SOCIALCARBON® Standard

Indicators for Micro and Small Scale Hydropower Grouped Project

Version 1.1 – June 2011

DOCUMENT REVISION HISTORY

Version	Description of the main adjustments	Review Date
1.0	First version of the indicators	August, 2010
1.1	Revision to layout only	09/06/2011

1. Elements considered for using SOCIALCARBON in Hydroelectric Power Plants – bundling projects

The SOCIALCARBON concept was first developed community based forest projects in 1998. Through the years, due to the beginning of new scope of emission reductions projects it was adapted also for other types of project activities such as switching fuels and renewable energy. SOCIALCARBON was first applied to hydropower plant projects in 2007, using indicators based on The International Hydropower Association (IHA)'s *Sustainability Guidelines t*o assess fundamental aspects of economic, social, and environmental sustainability pertaining to hydro projects. The original version of the indicators is applicable to hydroelectric power plants, both small- and large-scale, during implantation and operation activities.

For the *Rural China Micro and Small Scale Hydropower Grouped Project* these indicators have to be reviewed and adapted to the project context which consists of 95 individual micro-hydropower plants owned by different companies. Due to the large number of project owners and distant locations involved, six main adaptations were made:

SOCIALCARBON criteria	Barrier	Adaptation/recommendations for the project
Assessment using SOCIALCARBON methodology: SOCIALCARBON indicators shall be set out and used to detail the main benefits and impacts arising from a carbon offset project for the six resources: Social, Human, Financial, Natural, Biodiversity/Technology and Carbon.	Some of the existent indicators for Hydro projects were related to project owner´s governance of the business in terms of sustainability objectives for the project. It was nearly impossible to involve all project owners in the assessment and a sample method could result in a non representative assessment due to the significant differences between the project owners – in economics, development, capacity, and institutional and legal set-up.	Therefore indicators related to specific project owners governance and performance were dropped and replaced for new indicators, focused on monitoring the changes and impacts occurring in the surroundings community or specific group of stakeholders that: a) are located within the project area or the direct impact project area. b) Are involved or benefited by the project activities, including mitigation measures, additional social and environmental programs, etc. Also sampling techniques were elaborated for projects that include a large number of project owners or stakeholders impacted (i.e. bundling, POAs, large scale LULUCF projects, etc.) which includes: - Project developers may choose to define different clusters (a group of projects) and include them in the assessment progressively, considering that by the ending of the credit period all clusters must have been assessed. - Selecting 1 to 3 'typical' villages/communities or project owners/plants in each cluster and interviewing a number of people in each.
Continual improvement of Project performance: During the periodic verifications of the SOCIALCARBON Report, the project: a) Must	Collecting information for the assessment and defining continual improvement goals could not depend exclusively on the project owners as it is unfeasible to involve and get commitment of them	Project developers must provide a clear identification of roles and responsibilities of an assigned organization (i.e. project developer) or group of organizations (i.e. committee) responsible for coordinating activities for SOCIALCARBON

demonstrate perspectives of improvement and evidences that at least part of these perspectives is being developed; b) Will not be able to present decrease in the performance of the same resource two consecutive times.	all. Also, proposed continual improvement goals could impact more or less a specific region or project owner.	assessments and establishment of continual improvement goals. These elements should be clearly defined: a) the actors directly involved; b) the nature of the involvement; c) The frameworks under which the project owners, assigned organization and other organizations intervenes. (i.e. means of communication and exchange of data and information; notification of planned measures to stakeholders directly involved; establishment of particular agreements; responsible for implementing proposed actions; etc.) d) A brief description of the circumstances, negotiation and the other matters that resulted in this framework (optional). e) If applicable a justification for including or excluding clusters in the improvement goals and assessments.

List of references used for developing the new indicators:

FUNDAÇÃO COGE. 1a. Pesquisa Nacional sobre Responsabilidade Socioambiental nas Empresas de Energia Elétrica (First National Research on CSR in Electricity Companies). Rio de Janeiro, 2008

UNEP DAMS AND DEVELOPMENT PROJECT. Dams and Development: Relevant practices for improving decision-making. 2007, United Nations Environmental Program.

ROSA, V. H. S. Energia Eletrica Renovável em Pequenas Comunidades no Brasil: em busca de um modelo sustentável (Electricity from Renewable Sources in Small Communities in Brazil: Searching for a Sustainable Model). Brasília – D.F., Brazil. April, 2007.

RAINFOREST ALLIANCE et. All. Manual for Social Impact Assessment of Land-Based Carbon Projects. May, 2010.

2. Application of the indicators

Basic guidelines for assessment in POAs or Bundling projects involving more than 5 Project Owners

Sampling techniques might be used when the project includes different communities or different project owners, such as bundling, POAs or very large forest projects and should be adapted to a particular objective and are project specific, considering the following guidelines:

- Project developers may choose to define different clusters (a group of projects) and include them in the assessment progressively, considering that by the ending of the credit period all clusters must have been assessed.

- For each cluster a **pre-defined number samples** should be selected for collecting information and evidence. Number of samples should be defined according to the project, by selecting 'typical' villages/communities or project owners/power plants in each cluster and interviewing a number of people in each.
- At least **one site visit per cluster** must be done for the SOCIALCARBON assessment. Additional site visits during validation/verification might be required by the responsible auditor.

Collecting information

The collection of information and evidence to score indicators should be done preferable through:

- Group Work: Participatory meetings with representatives from the stakeholders involved in the project. The meeting is coordinated by a responsible professional whose function is orientating the participants to discuss the aspects included in the indicators. The results of the meeting ought to be compiled, and valued according to the indicators.
- Interviews: Key informers may be interviewed in a semi-structured way, aiming to indirectly obtain information concerning the six resources of SOCIALCARBON. The results of the interviews ought to be registered, compiled and valued according to the indicators.
- Questionnaires: Responsible professionals may apply questionnaires to key informers of the project in order to gather information. The results of the survey ought be registered, compiled and valued according to the indicators.

The person responsible for collecting information or auditing the indicators may select one method or combine several to obtain the best results.

Other physical and documented evidence might be required to evidence information provided in the SOCIALCARBON Report. Each indicator provides a list of examples of evidences that could be collected. Not all of the many documents and physical evidences described in the indicators need to be checked or available for the auditing process, only those documents necessary to support or verify the audit evidence for the information that is disclosed in the indicator.

In developing countries, it is sometimes difficult to apply the traditional research methods, because documents, researches, studies, satellite images and monitoring parameters such water and air quality are not always available. For this reason, some indicators clearly states that physical and documented evidence is not required and testimonies from local stakeholders are enough to verify the audit evidence for the information that is disclosed in the indicator, especially indicators that assess the impact of the project in the communities.

Scoring indicators

Scoring of the indicators should adhere to the following guidelines:

- The person responsible for applying the indicators should obtain the information necessary to characterize the project's situation in relation to the particular indicator.
- Next, the researcher should compare the characteristics of the project with the six scenarios available for the indicator.
- The scenario that best represents the presented characteristics should be selected and the respective index should be attributed to the indicator.

Special cases:

- **The characteristics can't fit any possible scenario**: The person responsible should contact the SOCIALCARBON team to verify the need to reformulate the indicator or to create a new indicator.
- **The indicator does not apply**: The person responsible must justify why the indicator doesn't apply in the SOCIALCARBON Report and identify it as "Not Applicable." No value should be agreed upon in this case.
- **The information necessary to evaluate the indicator does not exist or is not available**: In the case when the absence of information is due to lack of evidence, Index 1 should be applied. If the absence of information is justified by confidentiality reasons, the indicator should be considered "Not Applicable" in the SOCIALCARBON Report and no value should be agreed upon.
- **The characteristics presented match with more than one possible scenario**: The person responsible should always select the scenario with the smaller index.

Weight of the indicators

Indicators for assessing the Project performance*: Evaluate relevant sustainability issues, impacts and risks of the project (i.e. environmental impacts, population displacement, other social impacts, communication with stakeholders, etc.) and are identified in the following tables with the letter "P"* **(P – indicator name)**

Indicators for monitoring the changes occurring local communities: focused on monitoring the changes and impacts occurring in the surroundings community or specific group of stakeholders that: a) are located within the project area or the direct impact project area. b) Are involved or benefited by the project activities, including mitigation measures, additional social and environmental programs, etc. These indicators are identified in *the following tables with the letter "C"* **(C – indicator name). D**ocumented evidence is not required and testimonies from local stakeholders are enough to verify the audit evidence for the information that is disclosed in these indicators.

The final score for "P&C-indicators" should be an average between the score of the indicator and the number of clusters included in the assessment.

Indicator	1	2	3	4	5	6
Weight for project indicators	No project was assessed	< 20% of the clusters were included in the assessment	20-40% of the clusters were included in the assessment	40 – 60% of the clusters were included in the assessment	60-80 % of the clusters were included in the assessment	All projects were clusters in the assessment

Indicators for assessing additional voluntary social and environmental programs*: Evaluate actions taken to achieve continual improvement. These indicators are identified in the following tables with the letter "A"* **(A – indicator name)**

*The final score for "A-indicators" should be an average between the score of the indicator, the scope (*how many areas the project delivers benefits), and beneficiaries of the project:

Indicator	1	2	3	4	5	6
Scope and relevance of the benefits (assess this indicator only if you scored 04 or more in the	**-**	-	-	Actions deliver benefits in to only one of the major areas.	Actions deliver benefits in to two of the major areas.	Actions deliver benefits in to three or more of the major areas.

previous)						
Beneficiaries of the programs (assess this indicator only if you scored 04 or more in the previous)	-	-	-	Project owners and employees.	Local communities or other external stakeholders.	Multiple beneficiaries.

3. Indicators

Social Resource: The working networks, the social duties, social relations, relationships of trust, affiliations, and associations.

Indicator	Description	Evaluation Methods
P - Population Displacement	Evaluates if the project requires people, activities or services to be displaced due to the implementation of the project, as well as the measures adopted during the planning and implementation stages, in order to minimize negative impacts or maximize positive impacts.	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: i.e. site visit or pictures. - Documentation: EIA; Resettlement plans and compensation program; Mitigation / compensation / enhancement plans or programs; etc.
C – Social impact of the project	Evaluates the relevant socio-economic **impacts[1] occurred due to the provision of electricity to**: - Use of electricity in households (i.e for lighting, cooking, electronic equipments) - Public services (i.e. schools, offices, health centers, etc.) - Systems for water pumping (i.e. human consumption and productive activities such as irrigation and mills) - Impacts on the development of industries. Also evaluates if **there is a framework or plan for the assessment of social effects of the project**, including: - Characterization of the beneficiaries - Characterization of intervention and projected effects - Severity of the effects	- Interviews, questionnaires or meetings: testimony from local stakeholders; authoritative opinion on the level of social impact. - Physical evidence: i.e. site visit or pictures. - Documentation: EIA; researches and studies on social impacts of the project; social impact assessment and social management plans; Mitigation / compensation / enhancement plans or programs. Note: testimonies from stakeholders are enough to verify the audit evidence for this indicator.
P- Communication	Evaluates the process for contacting stakeholders in the planning, implementation and operation stages.[2]	- Interviews, questionnaires or meetings: testimony from local stakeholders.

[1] Note: Micro-hydropower plants, due to the absence of large reservoirs are not expected to generate other social impacts, such as flood control, industrial and domestic water supply, navigation and recreation.

[2] List f potential stakeholders:

with stakeholders		- Physical evidence: i.e. pictures or records of consultation process. - Documentation: i.e. agreements with stakeholders; summary of interviews or meetings with local stakeholders; Plans for involvement and/or consultation with directly affected stakeholders.
C - Acceptance	Evaluates the level of support or acceptance from the neighboring population in regard to the project.	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: i.e. pictures or records of consultation process. - Documentation: i.e. summary of interviews or meetings with local stakeholders. Note: testimonies from stakeholders are enough to verify the audit evidence for this indicator.
C – local socio-economic conditions	Assesses the comprehensiveness of local socio-economic conditions and the compatibility of the activities proposed for planning and implementing the additional programs with these conditions. **Knowledge about the socio-economic conditions of the project should contain a brief description of**: relevant aspects of the social environment (i.e. political context, institutional structure, demographics, land uses, current conditions and social trends); - local and regional economics; existing social and cultural values.	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: pictures or records of additional meetings with the community members - Documentation: secondary researches and studies on socioeconomic conditions; agreements with governments, local entities or project owners; others (government or project owners' polices, plan of activities, etc.) Note: testimonies from stakeholders are enough to verify the audit evidence for this indicator.
P – Benefits sharing	Evaluates how many clusters are benefiting from the additional programs.	- Interviews, questionnaires or meetings: testimony from local stakeholders.

- Local leaders of the villages/communities (village elders, heads, large farmers).
- Leaders of local NGOs, associations, village committees or other organized groups
- Representatives of local environmental agencies or municipalities
- Partners, suppliers or services providers
- Local team responsible for coordinating the implementation activities
- Households

		- Physical evidence: site visit, pictures or other records of results of the project. - Documentation: plan of activities for implementing additional programs; Agreements with partners and other organizations; periodic reports on status of implementation of additional programs.
A – Additional social programs	Evaluates the quality and results of additional social programs. Quality: evaluation of the effectiveness of projects/programs. Results: evaluate the relevance of the benefits/effects generated by the projects/programs, considering: a) In how many areas the project delivers benefits (scope): • Social and Environmental Communications Program • Community development / income generation • Ethnic integration • Other social areas (please specify). b) Who are the beneficiaries?	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: site visit, pictures or other records of results of the project. - Documentation: plan of activities for implementing additional programs; Agreements with partners and other organizations; periodic reports on status of implementation of additional programs.

Indicator	1	2	3	4	5	6
P - Population Displacement	Families and activities located in the project area have no compensation due to their displacement.	Relocation, displacement and mitigation programs exist for such families and activities. However, the program does not ensure reestablishment of quality of life enjoyed prior to displacement.	Only legal owners of properties are compensated.	All families and property owners are correctly relocated, including those who do not posses formal title the land.	Participatory Relocation Program, including negotiations with different actors (owners, public agencies, and civil society organizations).	There is no need to displace families or other activities.
C – Social impact of the project	Not known.	Project is expected to deliver some benefits, but there is no evidence that benefits are actually happening.	Project delivers benefits in to only one of the major areas: - Use of electricity in households. - Public services - Systems for water pumping	Project delivers benefits in to two of the major areas.	Project delivers benefits in to three or more of the major areas.	Framework and plan for the assessment of social effects of the project.

			- Development of industries			
P- Communication with stakeholders	There is no communication with local stakeholders	Fulfillment of legal obligations only	Fulfillment of all legal obligations and obligations by the applied Carbon Standard (VCS or CDM)	Additional community meetings were held to assess the local needs and/or to present the carbon project to the local stakeholders.	Permanent feedback opportunity to project owners and/or other stakeholders involved.	Clear mapping and existence of a systematic approach for communicating with stakeholders. Or Creation of specific forums, groups, committees.
C - Acceptance	High level of opposition.	Low support from local stakeholders.	Limited support from local stakeholders.	Support from local stakeholders, but some opposition still exists.	Support from local stakeholders and little opposition.	Strong support from local stakeholders and insignificant opposition.
C - socio-economic issues	No knowledge about the socioeconomic conditions of the project location.	Knowledge about the socioeconomic conditions of the project location based on secondary research.	Knowledge about the socioeconomic conditions of the project location based on local consultation with the project owners only.	Additional community meetings or consultation with external stakeholders were held to assess the local needs and potentials.	The implementation of activities is carried on by or in partnership with a local entity.	Additional programs are integrated with: - existing activities developed by the project owners or; - existing activities developed by other local organizations; - existing laws, polices or governmental programs.
P – Benefits sharing	Action was not implemented	Action was implemented benefiting < 20% of the clusters	Action was implemented benefiting 20 -40 % of the clusters	Action was implemented benefiting 40 -60 % of the clusters	Action was implemented benefiting 60 -80 % of the clusters	Action was implemented benefiting all of the clusters
A – Additional social programs Effectiveness of the programs	No actions were taken.	Actions are in planning stage with high uncertainty that benefits can be delivered.	Actions are in place, but there is high need of corrective actions or deviations in <u>all</u> proposed activities so benefits can be delivered.	Some programs were held successfully[3], but with limited impacts on the beneficiaries were observed.	Some programs were held successfully that had positive influence on everyday behavior.	Some programs were held which show positive results and improve the quality of life of beneficiaries.

[3] At least one project/action in at least one cluster

Human Resource: The skills, knowledge, capacities for work and good health that people have. Taken together, these become fundamental for the successful pursuit of different strategies.

Indicator	Description	Evaluation Methods
P – Capacity of local project owners	Evaluates if the carbon project is subject to risks or bad performance due to project owners' lack of capacity or availability of human resources for managing the operational activities or participating in the carbon project design activities.	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: none. - Documentation: Management systems audits and certifications; performance reporting (internal and external); Project owners' asset management strategies and programs. Note: testimonies from stakeholders are enough to verify the audit evidence for this indicator.
C – Capacity of local community members	Evaluates if the members of the community are grouped or organized facilitating the implementation of programs and their ability to solve their problems by themselves.	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: none. - Documentation: none. Note: testimonies from stakeholders are enough to verify the audit evidence for this indicator.
C - Capacity of local organization(s)	Evaluates the institutional capacity of local organizations responsible for developing and implementing the plan for additional actions to benefit local stakeholders.	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: none. - Documentation: none. Note: testimonies from stakeholders are enough to verify the audit evidence for this indicator.
A – Additional human programs	Evaluates the quality and results of additional human programs. Quality: evaluation of the effectiveness of projects/programs. Results: evaluate the relevance of the benefits/effects generated by the projects/programs, considering: a) In how many areas the project delivers benefits (scope): • Education • Health • Quality of Life / Leisure • Others	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: site visit, pictures or other records of results of the project. - Documentation: plan of activities for implementing additional programs; Agreements with partners and other organizations; periodic reports on status of implementation of additional programs.

	b) Who are the beneficiaries?	

Indicator	1	2	3	4	5	6
P – Capacity of local project owners	The carbon project has been impacted due to the difficult of some project owners in meeting regulatory requirements.	The carbon project has been impacted due to continuously fails of some project owners in management of operational activities.	Minor impacts on the carbon project due to lack of management systems or low capacity of human resources of some project owners.	The carbon project has not been impacted, but some gaps or weaknesses were identified regarding lack of management systems or low capacity of human resources of some project owners.	Competent human resources facilitating the design and certification process of the carbon project, but lack of comprehension about the carbon project.	Competent human resources and good comprehension about the carbon project.
C – Capacity of local community members	No members of the community have the ability to tackle their problems. Simple issues remain unresolved for a long time.	Some community members engage in problem solving in an unstructured and rather random way.	The official bodies of the community take care of all issues. There is very little or no additional engagement of the communities.	Community organizations exist besides official bodies and take first steps towards improvement of the local situation.	Community organizations have achieved benefits for society and are actively engaged in further programs.	Community organizations have achieved significant benefits for society. They are in dialogue and cooperate with local official bodies
C – Capacity of local organization(s)	Absence of a local organization to coordinate activities with local stakeholders.	Focal point responsible (local expert) to coordinate activities with local stakeholders.	Local organizations exist but they lack structure to coordinate activities with local stakeholders.	Local organizations exist and are headed by capable and experienced people, but are not active in the project area or recognized by the local stakeholders.	Local organizations exist and are headed by capable and experienced people.	Organizations exist and are headed by capable and experienced people with a.
A – Additional human programs	No actions were taken.	Actions are in planning stage with high uncertainty that benefits can be delivered.	Actions are in place, but there is high need of corrective actions or deviations in the plan of activities so benefits can be	Some programs were held successfully[4], but with limited impacts on the beneficiaries were observed.	Some programs were held successfully that had positive influence on everyday behavior.	Some programs were held which show positive results and improve the quality of life of beneficiaries.

[4] At least one project/action in at least one cluster

			delivered.			

Financial Resource: The basic capital in the form of cash, credit/debt and other economic goods which are available or potential.

Indicator	Description	Evaluation Methods
P - Market	Evaluates eligibility of credits to compliance or to voluntary markets.	- Interviews, questionnaires or meetings: testimony from proponent. - Physical evidence: none. - Documentation: Information on market conditions for similar projects. Note: testimonies from project proponent are enough to verify the audit evidence for this indicator.
P - Sale of Credits	Evaluates uncertainties regarding the value of commercialized credits generated by the project and their attractiveness to potential buyers.	- Interviews, questionnaires or meetings: testimony from proponent. - Physical evidence: none. - Documentation: Information on market conditions for similar projects. Note: testimonies from project proponent are enough to verify the audit evidence for this indicator.
P – Funds for additional programs	Evaluates if source of funds are clearly defined and if available for implement programs to achieve continual improvement goals.	- Interviews, questionnaires or meetings: testimony from proponent. - Physical evidence: none. - Documentation: none. Note: testimonies from project proponent are enough to verify the audit evidence for this indicator.
P – Costs for additional	Assess if programs to achieve continual improvement goals have financial planning, such as financial analyses and budgets.	- Interviews, questionnaires or meetings: testimony from stakeholders and proponent.

programs		- Physical evidence: none. - Documentation: plan of activities for implementing additional programs; Agreements with partners and other organizations; periodic reports on status of implementation of additional programs.

Indicator	1	2	3	4	5	6
P - Market	Project activities are not eligible for the carbon market.	-	Project activities are eligible for the voluntary market.	-	-	Project activities are eligible for compliance markets.
P - Sale of Credits	Uncertainties about the commercialization of the carbon credits for the period.	Carbon credits are being negotiated, with little uncertainty regarding its commercialization.	Price of the credits is below the current market value.	Price of the credits is in accordance with the average market value.	-	Credits with high aggregated value, above the market average.
P – Funds for additional programs	No funds available and high uncertainty that they will be available in the future.	No funds available at the moment but moderate level of certainty that they will be available in the near future.	Limited funds available, insufficient to implement additional programs.	Funds available to implement the additional programs, but below the expectations/needs.	Funds available to implement the additional programs generally meet the expectations/needs.	Funds available to implement the additional programs exceeding the expectations/needs.
P – Costs for additional programs	No planning or estimated budgets defined.	Planning or budgets with some significant elements missing.	Planning or budgets with some gaps, but costs of additional programs meets the expected targets.	Comprehensive planning and estimated budgets, but costs of additional programs are higher than expected due to problems during implementation.	-	Comprehensive planning and estimated budgets, costs of additional programs meets the expected targets.

Natural Resource: The stock of natural resources (soil, water, air, etc.) and environmental services (soil protection, maintenance of hydrological cycles, pollution sinks, pest control, pollination, among others), from which resources for livelihoods are derived.

Indicator	Description	Evaluation Methods
P - Environmental Impacts	Evaluates magnitude of environmental impacts of the project, existence of environmental impact statements/studies, and maintenance of environmental evaluation procedures.	- Interviews, questionnaires or meetings: testimony from local stakeholders and/or regulators. - Physical evidence: i.e. site visit or pictures; Records of stakeholder involvement. - Documentation: Identification of directly affected stakeholders; Agreements with stakeholders and/or regulators; Environmental Impact Study (EIS/ EIR or equivalents) and Mitigation / compensation / enhancement plans or programs if required by local government.
P - 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, etc.	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: none. - Documentation: Environmental licenses and certifications related to the fulfillment of obligations stated by environmental organizations.
A – Additional environmental programs	Evaluates the quality and results of additional environmental programs. Quality: evaluation of the effectiveness of projects/programs. Results: evaluate the relevance of the benefits/effects generated by the projects/programs, considering: a) In how many areas the project delivers benefits (scope): • Erosion, landslides, silting. • Water Quality • Floods	- Interviews, questionnaires or meetings: testimony from stakeholders. - Physical evidence: none. - Documentation: plan of activities for implementing additional programs; Agreements with partners and other organizations; periodic reports on status of implementation of additional programs.

	• Others (please specify) b) Who are the beneficiaries.	

Indicator	1	2	3	4	5	6
P - Environmental Impacts	There are no environmental impact studies.	Environmental impact studies are incomplete.	Studies show high environmental impact. Remunerative and mitigation measures for such impacts are not yet in place.	Studies show high environmental impact, yet remunerative and mitigation measures for such impacts are unsatisfactory.	Studies show insignificant environmental impact.	Studies show minimal environmental impact. The project implements new technologies or innovative processes to control environmental impacts.
P - Environmental Legislation	Violation or inadequate fulfillment of environmental legal obligations. Environmental license suspended for indeterminate period or not renewed.	Licensing process has commenced but with some difficulties such as public lawsuits, inadequacy of environmental impact statements, and judicial procedures, among others.	Environmental license has been issued but uncertainties exist regarding the fulfillment of determined obligations.	Environmental license has been issued, but minor uncertainties exist regarding fulfillment of determined obligations.	Environmental licenses routinely issued; determined obligations are fulfilled.	In addition to the items in Index 5, the entrepreneur has systematic control of the licensing process.
A – Additional environmental programs	No actions were taken.	Actions are in planning stage with high uncertainty that benefits can be delivered.	Actions are in place, but there is high need of corrective actions or deviations in the plan of activities so benefits can be delivered.	Some programs were held successfully[5], but with limited impacts on the environment were observed.	Some programs were held successfully that had positive influence on the environment.	Some programs were held which show positive results and improve the quality of the environment.

[5] At least one project/action in at least one cluster

Technology Resource: evaluates the conditions of access to new technologies, as well as its contribution to the economic development and diminished impacts to the environment.

Indicator	Description	Evaluation Methods
P - Transfer of New Technology	Evaluates the level of technological innovation and the technologies employed in the project or 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.	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: none. - Documentation: registers of the capacity building programs due the implementation of a new technology; agreements for acquisition of the new technology; reports on results in considerable efficiency gains of the new technology; Researches on new technologies. Note: testimonies from stakeholders are enough to verify the audit evidence for this indicator.
C - Access to electricity	Evaluate the level of access that local people and organizations have to the electricity provided by the project and, considering: a) If the cost of electricity is affordable for local population b) if grid connection are available c) the quality and continuity of the energy provided	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: none. - Documentation: plans, agreements or contracts outlining the expansion of grid connection; Monitoring reports on the quality and continuity of the energy provided; Project owners' asset strategies and plans for improving grid confection; Other documents containing information on the operational efficiency of individual power station, or groups of power stations. Note: testimonies from stakeholders are enough to verify the audit evidence for this indicator.
C - Irrigation benefits	Evaluates the impact of the project on local irrigation systems. This includes prioritization of water supply during times of water shortages.	- Interviews, questionnaires or meetings: testimony from local stakeholders.

		- Physical evidence: i.e. site visit or pictures. - Documentation: EIA; researches and studies on social impacts of the project; social impact assessment and social management plans; Mitigation / compensation / enhancement plans or programs. Note: testimonies from stakeholders are enough to verify the audit evidence for this indicator.
C - Spread of electrical appliances	Evaluates the spread of electrical appliances among the local population. This is a measure for the benefits from electrification on the household level.	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: i.e. site visit or pictures. - Documentation: EIA; researches and studies on social impacts of the project; social impact assessment and social management plans; Mitigation / compensation / enhancement plans or programs. Note: testimonies from stakeholders are enough to verify the audit evidence for this indicator.
C - Spread of IT and communication technology	Evaluates the spread of IT and communication technology among the local population. This is a measure for the benefits from electrification. IT and communications are especially important for the development of new businesses.	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: i.e. site visit or pictures. - Documentation: EIA; researches and studies on social impacts of the project; social impact assessment and social management plans; Mitigation / compensation / enhancement plans or programs. Note: testimonies from stakeholders are enough to verify the audit evidence for this indicator.
A – Additional technology	Evaluates the quality and results of additional technology programs.	- Interviews, questionnaires or meetings: testimony from local stakeholders.

programs	Quality: evaluation of the effectiveness of projects/programs. Results: evaluate the relevance of the benefits/effects generated by the projects/programs, considering: a) In how many areas the project delivers benefits (scope): • Transference of new technologies • Promoting more efficient technology • Spread of electrical appliances, IT and communication technology b) Who are the beneficiaries.	- Physical evidence: site visit, pictures or other records of results of the project. - Documentation: plan of activities for implementing additional programs; Agreements with partners and other organizations; periodic reports on status of implementation of additional programs.

Indicator	1	2	3	4	5	6
P - Transfer of New Technology	The project does not promote transfer of new technology.	Technology transfer is restricted to building capacity of employees involved in project activities.	The project has some technological or process innovation.	Technological innovation results in considerable efficiency gains and reduced environmental impacts.	R&D projects are conducted.	Results of the R&D projects are incorporated in operational activities and/or the project has royalties and/or technological licenses.
C - Access to electricity	Not know or no assessment of range of access to electricity.	Very limited access to the electricity provided, due to absence of grid connection.	Access to the electricity provided, benefiting mostly companies or public services, but with some gaps to connect households.	Good range of grid connection, but people have difficulties in having access to electricity due to the high cost.	Good range of grid connection and accessible costs, but facing some gaps due to the low quality or effectiveness of delivery of electricity.	Good access to electricity services, with minor or no gaps in grid connection, costs and quality of the electricity provided.
C - Irrigation benefits	The project harmed the irrigation needs of the local population	The project did not influence irrigation availability	Irrigation increased in reliability.	Irrigation increased in reliability and area.	Irrigation needs have priority over power generation. Irrigation increased in reliability and area.	Irrigation needs have priority over power generation. Irrigation improved in reliability and local stakeholders could increase the irrigated areas

						according to their needs.
C - Spread of electrical appliances	No electricity	- some electric lighting is present	- electric lighting is wide spread, some entertainment (radios)	- Electric lighting & radio is wide spread, some high energy electric appliances are in use (for rice cookers, electric cooking plates, washing machines, etc.)	- Electric lighting & radio & high energy electric appliances are widely spread (for rice cookers, electric cooking plates, washing machines, etc.)	- Electric lighting & radio & high energy electric appliances are widely spread (for rice cookers, electric cooking plates, washing machines, etc.). Additionally, power tools are used regularly in construction activity.
C- Spread of IT and communication technology	No telephones are in use in the village, no internet.	There is at least one public telephone available, OR some villagers have private phones. No internet.	Most villagers have private phones. A few villagers can go on the internet.	Most villagers have their own phones. Some villagers can access the internet.	Almost all villagers have their own phones. Most villagers have the chance to get on the internet somehow.	Almost all villagers have their own phones and internet is widespread among the households.
A – Additional technology programs	No actions were taken.	Actions are in planning stage with high uncertainty that benefits can be delivered.	Actions are in place, but there is high need of corrective actions or deviations in the plan of activities so benefits can be delivered.	Some programs were held successfully[6], but with limited impacts on technology improvement were observed.	Some programs were held successfully that had positive influence on technology improvement.	Some programs were held which show positive results and improve technology.

Carbon Resource: The type of carbon project developed, encompassing the methodologies utilized and project performance.

Indicator	Description	Evaluation Methods
P - 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.	- Interviews, questionnaires or meetings: testimony from proponent.

[6] At least one project/action in at least one cluster

		- Physical evidence: none. - Documentation: PDD & Verification Report
P - Emission Reductions Calculations & Monitoring	Evaluates methodologies used to calculate emissions and monitor compliance with national and international standards.	- Interviews, questionnaires or meetings: testimony from proponent. - Physical evidence: none. - Documentation: PDD & Verification Report
P - 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.	- Interviews, questionnaires or meetings: testimony from proponent. - Physical evidence: none. - Documentation: PDD & Verification Report
P - Project Performance	Evaluates performance of project, verified by comparison with estimates of emissions reductions under the PDD.	- Interviews, questionnaires or meetings: testimony from proponent. - Physical evidence: none. - Documentation: PDD & Verification Report
A- Additional Climate Change programs	Evaluates the quality and results of additional climate programs. Quality: evaluation of the effectiveness of projects/programs. Results: evaluate the relevance of the benefits/effects generated by the projects/programs, considering: a) In how many areas the project delivers benefits (scope): • mitigation • adaptation • climate change awareness b) Who are the beneficiaries.	- Interviews, questionnaires or meetings: testimony from local stakeholders. - Physical evidence: site visit, pictures or other records of results of the project. - Documentation: plan of activities for implementing additional programs; Agreements with partners and other organizations; periodic reports on status of implementation of additional programs.

Indicator	1	2	3	4	5	6
P - Additionality	It is not considered additional.	It has additionally limited to part of the	There are uncertainties about additionally, partial or	It is considered additional, but it doesn't use	It is considered additional, and it uses internationally and	It is considered additional according to criteria stated in a

		project's activities.	total.	internationally or nationally recognized standards.	nationally recognized standards.	monitoring methodology approved by the CDM Executive Board.
P - Emission Reductions Calculations & Monitoring	Absence of a specific methodology to calculate emission reductions AND/OR It does not have a monitoring plan, or it has only partial or insufficient monitoring.	It has an emissions reductions calculation methodology to part of the project's activities.	It possesses a consistent methodology to calculate emissions reductions AND It possesses a consistent monitoring plan that approaches all dimensions of the project.	-	In addition to the items in Index 3, methodology of baseline and monitoring plans are based in internationally recognized standards.	It possesses a methodology to calculate emissions reductions and a monitoring plan based on a methodology approved by the CDM Executive Board.
P - Validation & Verification	There is no validation or verification conducted by a third part.	Validation/verification of the project is conducted by an independent third party that is not registered by the UNFCCC (DOE[1]).	Validation and verification by a DOE is limited to parts of the project.	Validation/ verification are conducted by a Designated Operational Entity but don't follow any internationally recognized procedures.	Validation/ verification are conducted by a Designated Operational Entity following nationally/internationally recognized procedures.	Validation/ Verification are conducted by a Designated Operational Entity according to UNFCCC specifications.
P - Project Performance	Not successful: 0% of carbon credits predicted for the period were effectively generated.	Very Low: 1% to 25% of carbon credits predicted for the period were effectively generated.	Low: 26% to 50% of carbon credits predicted for the period were effectively generated.	Reasonable: 51% to 75% of carbon credits predicted for the period were effectively generated.	Good: 76% to 95% of carbon credits predicted for the period were effectively generated.	Excellent: More than 95% of carbon credits predicted for the period were effectively generated.
A- Additional Climate Change programs	No actions were taken.	Actions are in planning stage with high uncertainty that	Actions are in place, but there is high need of corrective actions	Some programs were held successfully[7], but with limited impacts	Some programs were held successfully that had positive influence	Some programs were held which show positive results on

[7] At least one project/action in at least one cluster

		benefits can be delivered.	or deviations in the plan of activities so benefits can be delivered.	on climate change mitigation/adaptation were observed.	on climate change mitigation/adaptation.	climate change mitigation/adaptation.