPI to provide a GTZ like training for solar PV, wind or biomass. Also within CAREPI bankable projects regarding other renewable energy can be evaluated. In this context, the Central Java representative asked if ECN could also provide support for non MHP projects by sending a support letter to e.g. the ADB (Asian Development Bank) when they submit proposals. This certainly can be arranged.

Agenda item 4

The introduction by Mr van der Linden was followed by a discussion on the identification of suitable locations, evaluation of already available information from other sources and a possible approach for Yogya and Central Java. The agreement was that, since the time schedule is not so stringent, at the next CAREPI meeting in November 2007 to have a discussion based on the outcome of the above mentioned evaluations.

Agenda item 5

See the Medan meeting

The meeting ended at 13h20 after which the rector of the university joined the attendants during lunch. The same afternoon and evening, the flight to Mataram was taken, via Jakarta.

Thursday 1 August - Mataram

The meeting took place at the UNRAM university in the technical faculty. About 12 persons were present of which 3 or 4 from the local regional energy office and other authorities.

Agenda item 1

Regarding the administrative and financial matters, the same message as in Medan and Yogya was given.

The RTT is fully approved, the CAREPI team as a whole is member of the RTT. Seen the long history in West Nusa Tenggara with the electricity forum, the collaboration between RTT and REF is quite good.

Agenda item 2

After the introduction by Mr Smekens, prof Hadi of the Tech Team gave a presentation. Their main concern is how they fit in the specific regional structure (island region) into the CAREPI model structure, allowing them to perform adequate regional analysis suitable for the regional policy making. After some discussion, it was proposed to defer this discussion to later that day including technical advice from Mr Oetomo and Mr Smekens. Regarding the data collection they had made a detailed spreadsheet table listing problem areas and possible solutions.

As in all other regions, it has to be mentioned that there is a large willingness to improve future data collection by BPS/SUSENAS following suggested improvements or extensions discovered during the CAREPI data collection. Another problem is the definition of the electrification ratio in rural areas as well as the split between urban and rural. The RTT supposes that the official PLN figure is too low since there are in reality possibly more consumers linked to a connection point than reported.

Fuel consumption in transport is apparently only available expressed in monetary units, so additional assumptions regarding price will be needed to translate it into physical units.

Agenda item 3

The locations in West Nusa Tenggara are the same as mentioned in the February meeting: Teres Genit in north Lombok (off grid), Aik Berik in central Lombok (electrified area) and Oi Marah in Bima (east Sumbawa, of grid). Teres Genit is the farthest developed regarding FS, but the RTT had questions about the task division between themselves and GTZ for the further development of the project and of the rural development plan. Concerns were raised that if the NTB CAREPI team would like to develop the three locations, the foreseen budget would not be sufficient, so further clarification about responsibilities is needed.

The regional government already approved the construction of the plant and transmission system in Teres Genit. It was therefore proposed that CAREPI would focus on the institutional set-up in this location. Teaming up with a local NGO YKKSSI was highly recommended.

For Oi Marah, no feasibility study has been done yet. This location is a transmigration area, so population is not scattered and has a good potential for micro hydro. It was proposed that this location would be developed by CAREPI.



Site measurements going on at Teres Genit, Lombok



Mr van der Linden (right) and Mr Sme-kens at the dedicated CAREPI secretariat office at UNRAM. Lombok

Agenda item 4

After the introduction by Mr van der Linden, the attendants discussed about suitable locations and available information for a needs assessment, but without reaching hard conclusions.

Agenda item 5

See the Medan meeting

The meeting ended around 13h00, but after lunch a smaller team continued the discussion about the regional model structure, in presence of Mr Oetomo. The RTT had proposed three options:

- 1] on regional scale (West Nusa Tenggara)
- 2] on island level (Lombok and Sumbawa)
- 3] on sub regional level based on the electricity grids (Lombok, Sumbawa and Bima).

They prefer the latter since data are available on that level and it suits their plans for energy planning better. It even seems that they want to go in even more detail by modelling the region on district level. Also Yogya could work towards this detail.

Friday 3 August - Mataram

A short meeting between Mr Oetomo and Mr Smekens to discuss the UNRAM approach for the modelling. For households they will make a further subdivision by income class (4) and with a rural/urban split. The criteria for this split are defined by BPS and consider e.g. the presence of hardened roads, a local market place,

Commercial and industry would be subdivided likewise, but without income classes.

Their plans to go on a district level are triggered by the availability of the data on that level and - more important - the fact that energy planning can be made at that level.

Mr Oetomo's feeling is that the UNRAM team is the farthest developed among all CAREPI teams but he is confident that the set time schedule can be met by all teams. On the side, he mentioned that traditionally the second semester in Indonesia is the most busiest because in that period, all government funded projects need to be finished, moreover there is also the Ramadam in September-October 2007.

Sunday August 5

Return flight for Mr Smekens and van der Linden to Jakarta

Monday August 6 - Jakarta

In the morning a meeting at the GTZ/Entec office took place with Messrs Ritter, Hayton and Chayun present. Mr Smekens and van der Linden gave firstly a short briefing about the previous regional technical team meetings, with emphasis on the MHP issues.

The GTZ team replied on the following:

- their general feeling is that communication between the RTT and the regional energy office (DINAS) regarding MHP is open for improvement;
- GTZ works together with local NGO's to set up the local institutional setting of the project and the local community preparation;
- GTZ agrees with the locations chosen, two on grid and two off grid sites will be developed within CAREPI. Some of these sites are rehabilitation of existing but derelict installations;

- GTZ endorses the additional visit of the North Sumatra team (perhaps including a person from the regional energy office) to their offices, but would prefer to have it in Bandung, where more material is available. It is the purpose that the RTT does as much as possible themselves, with little factual work of the FS done by GTZ;
- GTZ will draw up a detailed work plan and task allocation for the coming months and distribute it to the RTTs;
- in response to the discussion in Yogya about non MHP renewables, GTZ mentioned a current DGEEU programme in which 30 000 solar PV systems (SHS) will be distributed (budget about 12 million US\$). The DGEEU approach is to promote the installation, but not much more. Such an approach is not considered sustainable as many likewise examples in other countries have proved in the past. If even a small amount of the DGEEU budget could be freed for community preparation and development, the outcome would be more successful;
- GTZ thinks that it is possible to develop a second site in NTB, Oi Marah is the choice since it is also on the list of DINAS to be developed;
- GTZ uses more an on-the-job training for local business development once the MHP project is prepared for a site, there is not such a thing as a common training nor theoretical material available;
- finally some administrative and financial matters were settled.

In the afternoon, a final meeting with DICEMR took place with Mr Toto and Mrs Etna. Mrs Farida was occupied in a meeting and could not be met at this time.

A final debriefing about the regional visits was given with a reminder of some actions to be undertaken by the ministry:

- to contact Mr Washington, the head of the energy office of North Sumatra, in order to get the RTT list signed and approved;
- to facilitate communication between the RTT and DINAS in the regions (Lombok was given as example);
- to contact DGEEU about their SHS project and inform about possible strengthening of that project by providing local supporting measures;
- to arrange a convenient meeting venue for the next CAREPI team meeting in November, the most probable option will be the Menara Peninsula where the kick off meeting took place (the Sari Pan near DICEMR may not be conveniently reached during rush hours).

In the evening, the return flight to Amsterdam was caught.

Abbreviations

BPS : Badan Pusat Statistik - Center of Statistics Body
DGEEU : Directorate General of Electricity and Energy Utilisation
DICEMR : Data and Information Center of the Ministry of Energy and Mineral Resources
DINAS Energi: Regional Energy Office
ITB : Institute of Technology Bandung
MHP : micro Hydro Power
NTB : Nusa Tenggara Barat -West Nusa Tenggara
PAC : Project Advisory Committee
PLN : Perusahaan Umum Listrik Negara - State Electricity Company
PUSPER : Pusat Studi Pengelolaan Energi Regional - Center for Regional Energy Management
REF : Regional Energy Forum
Rpa : Rupiah (1€=~12500 Rpa)
RTT : Regional Technical Team
RUPED : Rencana Umum Pengelolaan Energi Daerah - Regional Energy Management Planning (Central Java)
SHS : Solar Home Systems
SumUt : Sumatera Utara - North Sumatra
SUSENAS : National Social Economic Survey
Tech Team : Technical Team
UMY : University Muhammadiyah Yogyakarta
UNRAM : University of Mataram
USU : University of Sumatera Utara
Yogya : Yogyakarta

CAREPI
Agenda for meeting with Regional Technical Teams
30 July - 3 August, 2007

31 July, 9.00 -12.30 hours - Medan

1 August, 9.00 – 13.00 hours - Yogyakarta

2 August, 9.00 – 13.00 hours - Mataram

1. General

- contract, payments, other administrative issues
- link with regional energy forum
- Project Advisory Committee

2. Energy data collection and LEAP model

- feedback on LEAP training: helpful, difficult, additional training needs
- status collection/assessment energy data and energy related data: completeness, quality, problems, solutions, timeframe
- status LEAP modelling: knowledge, database, problems, solutions, timeframe

3. Micro-hydro projects

- feedback on micro hydro training: helpful, additional training needs
- identified projects: selection of most promising sites, needs assessment, feasibility study, problems, solutions, timeframe

4. Needs assessment

- open discussion about approach, means, timeframe
- reviewing existing surveys and preparation to conduct workshops with local stakeholders

5. Any other matter

Appendix E Copy of the deliverables produced during the report period, if not already submitted with previous report

The following deliverables have been produced and submitted to the IEE Programme:

Del. No. 1:	Inception Report	May 2007
Del. No. 3:	First Progress report	October 2007
Del. No. 7:	ToR regional technical team	September 2007
Del. No. 12:	Summary report on identified capacity building needs	September 2007

Appendix F Invitation letter for the Project Advisory Committee

Dear Sir/Madam,

We are writing to you in connection with the project ‘ Contributing to poverty Alleviation through regional Energy Planning in Indonesia (CAREPI)’, which is now being implemented in Indonesia on behalf of the European Commission. The project consortium consists of:

- Energy research Centre of the Netherlands (ECN)
- GTZ, Germany
- Ministry of Energy and Mineral Resources, Jakarta
- Institute Technology Bandung, Bandung
- University of Sumatra Utara, Medan
- University of Mataram, Mataram
- University Muhammadiyah of Yogyakarta, Yogyakarta

The project is about developing institutional and technical capacity for regional energy policy formulation in the selected regions North Sumatra, Yogyakarta, Central Java and West Nusa Tenggara. It will focus on the development of a Regional Energy Plan for each selected region and the development of concrete micro hydro plants in each region. Project details can be found in the attached CAREPI brochure and inception report as well as on the CAREPI website www.carepi.info

We would like to invite you to take part as a member of the Project Advisory Committee (PAC) for the project. Your role would be to provide comments, advice and suggestions on the project as it progresses, based on your own particular area of expertise. We envisage that this can mainly be done electronically. If a suitable opportunity arises, for example at the annual meeting of the Indonesia – Netherlands Energy Working Group, the PAC can also meet physically. Your comments would usually be sought in conjunction with the preparation of the substantive outputs of the CAREPI project, being the work programme, the draft regional energy scenarios, the draft regional energy outlook, strategies to improve access to modern energy for poor communities and the draft final report.

We do hope that you will be able to find the necessary but limited amount of time to devote to this task. If you find that you are not able to join the committee, could we ask you to nominate a colleague as a possible replacement.

Appendix G CAREPI project summary slides



CAREPI

Contributing to poverty Alleviation through Regional Energy Planning in Indonesia

Contract number: EIE/06/261/S12.448409
Project duration: December 2006 to October 2009
Last updated: September 2007
Website: www.carepi.info



Project Summary

- The CAREPI project aims to develop institutional and technical capacity in the regions North Sumatra, Yogyakarta, Central Java and West Nusa Tenggara for conducting energy policy analysis and providing improved energy services to poor communities.
- To reach its objectives, the CAREPI project comprises three key activities:
 - strengthening institutional & technical capacity on energy policy formulation
 - Identifying energy priorities and best practices for energy service provision
 - Facilitating the development of concrete energy supply projects
- The main results of the project include a Regional Energy Outlook for the four selected regions and the development of a number of concrete small-scale hydro projects that provide electricity to poor communities.





Contributing to poverty Alleviation through Regional Energy Planning in Indonesia

Background

- A key component of the political and economic reforms that are currently being implemented in Indonesia is the devolution of responsibilities for regional development, including energy sector development. New institutions need to be created and relevant capacity needs to be built to enable the regions to duly execute their new responsibilities.
- The CAREPI project contributes to this process by identifying and bringing together relevant stakeholders, strengthening institutions that conduct energy policy analysis and training local businesses that provide energy services



Contributing to poverty Alleviation through Regional Energy Planning in Indonesia

Objectives

- To establish an effective technical and institutional setup for energy policy formulation in the selected regions
- Effective integration of energy and poverty aspects into the regional energy planning framework
- Increased availability and affordability of energy services, especially for rural communities in the selected regions
- Regional, national and international exchange of knowledge and experience on the formulation of pro-poor energy strategies





Contributing to poverty Alleviation through Regional Energy Planning in Indonesia

Expected results

- Institutions for regional energy planning established and strengthened
- Increased technical capacity on energy policy formulation
- Regional energy – economy database developed and pro-poor energy strategy analysed by the technical teams in the selected regions
- A number of small scale hydro projects up and running
- Regional Energy Outlook produced for the selected regions



Contributing to poverty Alleviation through Regional Energy Planning in Indonesia

Partners & Contact

CAREPI is a partnership among the Ministry of Energy and Mineral Resources in Indonesia and the following European and Indonesian research and development institutions:

- Energy research Centre of the Netherlands ECN, The Netherlands
- University of Mataram, Indonesia
- Muhammadiyah University of Yogyakarta, Indonesia
- University of Sumatra Utara, Indonesia
- Institute Technology Bandung, Indonesia
- Deutsche Gesellschaft für Technische Zusammenarbeit GTZ, Germany
- ENTEC Consulting and Engineering, Switzerland

For more information please contact Nico van der Linden,
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