





VALIDATION OF SOCIAL CARBON REPORT

82 MW Lau Renun Hydropower Plant, North Sumatra



COMPANY NAME	LAU RENUN HYDROELECTRIC POWER PLANT (PT. PLN (Persero) Sektor Pandan, Unit Pembangkit Listrik Tenaga Air Lau Renun, Sumatera Utara)		
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AUDIT CRITERIA (standard)	Social Carbon Standard	
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1. Introduction

South Pole Carbon Assessment Limited commissioned Mutucertification International (PT. Mutuagung Lestari) to validate a 82 MW Lau Renun Hydropower Plant located in North Sumatra, Indonesia.

1.1. Objective

The purpose of this validation is to have an independent third party assessment in order to evaluate the accuracy and consistency of the indicators of the Social Carbon Standard.

1.2. Scope and Criteria

The validation is based on an independent site visit and evaluation as well as on document evaluation and review. There following are three reference documents:

- "Guide for Completing Social Carbon Reports" - Version 03, Oktober 2008
- "Approved Indicators for Hydroelectric Power Plants" – Version 4.0, June 2010
- "82 MW Lau Renun Hydropower Plant" – Social Carbon Report

1.3. Social Carbon Project Description

The project activity is a new run-off-river type hydropower plant with a daily regulating pond at the five-hour peak power generation, diverting from the Renun river main stream and eleven (11) tributaries into Lake Toba. The regulating pond has a storage capacity of 500,000 m³ and a power density of 820 W/m². The total actual installed capacity of the project is 82 MW, consisting of two 41 MW turbines. The project is owned and developed by PT. PLN (Persero), a state-owned electricity company. The project supplies electricity to the connected Sumatra grid. The electricity currently generated by the grid is relatively carbon intensive. The proposed project will increase the utilization of renewable energy sources, in this case hydro energy, by operating a new hydropower plant.

The project area of the Renun Hydropower Plant is situated in at northwestern part of Lake Toba in North Sumatra Province, and it is about 100 km south of Medan city as the crow flies. It includes part of the upper-reaches of the Renun River and part of Lake Toba. The principal structures of the Renun project such as the main intake and waterway are situated in the upper-reaches of the Renun River basin and the power station on Lake Toba. The proposed main intake is situated at about 750 m downstream from the public bridge of Sidikalang- Tarutung road on the upstream reach of the Renun river at Pangiringan. The power station is located at foot of the spur of Toba Escarpment about 2 km southeast of Silalahi village. The waterway is about 24 km long, including such structures as several stream intake weirs, surge tank and the penstock line is located between the main intake site and power station.

The regulatory pond is 10 ha in size with a very high power density of 820 W/m² and a storage capacity of 500,000 m³ while the power planed is designed for a flow of 10.1 m³/s respectively 872,640 m³/day.

1.4. Validation Team

The Validation team consists of the following personnel :

- Sigit H. Prabowo – Mutucertification International Team Leader and Auditor of Social and Environmental Responsibility, Environmental Specialist
- Abdul Rahman – Mutucertification International Auditor of Social and Environmental Responsibility, Sustainability Specialist

2. Methodology

The validation of the project was carried out from September 2010 to December 2010.

Preparations : September 7, 2010

On-site visit : October 17 – October 21, 2010

Draft reporting : October 25 – November 01, 2010

Final reporting : December 09, 2010

2.1. Method Used for Obtaining Information

The method used for obtaining the Social Carbon Methodology indicators involves four stages :

Stage 01 : A questionnaire was elaborated.

Stage 02 : The Hydroelectric Power Plant was visited.

Stage 03 : Direct interviews and phone interviews were conducted with several local stakeholders relevant to the project during site visit.

Stage 04 : Evidence (pictures and documents) was obtained during the site visit.

3. Validation Result

3.1. Social Resources

1. Population Displacement and Activities

Evaluates the need of people's displacement during the project implantation, just as the adopted procedures in order to avoid negative impacts and maximize the positive ones.

Previous index (in the social carbon report): 3

Observation:

Upon interview with Mr. Roni Siahaan as RHPP senior worker, it was evident that compensation were given to several farmland legally owned by surrounding community during earlier stage of the project construction. Compensation was defined as an amount of money given to land owners, and not as relocation of the farmers/families.

Index after validation: 3

Status: Appropriate

Perspective:

The money given to land owners had already through comprehensive studies carried out by relevant government institution, e.g. Department of agriculture, department of forestry, department of social, etc.. The amount of compensation had been calculated to include the assurance of livelihood reestablishment and live condition. There were no families without clear legal ownership accepted the compensation.

2. Communication with Stakeholders

Evaluates the process for contacting stakeholders in the planning, implementation and operation stages. The indicator also assesses the existence of an integrated approach among the items that will be evaluated next – acceptance, demands and campaigns – with systems for feedback.

Previous index (in the social carbon report): 5

Observation:

Upon interview with Mr. Roni Siahaan as senior worker of RHPP, it was known that a forum called "Das Forum Renun" was formed due to environmental issue such as the sedimentation of main intake because of illegal mining activities.

And upon interview with Mr. Edward Batubara as Sector Manager at Pandan who is also one of the forum member as representative of Renun HEPP, it was known that the forum had already established with several member involved in it, i.e. University of North Sumatera, Local Government of Dairi, BP DAS (agency who manage local rivers), PLN / HEPP, and local NGO. Although the form had been formed, a decision letter to strengthen the legal status of the forum was still in progress to be approved by the Governor of North Sumatera. The forum was currently often held a meeting to discuss about their rules and procedures including meeting agenda, and thought to be finished at 2011. Latest meeting held on 2010 were as many as 10 meetings discussing on 3 issues: 1) socialization on the importance of river area, 2) prevent any overlapping duty and responsibility between government agencies in the river management, and 3) technical program to relocate illegal miners in the upstream area and to provide those miners with alternative mean of support.

Index after validation: 4

Status: lowered

Perspective: From the interview, it was known that the forum was still in the stage of establishment and procedure discussion although had already discussed several public issues. The forum was expected to be developed in the future with relevant studies of public opinion. The index was lowered into 4 (establishment of a permanent forum in order to maintain communication with local stakeholders)

3. Acceptance

Evaluates the level of support or acceptance from the neighboring population in regard to the entrepreneur.

Previous index (in the social carbon report): 6

Observation:

Observation was not only concerning on local communities perspectives during earlier EIA, but also current perspective. Upon review on Renun HEPP's surveys regarding social and culture of local communities in the RKL/RPL (for period October 2010) it was evident that local communities have different perspective regarding the existence of the HEPP. Local communities felt little positive impacts on the existence of HEPP to their economic and social needs. However, they were not disturbed by operational activities of HEPP. Yet, the survey conducted was not yet appropriate to determine level of support from local communities.

Index after validation: 6

Status: Appropriate

Perspective:

Index of 6 was estimated as the most appropriate to the condition. Although level of support was not yet clear, the survey showed that no opposition from local communities regarding the existence if Renun HEPP. It is strongly recommended that Renun HEPP modified the survey method to cover question about level of support from local communities.

4. Social Demands

Social Demands may be understood as institutional or civil society interests: demands made by institutions, agencies, NGOs, municipalities or other institutions which aim to improve the human development and/or the environment near the project. This item evaluates which social demands the entrepreneur addresses.

Previous index (in the social carbon report): 3

Observation:

Upon interview with local communities, it was evident that Renun HEPP had meets several demands from local communities such as Silahisabungan Senior High School early construction and drainage piping, Catholic Church at Sihotang Nahornop Village, request form local waver ladies of woven cloth, etc. Several other demands received by Renun HEPP were not yet realized due to limited budget but Renun HEPP will continue to put into consideration of all the requested demands.

The demands made by surrounding community(s) were supposed to be in the format of proposal letter to the office of PLN. Upon receiving the demands, Renun HEPP will consider which demand(s) is first priority and which is second, etc. A social program to fulfill the demands was in place.

Index after validation: 3

Status: Appropriate

Perspective:

Renun HEPP was committed to implement a CSR Corporate Social responsibility) Project which made them need to bring extra benefit to surrounding communities. Due to limited budget, Renun HEPP was currently not able to surpass their compulsory activities required by CSR activities.

5. Social Programs

Evaluates the quality and results of additional social programs, such as:

- Social and Environmental Communications Program
- Community development / income generation
- Ethnic integration
- Other social areas (please specify).

Previous index (in the social carbon report): 4

Observation:

From social demands received by Renun HEPP, a program of budgeting was carried out in order to fulfill the demands after determine which demands(s) is priority. All of the social demands and realization of the social program were all reported in Renun HEPP's CSR (corporate social responsibility) report.

Index after validation: 4

Status: Appropriate

Perspective:

Renun HEPP had realized several social programs such as contribution to local church on several benches, contribution to local High School on several unit computers, and also distribution and socialization to surrounding community regarding trees seedlings. Programs were successfully held but have less positive impacts on the beneficiary to local surroundings (i.e. economic benefit, psychology benefit, social benefit, etc.)

6. Social Benefit

Evaluates the additional benefits to local stakeholders, when these benefits are measurable or evident. These benefits may include:

- Improvements in health system (new installations, enhanced water and electricity systems, support for health programs, and others)
- Additional economic activities (industry, commerce, and others)
- Improvements in the infrastructure (roads, energy provision, leisure spaces, and others)

Previous index (in the social carbon report): 4

Observation:

Social benefit was closely related to acceptance index, which Renun HEPP had already evaluate the level of acceptance including social benefit in the periodic report of "RKL-RPL" once every three months. The periodic evaluation showed that surrounding communities felt limited economic and social benefit from the existence of Renun HEPP.

Apart from community's perspective, Renun HEPP had contribute on several social project such as donations to local churches and mosque, local junior and high schools, provided clean water to surrounding areas, free medical treatment, etc.

Current index: 4

Status: Appropriate

Perspective:

Social benefits were delivered to more than one aspects, i.e. health, economic, religious, etc. The benefits were accepted by surrounding community of Renun HEPP and not yet to all stakeholders.

3.2. Human Resources

7. Human Resource Availability and Capacity Building Initiatives

Implementation: Evaluates the availability of human resources as well as their competence for executing the project, including the research, planning and implementation stages. Uncertainty regarding the availability of human resources may be described as the absence of qualified professionals in the market, reduced numbers in the working team, and need for international support, among other alternatives that may compromise the execution of the project.

Operations and Maintenance: Level of experience and capacity of people involved in the operation and maintenance of the project.

Previous index (in the social carbon report): 3

Observation:

Upon interview with Section Head of Human Resource of Renun HEPP (Mr. Zulkarnain Pulungan), it was evident that the standard of competence and also standard of availability were in place (*“Daftar Sebutan Jabatan dan Formasi Tenaga Kerja Sesuai SK. Direksi No: 140.K/Dir/20001”*, dated April 2010).

A competence examination (ind: *Uji Kompetensi*) was one big program held once every 2 years to ensure the competence of all personnel. A competence certificate from the examination was issued with cooperation between PLN and IATKI (Indonesian Power Engineers Association). Renun HEPP had also proposed training needs to their main office in Medan. More than one trainings were usually approved and carried out.

Current index: 6

Status: upgraded

Perspective:

Renun HEPP had already in the stage of maintenance and operations. And all of the personnel involved in the operational and maintenance stages of the HEPP were competent on their basis of competence standard issued by PLN. Certificate of competence were also available issued by PLN in coordination with external parties. More than one trainings for one month were usually conducted upon approval by Head Office of PLN.

8. Health and Safety

Evaluates Health and Safety Procedures, monitoring of occupational accidents, adherence to labor laws and specific management programs or systems.

Previous index (in the social carbon report): 2

Observation:

Renun HEPP has an emergency preparedness and response procedure in place (PRO-ENJ-04). A certificate of Indonesian Health and Safety Management System (*SMK3*) were also available.

Current index: 6

Status: Upgraded

Perspective:

Renun HEPP had already received certificate of occupational health and safety management system called the *SMK3*, and the audit carried out by independent parties, and the certificate was issued by Decree from Minister of Labour (*Surat Keputusan Menteri # kep 26/Men/II/2008*), valid until February 2011. A recertification audit was carried out on May 18-19, 2010 and a “Gold Flag” criteria had been given since more than 90% of audit criteria were complied. A new certificate was still in progress of establishment by the certification body.

Therefore it was needed to upgrade the index category into 6 (existence of occupational health and safety management system certified by a third party) mostly after there were no working accidents occurred since 2006.

9. Benefits

Evaluates existence of additional benefits (not required by law) to workers regarding the following:

- Education (support for studies)
- Health (medical and hospital assistance)
- Retirement assistance
- Other (leisure, sports, and meal vouchers, among others).

In cases where the services for implementation, operation and maintenance are outsourced, the indicator evaluates the outsourced employees. The indicator also considers the existence of programs to evaluate employee satisfaction in regard to their benefits.

Previous index (in the social carbon report): 2

Observation:

Upon interview with one of Renun HEPP staff (Mr. Josua Simanjuntak), it was evident that Renun HEPP had provided additional benefits to workers regarding several aspects, such as routine periodic medical check-up every once a year for all operational staffs, education (operational course), retirement fund, and extra afternoon meal, etc.

However the compensation / benefits were only given for permanent staffs of Reunu HEPP, and do not include contractors / sub contractors working on behalf of Renun HEPP. According to interview, those subcontract staffs had already receive their own benefit / compensation such as health insurance, etc. from company which employed them.

Current index: 2

Status: Appropriate

Perspective:

The benefits were only given to permanent staffs and not include outsourcing personnel.

10. Transfer of New Technology

Evaluates the level of technological innovation and the technologies employed in the project, the origin of the equipment, existence of royalties and technological licenses, and the necessity of international technical assistance. In cases where the technology employed is already known (a common scenario of Hydropower plants), it evaluates if there are innovations regarding operational procedures and maintenance, actions for mitigation of impacts, or other aspects that show a break from the common practice of the sector. The existence of research and development projects (R&D) related to the project are also considered in this indicator.

Previous index (in the social carbon report): 3

Observation:

Renun HEPP had several innovation program, such as a program called filter cooling water system to minimize the amount of fish being sucked up the water intake, and also planning to implement a program to clean out regulating pond from existing sediment.

Current index: 3

Status: Appropriate

Perspective:

Renun HEPP had already implemented on several innovation technology developed by their internal ideas. However the program still not yet covered to gains efficiency and to reduce environmental impacts.

11. Involvement of the Employees in the Carbon Project

Evaluates internal communication process of the entrepreneur in relation to project emissions reductions.

Previous index (in the social carbon report): 2

Observation:

Several employees of Renun HEPP had already participated in Social Carbon Training given by South Pole Carbon during earlier stage of the project implementation. Not all of employees were participated in the training, but all of the working areas had their representative in the training. Upon interview with Mr. Purba from Renun HEPP, around 70% of the employees had been informed regarding the implementation of Social Carbon Project since the project was being one of discussion topic in the monthly meeting.

Current index: 3

Status: Upgraded

Perspective:

Since Renun HEPP is not such a large scale group of employees working there (27 permanent staff and 38 outsourced personnel), it was not difficult to inform all of the employees about the implementation of Social Carbon Project, mostly after all areas have its own representative that participated in the Social Carbon Training. Therefore it was evident that information regarding implementation of carbon project was not only received by management and employee(s) directly involve in the carbon project. However, Renun HEPP should consider establishing a documented policy regarding the implementation of carbon project (just like Quality Policy and Environmental Policy) and to distribute and/or display the policy within areas of Renun HEPP to have a more assurance that all of employees had been informed.

3.3. Financial Resources

12. Economic Performance

Evaluates if the economic performance of the project met the expectations of the shareholders and directors regarding, for example, goals for energy generation, stated periods for executing jobs, and operational and maintenance costs. It evaluates if the goals were met or if they did not meet the expectations for the given period.

Previous index (in the social carbon report): 4

Observation:

Renun project has been running in line with expectations. From 2006 until 2008, the power generation has reached the expected target. However in 2009 Renun HEPP had failed in achieving the expected target for electricity generation.

Index after validation: 4

Status: Appropriate

Perspective:

The flow of river water strongly affects the electrical energy generated. The reduction of water flow will reduce the production of electricity generated. In 2006, 2007 & 2008, there was excess supply of electrical energy due to normal streamflow. But upon review on the water discharge rate of 2009, it was evident that in 2009 the generation of electrical energy does not reach the target because the river water discharge is not in normal condition.

13. Market

Evaluates eligibility of credits to CDM Market or to other voluntary markets as well as their attractiveness to potential buyers.

Previous index (in the social carbon report): 3

Observation:

All project activities are eligible under the VCS.

Index after validation: 3

Status: Appropriate

Perspective: none

14. Sale of Credits

Evaluates uncertainties regarding the value of commercialized credits generated by the project.

Previous index (in the social carbon report): 1

Observation:

Until now there is no buyer who submitted the purchase of carbon from hydropower. There are some buyers who are interested but not yet filed negotiations.

Index after validation: 1

Status: Appropriate

Perspective:

Social Carbon verification will improve the attractiveness to potential buyers. South Pole produced a marketing video on Renun HPP, highlighting the CSR activities.

3.4. Natural Resources

15. Sustainability Principles

Evaluates the existence of specific policies and programs geared toward project sustainability and the applicability of the principles, values and objectives regarding sustainability.

Previous index (in the social carbon report): 4

Observation:

Renun HEPP had a documented policy regarding environmental and quality. The policy was also distributed to all sectors of Renun HEPP. Besides the policy, an environmental and quality objective was also available to ensure a consistent quality and environmental performance.

Current index: 4

Status: Appropriate

Perspective:

The objective, target, and program regarding quality and environmental matters were consistently implemented. A monitoring of the objective's achievement was available. From the achievement monitoring, it was known that several programs and objectives were not yet achieved due to several different causes.

16. Environmental Management

Evaluates environmental management procedures adopted by the project, including organization, coordination of actions, and documentation of impacts identification, monitoring, and periodic emissions reporting, as well as existence of regular certification.

Previous index (in the social carbon report): 6

Observation:

Renun HEPP had already gained ISO 14001:2004 (Environmental Management System) certificate issued by TUV Rheinland as ISO 14001 certification body. The certificate will expired on January 2011, and therefore a re-audit was carried out by TUV Rheinland on July 2010, but the certificate was not yet establish.

Current index: 6

Status: Appropriate

Perspective:

Renun HEPP was consistent to implement the environmental management system, and yet to be certified by an independent certification body. The index of 6 was the most appropriate to be given regarding indicator of environmental management system.

17. Environmental Legislation

Evaluates accordance of the project with environmental laws and norms, including agreements with public authorities, such as environmental licenses, requested authorizations for installation, Terms of Conduct Adjustment, etc.

Previous index (in the social carbon report): 4

Observation:

Renun HEPP had identified all of environmental regulations that were relevant to be complied (list of environmental regulation was in place). From the list, Renun HEPP had also evaluated the compliance status to all environmental regulation identified. And it was evident that majority of the regulation had been complied, though the not complied regulation had been addressed as environmental programs so a full compliance will be achieve.

Renun HEPP was in progress to gain a permit regarding environmental matter, i.e. temporary storage of hazardous waste from the Ministry of Environment.

Current index: 5

Status: Upgraded

Perspective:

Although Renun HEPP was still in progress to have a permit on temporary storage of hazardous waste from Indonesian Ministry of Environment, but the index could be upgraded into 5 (environmental licenses routinely issued, determined obligations are fulfilled). The reason was because the amount of hazardous waste produced by Renun HEPP was insignificant, i.e. used lubricants and dry cells. Beside that, there was no other activity within HEPP operational that needed any license/permit from relevant government agencies, i.e. no waste discharge to soil and/or river, etc.

And above all that, Renun HEPP had identified all of the legal environmental regulation relevant to be complied and also had evaluated the compliance level to all of the legal environmental regulation identified.

18. Legal Procedures

Evaluates if the project was involved with any lawsuit or administrative sanctions executed by public organs, person or people, aiming the environment and human health protection or repair.

Previous index (in the social carbon report): 5

Observation:

Upon interview with Mr. Sudin Nadapdap as Unit Manager of Renun HEPP, it was known that no lawsuit received regarding environmental matter and human health since the earlier stage of HEPP construction.

Current index: 6

Status: Upgraded

Perspective:

The social carbon report should be revised, due to the inappropriate observation regarding Legal Procedures indicator. The report stated that there was a lawsuit regarding land compensation, while the standard of this indicator state that any lawsuit occurred shall be aiming to environmental matter and/or human health.

19. Environmental Impacts

Evaluates accordance of the project with environmental laws and norms, including agreements with public authorities, such as environmental licenses, requested authorizations for installation, Terms of Conduct Adjustment, etc.

Previous index (in the social carbon report): 4

Observation:

Besides Environmental Impacts Assessment made by Renun HEPP, a periodic evaluation on the significance of environmental impacts was also carried out (on the form: “*Daftar Aspek dan Dampak Lingkungan*”). Renun HEPP had a list of all environmental aspects occurred from operational activity and evaluate the impacts which can have significant or insignificant impact on environment or human health. From the list, it was evident that several impacts were categorized as significant impacts and most of it was insignificant. Renun HEPP had also determined what action needed to control the impacts. A procedure of identification on environmental aspects and impacts evaluation was also in place.

Current index: 5

Status: Upgraded

Perspective:

From the periodic identification of environmental aspects and evaluation of the significance of environmental impacts (“*Daftar Aspek dan Dampak Lingkungan*”), it was evident that majority of the impacts were insignificant. As many as 67,68% of the impacts were insignificant. Therefore, it was obvious that the index for this indicator should be upgraded into 5 (studies show insignificant environmental impact).

20. Environmental Risk Management

Evaluates the definition, implementation and maintenance of procedures relevant to potential emergencies and accidents related to the project, as well as those relevant to the preparation of answers for such situations, in case of emergency.

Previous index (in the social carbon report): 6

Observation:

Renun HEPP had established a documented procedure regarding potential emergency condition and what action shall be done by all relevant personnel working at the HEPP (procedure PRO-ENJ-04). A simulation of emergency condition to test such procedure was also had been conducted, e.g. on July 29, 2010 regarding fire drill and first aid. A documented record of simulation was in place (ind:*Laporan Pelatihan Siaga Tanggap Darurat*)

Current index: 6

Status: Appropriate

Perspective:

Renun HEPP had committed to carry out periodic simulation on emergency condition according to emergency preparedness and response procedure.

21. Reservoir and Marginal Areas Management

Valuation about implementation of the Plan for use of the reservoir and surrounding areas, considering its coverage and efficacy for assurance of the planned uses.

Previous index (in the social carbon report): 2

Observation:

Upon interview with Mr. Sudin Nadapdap as Renun HEPP Unit Manager, it was known that community safety was being priority concern to Renun HEPP management, therefore all activities around reservoir was to be prohibited. Renun HEPP had set a perimeter fence and warning signs so that none of unauthorized personnel will enter reservoir area.

Current index: 3

Status: Upgraded

Perspective:

Due to HEPP management policy regarding restricted area of the reservoir, it was obvious that no invasions or inadequate uses of Renun HEPP's reservoir.

However, several tributary intakes owned by Renun HEPP were designed to separate the river water flow between the one flow to HEPP and to citizen's irrigation.

22. Erosion, Landslides, Silting and Floods

Evaluate the current stage of erosion and silting of the reservoir and if the operations area major cause of the problem and the existence of programs to manage these risks, such as monitoring, and erosive processes control (ex: protection and reforestation programs for reservoir protection zone).

Previous index (in the social carbon report): 4

Observation:

Renun HEPP had no contribution to erosion or silting in the reservoir and downstream areas. As HEPP, they are very rely on water debit so they implemented any action to minimize erosion and silting.

Hwever, illegal sand mining activity in the upstream area had caused a major problem of silting. This issue had became a discussion topic in the newly establish forum between HEPP and local stakeholders.

Current index: 5

Status: Upgraded

Perspective:

Renun HEPP had implemented a program of tide monitoring, reforestation, and discussion with local stakeholders regarding the sustainability of Renun River. Therefore, the index was upgraded into 5 (program includes preventive actions such as reforestation, tide monitoring, etc.). A strong opportunity to be upgraded into index 6 (program is supported by external stakeholders) was also available, but seems to be not yet inappropriate due to the Forum between HEPP and local stakeholders was still in progress of approval by Governor of North Sumatera.

23. Water Resources

Evaluates consolidation and interpretation of water quality monitoring data and measures of control implemented, aimed at maintenance of quality conditions and downstream uses (ex: sewage treatment station eventually implemented in local communities due to construction of the hydroelectric plant, actions taken for sanitary vigilance, etc).

Previous index (in the social carbon report): 4

Observation:

Monitoring and measurement of river water quality was conducted once every three months and reported to relevant agencies in the document of *RKL-RPL*.

Current index: 4

Status: Appropriate

Perspective:

From the last monitoring of water quality (covered main intake, regulatory pond, and final outlet), it was obvious that Renun HEPP had no contribution to any water pollution. Several result showed that Renun HEPP enhanced water quality. There had been several result that showed water quality measured in the outlet after utilized by HEPP were not as good as the water quality before utilization. This might caused by the sampling method of the water sample was not appropriate, i.e. water sample taken was inside the lake and had already contaminated with lake water.

3.5. Biodiversity Resources

24. APP (Permanent Protected Areas) and Legal Reservation

Evaluates state of conservation of the areas around the reservoir including Permanent Preservation Areas - APP and legal reserve areas whether owned by the project or not.

Previous index (in the social carbon report): 2

Observation:

More than 70% of areas surrounding the HEPP are a national owned forest (register 82 / *Lae Pandom Protected Forest*). This legally conservation area had been degraded due to illegal logging by surrounding community who thought the forest as community forest, and by other party

Current index: 2

Status: Appropriate

Perspective:

More than 70% of legal reservation areas are degraded

25. Recovery of Degraded Areas

Evaluates existence of reforestation projects in marginal areas of the reservoir, procedures for planting, maintenance, control measures and surveillance. It also evaluates extent of actions: limited legal obligations, areas of the company, riparian forest in the incremental basin, and so on.

Previous index (in the social carbon report): 3

Observation:

Renun HEPP had carried out reforestation on several areas. A series of monitoring data on the forestation was in place, and it was known that reforestation took place since end of 2007 until now. As many as 8700 tree seedlings had been planted ever since. The planting area was those related to keep the water availability, such as Tributary Intakes which are owned by HEPP, and also community land such as Barisan Nauli Village, Parbuluan 6 Village, Perjuangan Village which are on either water cathment areas of the tributary intakes or upstream of the intakes.

Current index: 5

Status: Upgraded

Perspective:

Renun HEPP had carried out voluntary action of reforestation on several areas, both owned by Renun HEPP and outside the project ownership.

26. Biodiversity Conservation

Evaluates actions of biological monitoring developed in surrounding environmental areas and influence of the power plant; assesses specific programs developed for flora and fauna on the banks of the reservoir or in surrounding areas for conservation and research.

Previous index (in the social carbon report): 3

Observation:

Renun HEPP, in the RKL-RPL report every three months, had already addressed monitoring result regarding the abundance of lake fauna, i.e. plankton and benthos. A simple analysis had also determined to explain connection between water quality and the abundance of plankton and benthos.

Current index: 3

Status: Appropriate

Perspective:

Still insufficient evidence that Renun HEPP had already conducted further research on local biodiversity other than lake fauna. The monitoring on the abundance of lake fauna

was limited to the obligation to provide RKL-RPL report every three months, where monitoring of plankton and benthos became one of the essence of the report.

27. Ichthyofauna

Evaluates existence of procedures for monitoring the Ichthyofauna, partnerships for research, and management actions (restocking, culture in ponds, net).

Previous index (in the social carbon report): 1

Observation:

Renun HEPP had not yet monitor the existence of ichthyofauna

Current index: 1

Status: Apropriate

Perspective:

Renun HEPP had not yet monitored the existence of ichthyofauna.

3.6. Carbon Resources

28. Additionality

Consists of reduction of greenhouse gas emissions or increase in removal of CO₂ beyond what would occur in absence of project activity. This item evaluates tools used for assessing additionality and compliance with national and international standards.

Previous index: 6

Observation:

Additionality is validated according to an investment analysis.

Index after validation: 6

Status: Appropriate

Perspective: none

29. Emission Reductions Calculations & Monitoring

Evaluates methodologies used to calculate emissions and monitor compliance with national and international standards.

Previous index: 6

Observation:

ACM0002/Version 10, Sectoral Scope: 1, EB 47 was used

Index after validation: 6

Status: Appropriate

Perspective: none

30. Validation & Verification

Evaluates existence of total or partial validation/verification of project by a third party, if third party is accredited by UNFCCC, and compliance procedures for validation/verification with national and international standards.

Previous index: 6

Observation:

Project was validated by RINA

Index after validation: 6

Status: Appropriate

Perspective: none

31. Project Performance
 Evaluates performance of project, verified by comparison with estimates of emissions reductions under the PDD.

Previous index: 5

Observation:
 The project reduced emissions by 196,894 tCO₂ from the 1st April 2009 till the 31st of March 2010. The expected annual reduction according to the PDD is 232,931 tCO₂.

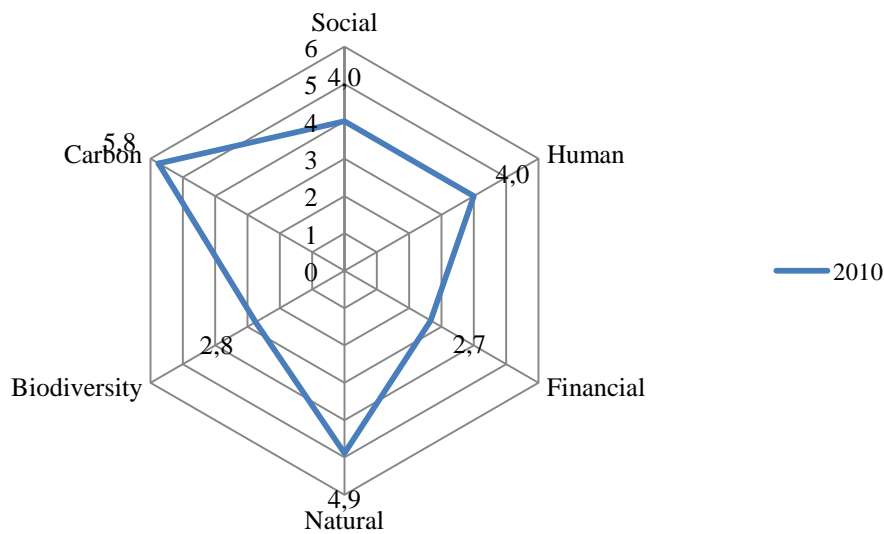
Index after validation: 5	Status: Appropriate
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Perspective: none

3.7. General Performance

Table 1. Performance by resource – point zero 2010

Resource	Critical	Satisfactory	Sustainable	Average	General Performance
Social	0.0%	83.3%	16.7%	4.0	Satisfactory
Human	20.0%	40.0%	40.0%	4.0	Satisfactory
Financial	33.3%	66.7%	0.0%	2.7	Satisfactory
Natural	0.0%	33.3%	77.8%	4.9	Sustainable
Biodiversity	50.0%	25.0%	25.0%	2.8	Satisfactory
Carbon	0.0%	0.0%	100.0%	5.8	Sustainable
Total	17%	41%	43%	4.0	Satisfactory



4. Conclusion

Upon validation that covers document review and interview, it was evident that Renun HEPP had done several actions in order to reach higher performance according to the Social Carbon Standard. However, it was found during validation that several indicators in the Social Carbon Standard were not yet sufficient to be included in the highest performance, i.e. several actions still needed / continued in order to gain better performance.

Social Resources – Renun HEPP, together with local stakeholders, should strengthen the existence of Forum Das Lae Renun so that periodic forum meetings can be done to discuss public opinion and also to carry out studies on the public opinion.

Human Resource – Currently, benefits which cover health insurance, retirement assistance, and education was limited to permanent workers and not yet included outsourced personnel. Apart from whether outsourced personnel had been given the above benefits by their carrying company, Renun HEPP did provide other benefit such as leisure and sports to all of the employees. Renun HEPP should consider to carry out satisfaction survey to all employees regarding benefits they received, and also to provide proper benefits to all employees either permanent or outsourced.

Performance on the human resources sector can also be raised if Renun HEPP had develop and/pr implement a new innovation to reduce environmental impacts and to gain efficiency. Further more, improvement can also be reach if Renun HEPP involved many more personnel in the Social carbon and VCS.

Financial Resources – The economic benefit of the Renun HEPP was not able to calculate since electricity produced were distributed to Distribution Section of National Electricity Company, a separate part of the HEPP, and not being directly sold to market. Furthermore, electricity price had been centrally standardized by the government. However, Renun HEPP electricity production itself were possible to be calculated which depends on the river water flow, i.e. normal flow will produced normal electricity and vice versa.

Natural – Sustainable performance had been performed by Renun HEPP regarding Natural aspects. Mostly since Renun HEPP had already certified by external party on their Quality Management System, Environmental Management System, and also for SMK3 as Indonesian Occupational Health and Safety Management System. Higher performance average can be gain by Renun HEPP if consider more action regarding the management of reservoir and marginal areas, which according to social carbon standard, higher performance can be given if there are multiple uses of reservoir and adjacent areas with evident benefits to the local population.

Biodiversity Resources – Only satisfactory performance was given to the aspect of biodiversity resources, mostly due to the existing condition that more than 70% of HEPP area is in a permanent protected area). To achieve a higher performance, Renun HEPP should consider more action on biodiversity conservation and to conduct a study regarding the abundance of ichthyofauna to determine the effect of HEPP operational with the abundance of ichthyofauna.

Carbon – already validated by RINA.

Upon validation of Social Carbon Report, it was evident that one indicator had its score lowered: Indicator number 2 regarding communication with stakeholders. And also as many as nine indicators had their scores upgraded: indicators number 7, 8, 11, 17, 18, 19, 21, 22, and 25. Therefore, as many as twenty one indicators had not changed from the earlier Social Carbon Report.

5. Persons Interviewed

- Mr. Roni Siahaan, worker at Renun HEPP
- Mr. Zulkarnain Pulungan, worker at Renun HEPP
- Mr. Randy Zulkarnaen, worker at Renun HEPP
- Mr. Edward Batubara, worker at Renun HEPP
- Mr. Josua Simanjuntak, worker at Renun HEPP
- Mr. Sudin Nadapdap, worker at Renun HEPP
- Mr. Taufik Abdi Nugraha, worker at Renun HEPP
- Mrs. Eka Silawati Firma, worker at Renun HEPP
- Mr. Sadiman Sigiro, Headmaster Junior High School
- Mr. Sihotang, Barisan Nauli Headvillage, member of church committee
- Mr. Sidebang, Silalahi I Headvillage
- Mrs. Erita Boru Sidebang, Weavern
- Mrs. Fransischa Boru Sinabutar, member of church committee

6. References

- "Guide for Completing Social Carbon Reports - Version 03, Oktober 2008";
- "Approved Indicators for Hydroelectric Power Plants – Version 4.0, June 2010
- www.socialcarbon.com
- www.southpolecarbon.com
- Renun HEPP periodic monitoring of environmental parameters (ind: *Laporan RKL-RPL Triwulan 3 2010*)
- 2010 and 2009 Performance Target of Renun HEPP
- HEPP production data of 2010
- Renun HEPP's Manual on Environmental Management System
- Minute of meeting of Forum Das Renun
- Certificate of ISO 14001, ISO 9001, and SMK3 possessed by Renun HEPP.

7. Validation Statement

THE SOCIAL CARBON REPORT BY SOUTH POLE CARBON INCLUDES ALL CHANGES REQUESTED IN THIS FINAL VALIDATION REPORT (LAST REVISION WAS SENT ON NOVEMBER 23, 2010).

THIS STATEMENT WAS ISSUED WITHOUT ANY PRESSURE OR INTIMIDATION FROM ANY PARTIES, AND UPON AN OBJECTIVE VALIDATION AUDIT. THIS VALIDATION REPORT SHALL NOT BE EDITED BY UNAUTHORIZED PARTIES WITHOUT PERMISSION FROM VALIDATOR PERSONNEL OF MUTUCERTIFICATION INTERNATIONAL AS SOCIAL CARBON APPROVED CERTIFYING ENTITIES.

8. Attachment

8.1 Corrective Action request form (CAR)
resolved by project owner.

8.2. Index of photos

8.1 CAR form resolved by project owner

Several non conformances were observed between Social Carbon Report and condition at field. Those non conformances shall be corrected by project owner by revising the Social Carbon Report. Details of the non conformances can be seen below. Project owner shall fill in the column of “summary of project owner response” and “revised sections “.

NC #:	1 of 12	Reference:	SCR Section 4.1, Indicator 1
Non conformance detail:			
<p>The word: “relocated” in the SCR was not the most appropriate word to describe what happened on field since there were no activities from group of people moved toward new living area.</p> <p>Renun HEPP had only compensated the legal farmland, or legal unutilized land, with amount of money regulated by local government regarding land compensation.</p>			
Summary of project owner response:			
n/a			
Revised sections (if applicable):			
SCR Section 4.1, Indicator 1			
Conclusion (filled by validator):			
Project owner had revised the SCR. CAR is resolved.			

NC #:	2 of 12	Reference:	SCR Section 4.1, Indicator 2
Non conformance detail:			
<p>- It was identified in the SCR that the meeting of “DAS FORUM RENUN” was held at least once in two months. This information was not conforming to current condition. Upon phone interview with Mr. Edward Batubara, as one of the representative from PLN to join the forum, it was known that the meeting will be held after an invitation from the forum leader, i.e. from University of South Sumatera., and there were no such periodic meeting interval.</p> <p>- The index of 6 being stated in the SCR was not the most appropriate index, since currently the forum is still on its process to establish rules and procedures, i.e. in the <i>RAD</i> (district budget allocation) for period 2011. The index shall be on 4 (establishment of a permanent forum in order to maintain communication with local stakeholders).</p>			
Summary of project owner response:			
n/a			
Revised sections (if applicable):			
SCR Section 4.1, Indicator 2			
Conclusion (filled by validator):			
Project owner had revised the SCR. CAR is resolved.			

NC #:	3 of 12	Reference:	SCR Section 4.2, Indicator 7
Non conformance detail:			
<p>- The observation given in the SCR was not yet considers the current condition of human resource availability. Therefore, the observation shall be more complete to address current condition of human resource availability.</p> <p>- The index given in the SCR was 3, and upon documentation review during validation it was evident that the most appropriate index is 6 since all of PLN units and sectors had established a competence criteria and job formation.</p>			

Summary of project owner response:
n/a
Revised sections (if applicable):
SCR Section 4.2, Indicator 7
Conclusion (filled by validator):
Project owner had revised the SCR. CAR is resolved.

NC #:	4 of 12	Reference:	SCR Section 4.2, Indicator 8
Non conformance detail:			
The information that Renun HEPP had already certified on SMK3 shall be clarify, since there is a big difference between 'uses SMK3' (quoted from SCR) and had already being certified by external parties. And therefore, the index should be upgraded into 6 (existence of an occupational health and safety management system certified by a third party).			
Summary of project owner response:			
n/a			
Revised sections (if applicable):			
SCR Section 4.2, Indicator 8			
Conclusion (filled by validator):			
Project owner had revised the SCR. CAR is resolved.			

NC #:	5 of 12	Reference:	SCR Section 4.2, Indicator 11
Non conformance detail:			
The index shall be revised, since index given in the SCR was 2, while upon validation it was evident that the index could be upgraded into 3. Please refer to Validation Report section 3 regarding validation Result on Indicator number 11 for more detail on validation perspective.			
Summary of project owner response:			
n/a			
Revised sections (if applicable):			
SCR Section 4.2, Indicator 11			
Conclusion (filled by validator):			
Project owner had revised the SCR. CAR is resolved.			

NC #:	6 of 12	Reference:	SCR Section 4.4, Indicator 17
Non conformance detail:			
The index shall be revised, since index given in the SCR was 4, while upon validation it was evident that the index could be upgraded into 5. Please refer to Validation Report section 3 regarding validation Result on Indicator number 17 for more detail on validation perspective.			
Summary of project owner response:			
n/a			
Revised sections (if applicable):			
SCR Section 4.4, Indicator 17			
Conclusion (filled by validator):			
Project owner had revised the SCR. CAR is resolved.			



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NC #:	7 of 12	Reference:	SCR Section 4.4, Indicator 18
Non conformance detail:			
Please complete the SCR on the indicator standard of indicator number 18. The social carbon report should be revised, due to the inappropriate observation regarding Legal Procedures indicator. See validation report.			
Summary of project owner response:			
n/a			
Revised sections (if applicable):			
SCR Section 4.4, Indicator 18			
Conclusion (filled by validator):			
Project owner had revised the SCR. CAR is resolved.			

NC #:	8 of 12	Reference:	SCR Section 4.4, Indicator 19
Non conformance detail:			
During site visit, it was evident that majority of the impacts were insignificant. As many as 67,68% of the impacts were insignificant. Please add some information about that. See validation report.			
Summary of project owner response:			
n/a			
Revised sections (if applicable):			
SCR Section 4.4, Indicator 19			
Conclusion (filled by validator):			
Project owner had revised the SCR. CAR is resolved.			

NC #:	9 of 12	Reference:	SCR Section 4.4, Indicator 21
Non conformance detail:			
Due to HEPP management policy regarding restricted area of the reservoir, it was obvious that no invasions or inadequate uses of Renun HEPP's reservoir. Please add some information about that. See validation report.			
Summary of project owner response:			
n/a			
Revised sections (if applicable):			
SCR Section 4.4, Indicator 21			
Conclusion (filled by validator):			
Project owner had revised the SCR. CAR is resolved.			

NC #:	10 of 12	Reference:	SCR Section 4.4, Indicator 22
Non conformance detail:			
During site visit, it was evidenced that Renun HEPP had implemented a program of tide monitoring, reforestation, and discussion with local stakeholders regarding the sustainability of Renun River. Please add some information about that. See validation report.			
Summary of project owner response:			
n/a			
Revised sections (if applicable):			
SCR Section 4.4, Indicator 22			

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Conclusion (filled by validator):
Project owner had revised the SCR. CAR is resolved.

NC #:	11 of 12	Reference:	SCR Section 4.5, Indicator 25
Non conformance detail:			
During site visit, it was evidenced that Renun HEPP had carried out voluntary action of reforestation on several areas, both owned by Renun HEPP and outside the project ownership. Please add some information about that. See validation report			
Summary of project owner response:			
n/a			
Revised sections (if applicable):			
SCR Section 4.5, Indicator 25			
Conclusion (filled by validator):			
Project owner had revised the SCR. CAR is resolved.			

NC #:	12 of 12	Reference:	SCR Section 4.5, Indicator 27
Non conformance detail:			
Observation given in the SCR was not appropriate to the essence of indicator 27 regarding monitoring of the existence on ichthyofauna (fishes). The index was appropriate with validation result, however the SCR observation on this indicator shall be corrected.			
Summary of project owner response:			
n/a			
Revised sections (if applicable):			
SCR Section 4.5, Indicator 27			
Conclusion (filled by validator):			
Project owner had revised the SCR. CAR is resolved.			

8.2 INDEX OF PHOTOS



Silahisabungan Senior High School



A view of Silahisabungan Senior High School's central field, which Renun HEPP contributed during land clearing



Used pipes from Renun HEPP donated to Silahisabungan Senior High School to be re-use as drainage pipe



A lady is in a process of weaving. It was told that Renun HEPP did contributed in donating woven cloth to all of the weaver lady there.



Ingul trees for reforestation. given by Renun HEPP for people around the intake.



Procuring drinking water installations on Lae Rias and Pargambiran Village in Sumbul Sub District



Renun HEPP Assistance to buy additional benches in Santa Teresa Church at Sihotang Nahornop Village



Irrigation sluice in tributary intake 3