

SOCIAL CARBON VERIFICATION AND CERTIFICATION REPORT

- SOCIAL CARBON POINT TWO-

SOUTH POLE CARBON ASSET
MANAGEMENT LTD.

GROUPED HYDROPOWER PLANTS IN
CHONGQING, YUNNAN, SICHUAN AND
GUIZHOU PROVINCES, P.R.CHINA

SC Monitoring Period: 2012-07-01 to 2015-05-31

Report No: 15/097

Date: 2015-07-29

Social Carbon Point Two Periodic Verification and Certification Report:

Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou

Provinces, P.R.China

TÜV NORD JI/CDM Certification Program



R-No: 15/097

Verification Report:	Report No.		Rev. No.	Date of Point Two issue:	Date of this rev.
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Project:	Title:			VCS Registration date:	VCS-No.:
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			Point Two	SC periodic verification	
Project Participant(s):	Client:				
	South Pole Carbon Asset Management Ltd.				
VCS Applied methodology/ies:	Title:			No.:	Scope(s) / TA(s)
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Verification team / Technical Review and Final Approval:	Verification Team:			Technical review:	Final approval:
	TL: Zhao Xuejiao			LI Yongjun	Rainer Winter
Summary of Verification opinion	South Pole Carbon Asset Management Ltd. has commissioned the TÜV NORD JI/CDM Certification Program to carry out the Social Carbon Point Two periodic verification of the project: "Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R.China", with regard to the relevant requirements for VCS and Social Carbon project activities. As a result of this verification, the verifier confirms that the project is carried out based on VCS and Social Carbon Standard. The review of the Social Carbon Report Point Two, the subsequent interviews, and the further cross-check of references have provided TÜV NORD JI/CDM CP with sufficient evidences to determine the fulfilment of stated criteria in the guideline. ☒ TÜV NORD JI/CDM CP herewith confirms that the project has meets all relevant Social Carbon Standard requirements and recommend the project for issuance by Social Carbon Standard.				
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¹The monitoring period of Social Carbon is covering the period of corresponding monitoring report (Carbon Accounting Standard).

Abbreviations:

CAR	Corrective Action Request
CL	Clarification Request
CO₂	Carbon Dioxide
CO₂ eq	Carbon Dioxide Equivalent
CCPG	Central China Power Grid
CSPG	China Southern Power Grid
CEC	China Environmental United Certification Centre Co., Ltd.
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EIA	Environmental Impact Assessment
EF	Emission Factor
ER	Emission Reduction
FSR	Feasibility Study Report
GHG	Green House Gas(es)
GWh	Giga Watt Hours
GWP	Global Warming Potential
kW	Kilo Watt
kWh	Kilo Watt Hours
MWh	Mega Watt Hours
NDRC	China National Development Reform Commission(DNA)
NGO	Non Government Organization
PDD	Project Design Document
PP	Project Participant
SC	Social Carbon

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SCR	Social Carbon Report
SHP	Small Hydropower Project
VCS	Voluntary Carbon Standard
VCU	Voluntary Carbon Unit
YINGOS	Yunnan International Non-government Organization Society
JGI	The Jane Goodall Institute

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1. INTRODUCTION

South Pole Carbon Asset Management Ltd. has commissioned the TÜV NORD JI/CDM Certification Program (CP) to carry out the Social Carbon Point Two periodic verification of the project

“Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R.China”

with regard to the relevant requirements for Social Carbon project activities. The verifiers have reviewed the implementation plan in the Social Carbon Point Zero report^{/SCR0/}.

This report summarizes the findings and conclusions of this Social Carbon Point Two periodic verification of the above mentioned Social Carbon Point Zero project^{/SCR0/}.

1.1. Objective

The objective of the verification includes the verification of the:

- I. to have an independent third party assessment in order to evaluate the accuracy and consistency of the Indicators of the Social Carbon Methodology for this specific point in time and
- II. to verify the consistency of these Indicators with the criteria established and their evolution since last evaluation in order to assure that they can maintain the designation as Social Carbon, following the Social Carbon Methodology.

In particular, the verification evaluates the site data related to the scope of the project and the report prepared to address the project in the specific point in time in order to document the Indicators and their evolution, in compliance with the requirements of the Social Carbon Methodology.

Verification is seen as necessary to provide assurance to stakeholders on the quality and veracity of the project, the Indicators and their evolution on time.

1.2. Scope

The verification of this project is based on the VCS PD^{/PD/}, the Social Carbon Report^{/SCR/}, supporting documents made available to the verifier and information collected through performing interviews and assessment. Furthermore publicly available information was considered as far as available and required.

The verification is carried out on the basis of the following requirements, applicable for this project activity:

- VCS Project Description of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, 13th October 2009^{/PD/};

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- Final VCS Validation Report by TÜV Rheinland Japan Ltd. Version 03, 25th November 2009^{/VAL/}
- 3rd VCS Monitoring Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, Version 2.0, 17th Jan 2014
- 3rd VCS Final Verification Report by TÜV Rheinland Japan Ltd. Version 02, 28th Feb. 2014^{/VER/}.
- Guide for Completing Social Carbon Reports, Version 03.1, September 2010^{/GSCR/};
- Indicators for Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P. R. China Version 1.1, July, 2015^{/SCI/};
- Point Zero Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, 15th October 2010^{/SCR0/}.
- Point One Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, 25th July 2012^{/SCR1/}.

2. SOCIAL CARBON PROJECT DESCRIPTION

2.1. Technical Project Description

The Grouped Project is a project under VCS 2007.1, which consists of 95 run-of-river hydropower stations in less-developed rural areas of south-western China. There are four sub-groups (i.e. 9 projects are located in Yunnan Province, 67 in Chongqing City, 13 in Sichuan Province and 6 in Guizhou Province), which are determined by the geographical boundary. The entire Grouped Project complies with the requirements of VCS.

Most of the grouped projects are developed as run-of-river hydropower projects, consisting of intake structure, the water conveyance system and the power house. Only two projects (i.e. Project No. 74 and 75) involve construction of new reservoirs while the power densities of both projects² are greater than 10W/m². The installed capacity of each grouped project is below 15MW. The electricity generated from the Grouped Project will be supplied to Central China Power Grid (CCPG) and China Southern Power Grid (CSPG), where geographic and system boundaries can be clearly identified. The CCPG and CSPG are both dominated by fossil fuel based power plants as per the China Electrical Power Yearbook 2003~2007^{/CEPY/}. By exporting renewable electricity to the CCPG and CSPG respectively, the project activity achieves greenhouse gas (GHG) emissions reductions by displacing electricity from fossil fuel based power plants connected to the grids.

The Grouped Project is considered to be contributed to sustainable development, by utilization of renewable hydro resources in local area for the generation of electricity that would be have been provided by business-as-usual fossil-fired power to meet the growing power demand within CCPG and CSPG. The project sites were located at rural area where the infrastructure construction was very poor. The entrance road for each sampled project site was built by the project owner and has brought much convenience for local villagers. The local residents around the project site were living at very poor conditions and the local governmental financial sources were very limited. The Grouped Project has created considerable amount of permanent and temporary job opportunities for local residents. In the rural area, the electricity generated from the project activity will be supplied to local people via grid and avoid firewood combustion and thus protecting the forest in local region. In addition, local government will also benefit from the additional income tax for electricity sale of the project activity. It is thus concluded that the implementation of the project activity will help in achieving

² It has been validated that the power density of Project No.74 and No.75 was calculated as 16 W/m² and 58 W/m² with the surface area of the reservoirs were determined according to the Environmental Impact Assessment Reports.

sustainable development in social, environmental and economic aspects for local community.

Point Zero

According to the Point Zero Social Carbon Report^{/SCR0/}, the grouped project is split into 6 clusters by geography and one cluster per year will be assessed. The actions taken in one cluster will be assessed and be part of Social Carbon Report of the following year. The first cluster consists of 9 projects in Yunnan Province (i.e. Project No. 89~98). Three sampled projects (i.e. Project No. 94, 96 and 98) are included in the community assessment of the Point Zero Social Carbon Report.

During the Point Zero period, China Association for NGO Cooperation (CANGO) and Yunnan International Non-government Organization Society (YINGOS) have conducted one survey in Lishadi Village, which is the location of Lishadi HEPP, and another survey in Yingjiang County, which is the location of Husa River project. According to these surveys, the following suggestions for activities have been brought up by CANGO and YINGOS:

- Provide the education for kids, whose parents are addicted to drugs
- Construct Composting toilets for schools
- Provide books for primary schools' libraries
- Agricultural Education events for adults
- Basketball court reconstruction
- Provide equipments for computer classrooms building

Point One

During the Point One period, a series of social activities were financed by South Pole Carbon Asset Management Ltd. and organized by YINGOS in March 2011 in Lishadi Village. An agricultural training program has been hold. After the course, villagers were provided with tools, which are scissors, saws and ladders. In addition, a library with many agricultural books and DVDs has been implemented in a community building of Lishadi Village.

According to the Point One Social Carbon Report^{/SCR1/}, the above social activities have been described and evaluated. Several indicators have been improved accordingly.

Point Two

During the Point Two period, a series of social activities were financed by South Pole Carbon Asset Management Ltd.

The first activity was organized by JGI China in March 2013 in Shifen Village and Lushan Village. Two agricultural training programs and two eco education programs

have been hold. After the course, villagers received the agricultural tools, students received dictionaries, sets of pencil box and painting pencils, sets of musical instruments and books. The further interviews were organized by Ruilu Sun from Yingos on 21.10.2013 and 22.10.2013 in Shifen village and Lushan village. The site visit is a collaborative work with CEC. CEC has met Zhen Zhu from JGI in Beijing.

The second activity was organized by Wulong Water Conservancy Bureau; Wulong Small Hydropower Station Association; Wanzhou Water Conservancy Bureau; Wanzhou Shunca hydropower Development Limited in March 2015 in Wulong County and Wanzhou County. The questionnaire collection was conducted by Qun Fang and Liyong Liu during the site visit of the second Social Carbon activity.

According to the Point Two Social Carbon Report^{SCR/}, the above social activities have been described and evaluated. Several indicators have been improved accordingly.

2.2. Project Location

The details of the project location are given in below:

15 hydropower stations are located in Wanzhou County along the Northeast direction from Chongqing city, China (project numbers included: 5~16, 18, 20~21), whereas 45 hydropower stations are located in Wulong County to the Southeast of Chongqing (project numbers included: 4, 22, 24~31, 33~44, 46~69).

2 hydropower stations are located in Ebian County (project numbers included: 87, 88) and 9 in Ya'an County within Sichuan province, China, southwest of Sichuan's capital city Chengdu (project numbers included: 76~80, 83~86).

There are 4 power stations in Yunnan Province, China (project numbers included: 90~92, 98), sparsely distributed throughout the entire province with borders to Myanmar, Laos and Vietnam.

There are 4 project locations in Guizhou province, China (project numbers included: 70~73).

3. METHODOLOGY AND VERIFICATION SEQUENCE

3.1. Verification Steps

The verification consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- A desk review of the Social Carbon Report^{/SCR/} submitted by the client and additional supporting documents with the use of customised verification protocol^{/CPM/} according to the Social Carbon Standard Indicators for Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P. R. China Version 1.1, July, 2015^{/SCI/},
- Verification planning
- Background investigation
- Follow-up interviews
- Draft verification reporting
- Resolution of corrective actions (if any)
- Final verification reporting
- Technical review
- Final approval of the verification.

3.2. Contract review

To assure that

- the project falls within the scopes for which accreditation is held,
- the necessary competences to carry out the verification can be provided,
- Impartiality issues are clear and in line with the SC accreditation requirements

a contract review was carried out before the contract was signed.

3.3. Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities a verification team, consisting of one team leader and three team members, were appointed.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the Table 3-1 below.

Table 3-1: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence ³⁾	Technical competence ⁴⁾	Verification competence ⁵⁾	Host country Competence
☐ Mr. ☒ Ms.	ZHAO, Xue Jiao	TÜV NORD Cert GmbH	TL	LA	☒	1.2	☒	☒
☒ Mr. ☐ Ms.	LI Yongjun	TÜV NORD Cert GmbH	TR ^{B)}	SA	☒	1.2	☒	☒
☒ Mr. ☐ Ms.	Rainer Winter	TÜV NORD Cert GmbH	FA ^{B)}	SA	☒	1.2	☒	☐

¹⁾ TL: Team Leader; TM: Team Member, TR: Technical review; OT: Observer-Team, OR: Observer-TR; FA: Final approval

²⁾ GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert

³⁾ GHG auditor status (at least Assessor)

⁴⁾ As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, ...)

⁵⁾ In case of verification projects

A) Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE

B) No team member

Team Leader contributed to the review of documents, the assessment of the project activity and to the preparation of this report under the leadership of the team leader.

Team Leader contributed to the assessment of special aspects of the project activity, e.g. technical or host country aspects.

Statements of competence for the above mentioned involved personnel are enclosed in annex 2 of this report.

3.4. Verification Planning

In order to ensure a complete, transparent and timely execution of the verification task the team leader has planned the complete sequence of events necessary to arrive at a substantiated final verification opinion.

3.5. Desk review

During the desk review all documents initially provided by the client and publicly available documents relevant for the verification were reviewed. The main documents are listed below:

- the last revision of the SC Report (Point one) and VCS PD including the VCS monitoring report^{/SCR/&PD/&MR/},

- the last revision of the SC Verification Report (Point one)^{/SCVER/},
- the last revision of the VCS validation report^{/VAL/},
- the last revision of the VCS verification report^{/VER/},
- the last revision of the VCS monitoring report, including the claimed emission reductions for the project^{/MR/},

Other supporting documents, such as publicly available information on the VCS website, SC website and background information were also reviewed.

3.6. Follow-up Interviews

The verifier performed interviews with the project participants to confirm selected information and to resolve issues identified in the document review.

South Pole Carbon Asset Management Ltd., was interviewed. The main topics of the interviews are summarized in below table.

Table 3-2: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
1. South Pole Carbon Asset Management Ltd. ^{/IM01/}	- Desk review findings - General aspects of the project - Project design, Commissioning and implementation - Plan of the Social Activities - Implementation of the Social Activities - Participants of the Social Activities - Impacts of the Social Activities - Involved personnel and responsibilities - Implementation of the monitoring plan - Monitoring Procedure - Environmental aspects

The list of interviewees is included in chapter 7.4.

3.7. Draft verification reporting

On the basis of the desk review, the follow-up interviews and further background investigation the verification findings is completed, together with a general project and procedural description of the verification and a detailed list of the verification findings form the draft verification report is sent to the client for resolution of raised CARs, CLs and FARs.

3.8. Resolution of CARs, CLs and FARs

Nonconformities raised during the verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

Corrective Action Requests (CARs) are issued, if:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;
- Issues identified in a FAR during validation or previous verifications requiring actions by the project participants to be verified during verification have not been resolved.

The verification team uses the term Clarification Request (CL), which is issued if:

- information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

Forward Action Requests (FAR) indicate essential risks for further periodic verifications. Forward Action Requests are issued, if:

- the monitoring and reporting require attention and / or adjustment for the next verification period.

For a detailed list of all CARs, CLs and FARs raised in the course of the verification pl. refer to chapter 4.

3.9. Final reporting

Upon successful closure of all raised CARs and CLs the final verification report including a positive verification opinion can be issued. In case not all essential issues could finally be resolved, a final report including a negative verification opinion is issued.

The final report summarizes the final assessments w.r.t. all applicable criteria.

3.10. Technical review

Before submission of the final verification report a technical review of the whole verification procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the verification team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the verification opinion and the topic specific assessments as prepared by the verification team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

3.11. Final approval

After successful technical review an overall (esp. procedural) assessment of the complete verification will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

After this step the request for issuance can be started.

4. VERIFICATION FINDINGS

In the following paragraphs the findings from the desk review of the Social Carbon Report^{/SCR/}, VCS PD and MR^{/PD&MR/}, VCS Validation and Verification report^{/VAL&VER/}, the Social Carbon Validation Report^{/SCVAL/} and last Verification Report^{/SCVER/} and other supporting documents, as well as from the interviews are summarised.

The summary of CAR, CL and FAR issued are shown in Table 4-1:

Table 4-1: Summary of CAR, CL and FAR

Verification topic	No. of CAR	No. of CL	No. of FAR
a. Identifying the project	0	0	0
b. Project details	0	0	0
c. Method of applying SOCIALCARBON Methodology	0	0	0
d. Results	0	1	0
e. Prospects	0	0	0
SUM	0	1	0

The following tables include all raised CARs, CLs and FARs and the assessments of the same by the verification team.

Finding	D1		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	It is observed that the index of indicator 3 Social programs for the elderly, 4 Capacity of local association and 17 Project Performance is not assessed, and the index value is missing.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the MR is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	The index of indicators 3 Assessment of social effects, 4 Capacity of local association and 17 Project Performance is added, and the assessment has been added in observations. The index value is defined.		
	☒ Changes in SCR	Section(s): D	New version No.: 02

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Finding	D1
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The revised SCR was checked, it is confirmed that the index of indicator 3 Social programs for the elderly, 4 Capacity of local association and 17 Project Performance is assessed, and the index value is defined. Through checking the “Indicators for Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P. R. China Version 1.1– July, 2015”, it is confirmed that the index value is defined accordingly. CL D1 is closed out.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Additional action should be taken (finding remains open) ☒ The finding is closed

5. SUMMARY OF VERIFICATION ASSESSMENTS

The following paragraphs include the summary of the final verification assessments after all CARs and CLs are closed out. For details of the assessments pl. refer to the discussion of the verification findings in chapter 4.

5.1. Indicators of the Social Carbon and Project Performance

"Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R.China – Point Two Social Carbon Report" was issued in 30th June 2015 by South Pole Carbon Asset Management Ltd. with assessment of the Indicators of the Social Carbon Standard and their evolution since Point Zero and Point One.

The Indicators for Point Two of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P. R. China are as follows:

Social Resources

1. Local socioeconomic 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.

Assessment:

Through checking the project activity record of Shifen Village and Lushan Village in Mar. 2013^{/PAR/}, it is confirmed that the two education programs about environment protection and wildlife protection, were held to local students. 46 students from Shifen primary school and 84 students from Lushan primary school participated in the programs. These education programs were held by the Jane Goodall Institute China, Roots & Shoots Program (JGI) and financed by South Pole Carbon Asset Management Ltd.(South Pole) In addition, 270 dictionaries, 270 sets of pencil box and painting pencils, 2 sets of musical instruments and 1046 books were delivered to students and primary schools. They were organized by Yunnan International Non-government Organization Society (Yingos) and financed by South Pole Carbon Asset Management Ltd.

Via checking the questionnaires collected in Wanzhou County^{/QUE/}, it is confirmed that the Fengmu Hydropower Station (No.5) has donated a poor student 500 RMB in

Puzixiang village in 2013 and donated the Puzixiang beadhouse 1,500 RMB, rice and cooking oil in 2014.

Via checking the questionnaires collected in Wulong County^{/QUE/}, it is confirmed that the Lianghekou Hydroelectric Plant (No.50) has donated the poor students in the Longdong Centre Primary School in Dec 2014 and has offered jobs to the older people in Machi village.

Furthermore, through checking the project activity record of Wulong cluster in Mar. 2015^{/PAR/}, it is confirmed that an education program about air pollution to local students was organized. Via checking the attendance register list^{/PAR/}, it is concluded that 62 students from Huangdu primary school participated in the programs. Furthermore, through checking the project activity record of Wulong cluster^{/PAR/}, it is confirmed that 40 bags were delivered to students. All of the programs were held and financed by South Pole Carbon Asset Management Ltd.

Also, through checking the project activity record of Wuzhou cluster in Mar. 2015^{/PAR/}, it is confirmed that an education program to local students was organized. Via checking the attendance register list^{/PAR/}, it is concluded that 30 students from Changling primary school participated in the programs. Furthermore, through checking the project activity record of Wulong cluster^{/PAR/}, it is confirmed that 40 books, 40 vacuum cup, 40 pencil boxes, 40 pencils and 40 compasses were delivered to students. Fresh fruits were also offered to the students. All of the programs were held and financed by South Pole Carbon Asset Management Ltd.

Index Wulong cluster: 4
Index Wanzhou cluster: 4
Index Yunnan cluster: 4
Index Guizhou cluster: 2
Index Ebian cluster: 2
Index Ya'an cluster: 2
Average index: 3

Perspectives: None at the moment

2. Social Impact of the project

Evaluates the relevant socio-economic impacts 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*

Assessment:

Via checking the questionnaires collected^{/QUE/} and based on the local expertise of the the validation team, , it is confirmed that the project has social impact especially in household appliances, irrigation, sugar-refinery and mining industry.

Index Wulong cluster: 4
Index Wanzhou cluster: 4
Index Yunnan cluster: 4
Index Guizhou cluster: 4
Index Ebian cluster: 4
Index Ya'an cluster: 4
Average index: 4

Perspectives: None at the moment.

3. Social programs for the elderly

Evaluates programs to address elderly needs.

Assessment:

No social programs were observed during the monitoring period.

Index Wulong cluster: 2
Index Wanzhou cluster: 2
Index Yunnan cluster: 2
Index Guizhou cluster: 2
Index Ebian cluster: 2
Index Ya'an cluster: 2
Average index: 2

Perspectives: Implement social program for the elderly, such as storytelling in connection with local schools, in at least two clusters.

It is confirmed that the Prospect is reasonable and will be fulfilled in the future. The relevant social programs for the elderly will be checked during next monitoring period.

Human Resource

4. Capacity of local association

Evaluates the creation local association to addresses project owners collective issues.

Assessment:

Via cheking the project activity record^{/PAR/}, questionnaires^{/QUE/} and interviews with South Pole Carbon Asset Management Ltd.^{/IM01/}, it is confirmed that Wulong, Wanzhou and Yunnan clusters have local associations which address the project issues,

respectively: Wulong Small Hydropower Station Association; Wanzhou Small Hydropower Station Association; Yngos and JGI.

The associations represent all project owners and have democratic election.

Index Wulong cluster: 5
Index Wanzhou cluster: 5
Index Yunnan cluster: 1
Index Guizhou cluster: 1
Index Ebian cluster: 1
Index Ya'an cluster: 1
Average index: 2.5

Perspectives: Notify the project owners of active projects about the benefits of the carbon project and of creating or joining associations to better organize social and environmental activities.

It is confirmed that the Prospect is reasonable and will be fulfilled in the future. The relevant notification to the project owners will be checked during next monitoring period.

5. Capacity of local community

Evaluates the contributions (capacity training, equipment donations etc) by project owners in the main economic activities of the region, such as:

- Agriculture
- Tourism
- Mining

Assessment:

Via checking the project activity record, it is confirmed that in 2013, two agricultural training programs, which were mainly about the proper plantation of tsaoko amomum fruit plants, improving the corn cultivation and pest and diseases control measures, were held for local villagers of Yunnan cluster. There were 81 participants from Shifen Village and 98 participants from Lushan Village. Totally, 180 sets of agricultural tools were delivered to participants. They were organized by Yingos and financed by South Pole.

Index Wulong cluster: 2
Index Wanzhou cluster: 2
Index Yunnan cluster: 3

Index Guizhou cluster: 2
Index Ebian cluster: 2
Index Ya'an cluster: 2
Average index: 2

Perspectives: None at the moment.

6. Training and capacity building programs

Evaluates whether the project invests in training and capacity building programs for its employees.

Assessment:

Through checking the project activity record of Wulong cluster in Mar. 2015^{/PAR/}, it is confirmed that a Hydropower Station Production Safety Training was provided to the employees of small hydropower stations in the region. The training was about the principles of the production safety and the protection measures of electricity usage in the hydropower station. It was organized by the Wulong Small Hydropower Station Association and financed by the South Pole. The lecturers were from Wulong Water Conservancy Bureau. Governmental officers from the Environmental Protection Bureau were invited and participated as well. Social Carbon and project information were introduced during the training. 56 people from the small hydropower stations in Wulong participated in the training. They were from the Yangjiao area, Changba area, Tongzi area, Huangying area and Yajiang area.

Also, through checking the project activity record of Wuzhou cluster in Mar. 2015^{/PAR/}, it is confirmed that a Hydropower Station Production Safety Training was conducted by Wanzhou Water Conservancy Bureau. The Hydropower Station Production Safety Training was about the labor condition improvement and labor healthy and safety protection. The Hydropower Station Production Safety Training and symposium were organized by Wanzhou Shuncaihydropower Development Limited and financed by the South Pole. Then a workshop was held, mainly introducing the Social Carbon, project information and Climate Change. 39 staffs from the small hydropower stations in Wanzhou participated in the training.

Index Wulong cluster: 3
Index Wanzhou cluster: 3
Index Yunnan cluster: 1
Index Guizhou cluster: 1
Index Ebian cluster: 1
Index Ya'an cluster: 1

Average index: 2

Perspectives: None at the moment.

7. Gender diversity

Evaluates the employment opportunities provided by the project to women.

Assessment:

In all 6 clusters, according to a site visits made by South Pole, Ecochain and DOEs during VCS verification^{VER/}, it is confirmed that about 20 to 30% of project employees are female workers. In total there are about 240 women.

Index Wulong cluster: 4

Index Wanzhou cluster: 4

Index Yunnan cluster: 4

Index Guizhou cluster: 4

Index Ebian cluster: 4

Index Ya'an cluster: 4

Average index: 4

Perspectives: None at the moment.

Financial Resource

8. Sale of Credits

Evaluates uncertainties regarding the value of commercialized credits generated by the project and their attractiveness to potential buyers, in comparison with international voluntary carbon market reports.

Assessment:

By interview with the Carbon Credit Buyer South Pole, it is stated that some buyers exclude Chinese projects or show a lower willingness to pay for Chinese credits. Hydro projects also are facing a tough situation. Nevertheless, there have been some requests from buyers for this particular project. Taking as base the "State of the Voluntary Carbon Market" by Ecosystem Marketplace, the price of the project's credits is in accordance with the average market value.

Index Wulong cluster: 4

Index Wanzhou cluster: 4

Index Yunnan cluster: 4
Index Guizhou cluster: 4
Index Ebian cluster: 4
Index Ya'an cluster: 4
Average index: 4

Perspectives: None at the moment.

9. Funds for social & environmental co-benefits

Evaluates if strategic planning and funds for implement programs to achieve continual improvement goals are available and how much.

Assessment:

Via checking the project activity record^{/PAR/} and interview with the Carbon Credit Buyer South Pole In Wulong, Wanzhou and Yunnan clusters, up to USD 10.000,00 per cluster in funds were invested in cobenefits, but in isolated initiatives. There was no strategic planning or funds available for Guizhou, Ebian and Ya'an clusters.

Index Wulong cluster: 2
Index Wanzhou cluster: 2
Index Yunnan cluster: 2
Index Guizhou cluster: 1
Index Ebian cluster: 1
Index Ya'an cluster: 1
Average index: 1.5

Perspectives: Improve scores for at least two clusters.

It is confirmed that the Prospect is reasonable and will be fulfilled in the future. The relevant action of improving the scores for at least two clusters will be checked during next monitoring period.

10. Economic performance

Evaluates if the economic performance of the project met the expectations of the shareholders and directors regarding yuan per megawatt.

Assessment:

Via checking the collected questionnaires^{/QUE/}, it is confirmed that the economic performance of the project barely met the expectations of the shareholders.

Index Wulong cluster: 2
Index Wanzhou cluster: 2
Index Yunnan cluster: 2
Index Guizhou cluster: 2
Index Ebian cluster: 2
Index Ya'an cluster: 2
Average index: 2

Perspectives: None at the moment

Natural Resource

11. Environmental impacts and accordance with legislation

Evaluates magnitude of environmental impacts of the project, existence of environmental impact studies and accordance with environmental laws and norms, (including agreements with public authorities, such as environmental licenses, requested authorizations for installation, etc).

Assessment:

During the VCS Validation, it is confirmed that Business license, Environment Impact Report, Feasibility Study Report, Approval of Environment Impact Report and Approval of Feasibility Study Report for each projects are the evidences during validation. Furthermore, during the VCS verification, the report of the check and acceptance of the environment protection for each project is available.

Regarding the environmental impact, studies show that it is neutral.

Index Wulong cluster: 5
Index Wanzhou cluster: 5
Index Yunnan cluster: 5
Index Guizhou cluster: 5
Index Ebian cluster: 5
Index Ya'an cluster: 5
Average index: 5

Perspectives: None at the moment.

12. Support from NGOs

Evaluates the support from NGOs and Institutes to the project's activities.

Assessment:

In Wulong cluster, the project owners have joined the Wulong Small Hydropower Station Association. In Wanzhou cluster, the project owners have joined the Wanzhou Small Hydropower Station Association. In Yunnan cluster, Yingos and JGI provided trainings to the local project owners. This is verified through checking the project activity records^{/PAR/}.

Index Wulong cluster: 2
Index Wanzhou cluster: 2
Index Yunnan cluster: 3
Index Guizhou cluster: 1
Index Ebian cluster: 1
Index Ya'an cluster: 1
Average index: 2

Perspectives: None at the moment.

13. Community environmental education programs

Evaluates the relevant environmental education programs related to the project, including additional programs to the stakeholders and broader community.

Assessment:

Through checking the project activity record of Shifen Village and Lushan Village in Mar. 2013^{/PAR/}, it is confirmed that the two education programs about environment protection and wildlife protection, were held to local students. 46 students from Shifen primary school and 84 students from Lushan primary school participated in the programs. These education programs were held by the Jane Goodall Institute China, Roots & Shoots Program (JGI) and financed by South Pole Carbon Asset Management Ltd.(South Pole) In addition, 270 dictionaries, 270 sets of pencil box and painting pencils, 2 sets of musical instruments and 1046 books were delivered to students and primary schools. They were organized by Yunnan International Non-government Organization Society (Yingos) and financed by South Pole Carbon Asset Management Ltd.

Furthermore, through checking the project activity record of Wulong cluster in Mar. 2015^{/PAR/}, it is confirmed that an education program about air pollution to local students

was organized. Via checking the attendance register list^{/PAR/}, it is concluded that 62 students from Huangdu primary school participated in the programs. Furthermore, through checking the project activity record of Wulong cluster^{/PAR/}, it is confirmed that 40 bags were delivered to students. All of the programs were held and financed by South Pole Carbon Asset Management Ltd.

Also, through checking the project activity record of Wuzhou cluster in Mar. 2015^{/PAR/}, it is confirmed that an education program to local students was organized. Via checking the attendance register list^{/PAR/}, it is concluded that 30 students from Changling primary school participated in the programs. Furthermore, through checking the project activity record of Wulong cluster^{/PAR/}, it is confirmed that 40 books, 40 vacuum cup, 40 pencil boxes, 40 pencils and 40 compasses were delivered to students. Fresh fruits were also offered to the students. All of the programs were held and financed by South Pole Carbon Asset Management Ltd.

Through checking the project activity record of Shifen Village and Lushan Village in Mar. 2013^{/PAR/}, it is confirmed that two agricultural training programs, which are mainly about the proper plantation of tsaoko amomum fruit plants, improving the corn cultivation and pest and diseases control measures, were held for local villagers of Yunnan cluster. There were 81 participants from Shifen Village and 98 participants from Lushan Village. Totally, 180 sets of agricultural tools were delivered to participants. They were organized by Yingos and financed by South Pole.

Index Wulong cluster: 2
Index Wanzhou cluster: 2
Index Yunnan cluster: 3
Index Guizhou cluster: 1
Index Ebian cluster: 1
Index Ya'an cluster: 1
Average index: 2

Perspectives: Implement education programs similar to the previous initiatives in at least two clusters.

It is confirmed that the Prospect is reasonable and will be fulfilled in the future. The relevant action of implementing education programs in at least two clusters will be checked during next monitoring period.

Technology and Biodiversity Resource

14. Access to electricity

Evaluate the level of access that local people and organizations have to the electricity provided in the project area, considering:

- If grid connection are available
- The quality and continuity of the energy provided
- If the cost of electricity is affordable for local population

Assessment:

All households are connected to the grid. The electricity is stable. The electricity interruption is less than once a week according to the questionnaires collected^{/QUE/}. The locals pay 0.55 RMB/kwh (about 0.09 USD/kwh) and it is affordable. They are using electric facilities (TV, wash machine, refrigerator etc).

Index Wulong cluster: 4
Index Wanzhou cluster: 4
Index Yunnan cluster: 4
Index Guizhou cluster: 4
Index Ebian cluster: 4
Index Ya'an cluster: 4
Average index: 4

Perspectives: None at the moment.

15. Technological benefits of electricity

Evaluates the technological benefits brought by the electricity provided by the project, such as:

- Irrigation
- Mechanization
- Household appliances
- IT and communication

Assessment:

Via checking the questionnaires collected^{/QUE/}, it is confirmed that the Xiangyun Hydropower Station (No.41), Sihe Hydropower Station (No.52), Canglong Hydropower Station (No.55) in Wanzhou County, Fengmu Hydropower Station (No.5) in Wanzhou County gave an account of the benefits regarding stability and reliability of the irrigation system due to the new pump. The new pumps were installed in 2012 and 2013 and project owners of hydropower stations paid for them. Local villagers are the lands/communities that benefit from the pumps. It is confirmed via checking the questionnaires collected^{/QUE/}.

Via checking the questionnaires collected^{/QUE/}, it is confirmed that all households have electric lightning and almost all households have TV and electricity cooker. High energy consuming devices such as washing machines and power tools are used by less than half of the population in the questionnaires collected.

Via cheking the questionnaires collected^{/QUE/}, it is confirmed that more than half of the people in the sample population own a telephone. About half have access to internet.

Index Wulong cluster: 3
Index Wanzhou cluster: 4
Index Yunnan cluster: 3
Index Guizhou cluster: 3
Index Ebian cluster: 3
Index Ya'an cluster: 3
Average index: 3.5

Perspectives: Monitor the infrastructural improvement through questionnaires.

It is confirmed that the Prospect is reasonable and will be fulfilled in the future. The relevant questionnaires will be checked during next monitoring period.

16. Operational performance

Evaluates if the operational performance of the project met the expectations of the shareholders and directors in relation to megawatts generated.

Assessment:

The operations of the plants are normal. The last three verifications all have good results.

Index Wulong cluster: 4
Index Wanzhou cluster: 4
Index Yunnan cluster: 4
Index Guizhou cluster: 4
Index Ebian cluster: 4
Index Ya'an cluster: 4
Average index: 4

Perspectives: None at the moment.

Carbon Resource

17. Project Performance

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

Assessment:

1,539,874 Credits were expected from June 2011 till June 2013. The amount monitored from June 2011 till June 2013 was 1,016,115, so 66% of the expected credits has been achieved. This is verified checking against the latest VCS verification report^{VER/}.

Index Wulong cluster: 4
Index Wanzhou cluster: 4
Index Yunnan cluster: 4
Index Guizhou cluster: 4
Index Ebian cluster: 4
Index Ya'an cluster: 4
Average index: 4

Perspectives: Achieve at least 76% of carbon credits predicted.

It is confirmed that the Prospect is reasonable and will be fulfilled in the future. The relevant data will be checked during next monitoring period against the VCS verification report.

18. Stakeholder consultation

Evaluates the methodology used for stakeholder consultation. The stakeholder consultation consists of interviews, meetings or questionnaires made with people who are involved or interact with climate change projects.

Assessment:

In Wulong cluster, a stakeholder consultation was organized by Wulong Small Hydropower Station Association and South Pole in March 2015 and it was both questionnaire and meeting. The participants were local villagers and project owners. In Wanzhou cluster, a stakeholder consultation was organized by the Wanzhou Shuncaihydropower Development Limited and South Pole in March 2015 and it was both questionnaire and meeting. The participants were also local villagers and project owners. In Yunnan cluster, a stakeholder consultation was organized by South Pole in March 2013 and it was both questionnaire and meeting. The participants were local

villagers and project owners. This is verified checking against the project activity record^{/PAR/}.

Index Wulong cluster: 4
Index Wanzhou cluster: 4
Index Yunnan cluster: 4
Index Guizhou cluster: 1
Index Ebian cluster: 1
Index Ya'an cluster: 1
Average index: 2.5

Perspectives: None at the moment.

19. Green marketing

Evaluates whether the project has marketing appeal regarding the list below:

- Location
- Pictures
- Human related events

Assessment:

Via checking the Project activity record in Yunnan, Wulong and Wanzhou^{/PAR/}, it is confirmed in Yunnan, Wulong and Wanzhou clusters, social carbon activities were organized in 2013 and 2015 and there are lots of pictures are available^{/PAR/}.

While, in Guizhou, Ebian and Ya'an, no special activities were organized so far. No good marketing pictures are available. Because the projects are located in remote areas, there is marketing appeal regarding the spread of electricity to people that did not have access before the project.

Index Wulong cluster: 4
Index Wanzhou cluster: 4
Index Yunnan cluster: 4
Index Guizhou cluster: 1
Index Ebian cluster: 1
Index Ya'an cluster: 1
Average index: 2.5

Perspectives: None at the moment.

5.2. Historia Analysers

Project Performance for Point One and Changes since Point Zero

In Point Zero and One it was used the “Indicators for Micro and Small Scale Hydropower Grouped Project Version 1.1, June 2011” ^{/SCI/} and focused on partial of selected clusters.

Table 5-1 – Performance by Resource – Point Zero

Resource	Critical	Transitory	Sustainable	Average	General Performance
Social	28.6%	42.9%	28.6%	3.5	Satisfactory
Human	50.0%	25.0%	25.0%	3.5	Satisfactory
Financial	25.0%	25.0%	50.0%	4.0	Satisfactory
Natural	33.3%	0.0%	66.7%	4.0	Sustainable
Technological	33.3%	50.0%	16.7%	3.0	Satisfactory
Carbon	20.0%	0.0%	80.0%	5.0	Sustainable
Total	32%	24%	44%	4.0	Satisfactory

Table 5-2 – Performance by Resource – Point One

Resource	Critical	Transitory	Sustainable	Average	General Performance
Social	0.0%	57.1%	42.9%	4.5	Satisfactory
Human	25.0%	25.0%	50.0%	4.0	Satisfactory
Financial	0.0%	25.0%	75.0%	4.0	Satisfactory
Natural	33.3%	0.0%	66.7%	4.0	Satisfactory
Technological	33.3%	50.0%	16.7%	3.0	Satisfactory
Carbon	20.0%	0.0%	80.0%	5.0	Sustainable
Total	19%	18%	55%	4.0	Satisfactory

The current report (Point 02) uses the “Indicators for Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P. R. China Version 1.1, July 2015” ^{/SCI/} which considers entirely different criteria and evaluates all 6 clusters.

The new system has been designed to close previous assessments gaps and to measure the contribution of the project to the sustainable development of more efficiently, better corresponding with the reality of the project. It is relevant to highlight that the new assessment adopted a more conservative approach.

Because of this entirely different methodological approach, it is reasonable to expect a significant distance between the historical scores from previous assessments and the current results.

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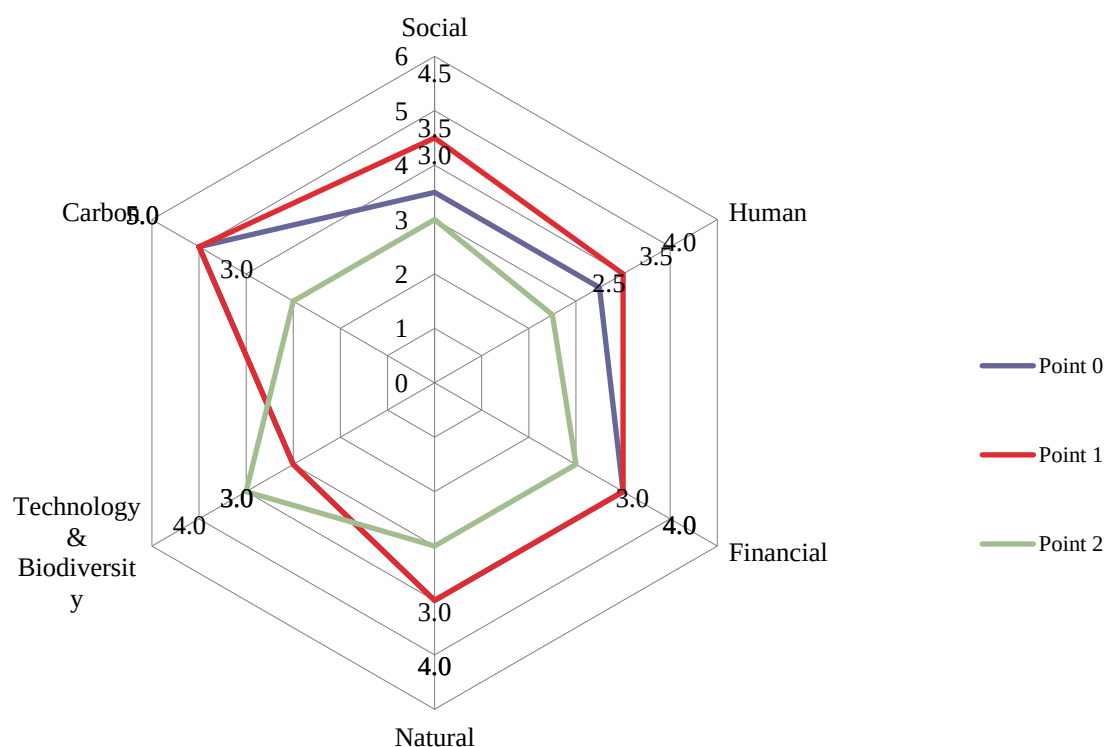
Provinces, P.R.China

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**Table 5-3 – Performance by Resource – Point Two**

Resource	Point 0	Point 1	Point 2	General Performance	Analyses
Social	3.5	4.5	3.0	Satisfactory	The comprehensiveness of local socio-economic conditions and the social impact of the project especially regarding household appliances and irrigation. Especial attention need to be paid in relation to social programs for the elderly.
Human	3.5	4.0	2.5	Satisfactory	The training provided to staff members, the relatively high number of women working in the project and the creation of associations. The score can be increased if there are further training opportunities, and/or if the project owners provide trainings in other clusters, besides the creation of association in the other clusters too.
Financial	4.0	4.0	3.0	Satisfactory	The stability of the project offset price compared to the market average price. Especial attention needs to be paid regarding funds for social and environmental co-benefits.
Natural	4.0	4.0	3.0	Satisfactory	The stability of compliance with regulations and because of environmental education programs. Implement similar initiatives in the other clusters will help to increase the score.
Technology Biodiversity	3.0	3.0	4.0	Satisfactory	The good provision of electricity and operational performance, resulting in various benefits for the community surrounding the project.
Carbon	5.0	5.0	3.0	Satisfactory	The Carbon Resource had a satisfactory performance especially with the project performance. Stakeholders consultations and better green marketing must be made in the other clusters in order to increase the score.
Total	4.0	4.0	3.0	Satisfactory	-



5.3. Prospects

Status of the prospects from the last verified SCR

1. Achieved prospects

Social Resource	
Indicator	Additional Social Programs
Prospect	Benefits are to be implemented according to the schedule in Section 6 of the SC report.
Social Resource	
Indicator	Socioeconomic issues
Prospect	Further assessments will be carried out in the other clusters.
Natural Resource	
Indicator	Additional Environmental Programs
Prospect	Provide the environmental education for kids

2. Not achieved prospects

Financial Resource	
Indicator	Costs for additional Programs
Prospect	Experience will improve the planning of additional programs for future implementation.
Details	Yunnan cluster is yet to complete financial planning for additional programs ^{/PAR/} . Nevertheless, despite the lack of a formally structured plan, there were investments in additional education programs in 3 clusters, including Yunnan, which shows that a systematic approach is under development.
Technology and Biodiversity Resource	
Indicator	Additional technology and biodiversity programs
Prospect	Provide equipment for computer classrooms building
Details	The foreseen program is no longer an interest
Carbon Resource	
Indicator	Additional climate change programs
Prospect	Disaster relieve fund as central and western China have been repeatedly hit by devastating floods recently, a type of event that is predicted to become more frequent with climate change.
Details	The foreseen program is no longer an interest

Prospects

In the next SCR

Social Resource	
Indicator	Social programs for the elderly
Current Score	2
Action	Implement social program for the elderly, such as storytelling in connection with local schools, in at least two clusters.
Timescale	Will be checked during next monitoring period.
Human Resource	
Indicator	Capacity of local association
Current Score	2.5
Action	Notify the project owners of active projects about the benefits of the carbon project and of creating or joining associations to better organize social and environmental activities.
Timescale	Will be checked during next monitoring period.
Financial Resource	
Indicator	Funds for social & environmental co-benefits

Current Score	1.5
Action	Improve scores for at least two clusters.
Timescale	Will be checked during next monitoring period.
Natural Resource	
Indicator:	Community environmental education programs
Current Score	2.0
Action	Implement education programs similar to the previous initiatives in at least two clusters.
Timescale	Will be checked during next monitoring period.
Technology and Biodiversity Resource	
Indicator:	Technological benefits of electricity
Current Score	3.5
Action	Monitor the infrastructural improvement through questionnaires.
Timescale	Will be checked during next monitoring period.
Carbon Resource	
Indicator:	Project performance
Current Score	4.0
Action	Achieve at least 76% of carbon credits predicted
Timescale	Will be checked during next monitoring period.

The verification team concluded that the Prospect in the future is reasonable and will be fulfilled in the next SCR. The relevant implementation and action and programs will be checked during next monitoring period.

5.4. Verification of the Social Carbon project criteria including continuous improvement

As defined in the Social Carbon Standard^{/SCS/}, the criteria for Verification and the conclusion based on evidences are:

1) All carbon credits issued and included as Social Carbon should be registered in the Voluntary Carbon Standard (VCS).

Evaluation: Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R.China is a registered VCS project^{/VCS/}. The criterion is fulfilled.

2) Annual verification must be carried out using Social Carbon Methodology, with Point Zero as the baseline, to assess the contribution of the project to sustainable development. The monitoring reports must be presented according to the Social Carbon template.

Evaluation: The Point Zero was validated and indicates Sustainability Performance as satisfactory^{/SCVAL/}. The report was presented according of the

Social Carbon report template^{/SCT/} and rules^{/SCSI&/SCI/}. This report is related to Point Two and covers the evaluation required by the criteria. The criterion is fulfilled.

3) For evaluation of continuous improvement the project should not present decrease in the performance of the same resource for two consecutive periodic evaluations.

Evaluation: These criteria is fulfilled. There is no decrease in the performance from Point One to Point Two.

4) The criteria of continuous improvement are only applied after the first Commercialization of carbon credits.

Evaluation: Some of the Credits from the 2nd insurance were sold.

5.5. Overall Aspects of the Verification

All necessary and requested documentation was provided by the project participants so that a complete verification of all relevant issues could be carried out.

6. VERIFICATION AND CERTIFICATION STATEMENT

South Pole Carbon Asset Management Ltd. has commissioned the TÜV NORD JI/CDM Certification Program to carry out the Social Carbon Point Two periodic verification of the project: "Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R.China", with regard to the relevant requirements for SC/VCS project activities. This verification covers the period from 2012-07-01 to 2015-05-31.

In the course of the verification 1 Clarification Request (CL) was raised and successful closed. The verification is based on the draft SC reports, the monitoring plan as set out in the Point Zero SC Report, the SC validation report and supporting documents made available to the TÜV NORD JI/CDM CP by the project participant.

As the result of the Social Carbon Point Two periodic verification, the verifier confirms that the project meets all relevant Social Carbon Standard requirements. Hence, TÜV NORD JI/CDM Certification Program recommends the project for issuance by Social Carbon Standard.

Shanghai, 2015-07-29



Zhao Xuejiao

TÜV NORD JI/CDM Certification
Program

Verification Team Leader

Essen, 2015-07-29



Rainer Winter

TÜV NORD JI/CDM Certification
Program

Final Approval

7. REFERENCES

Table 7-1: Documents provided by the project participant(s)

Reference	Document
/IMR/	1 st VCS Monitoring Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, Version 5.0, 6 th June 2010 2 nd VCS Monitoring Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, Version 2.2, 12 th June 2012 3 rd VCS Monitoring Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, Version 2.0, 17 th Jan 2014
/IPAR/	Project activity record 1. Project activity record of Shifen Village and Lushan Village in Mar. 2013 including the Training Program Picture, materials distribution Picture, Attendance Register List etc. 2. Project activity record of Wanzhou County in Mar. 2015 including the Training Program Picture, materials distribution Picture, Attendance Register List etc. 3. Project activity record of Wulong County in Mar. 2015 including the Training Program Picture, materials distribution Picture, Attendance Register List etc.
/IPDI/	VCS Project Description of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, 13 th October 2009
/IQUE/	Questionnaires collected in Wanzhou County and Wulong County
/ISCR/	Draft Point Two Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R.China dated 2015-06-30, version 3.0 Final Point Two Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R.China dated 2015-07-16, version 3.1
/IVAL/	Final Validation Report by TÜV Rheinland Japan Ltd. Version 03, 25 th November 2009
/IVER/	1 st VCS Final Verification Report by TÜV Rheinland Japan Ltd. Version 01, 8 th June 2010

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Reference	Document
	2 nd VCS Final Verification Report by TÜV Rheinland Japan Ltd. Version 02, 25 th June 2012 3 rd VCS Final Verification Report by TÜV Rheinland Japan Ltd. Version 02, 28 th Feb. 2014

Table 7-2: Background investigation and assessment documents

Reference	Document
/AMS-I.D./	Grid connected renewable electricity generation (Version 13, 14 th December 2007, EB 36)
/CEPY/	China Electrical Power Yearbook 2003~2007
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/GSCR/	Guide for Completing Social Carbon Reports, Version 03.1, September 2010
/SCAIA/	SOCIALCARBON Standard Additional information for auditors of SOCIALCARBON Reports Version 2.2, June 2011
/SCI/	Indicators for Micro and Small Scale Hydropower Grouped Project, Version 1.0, August 2010 Indicators for Micro and Small Scale Hydropower Grouped Project, Version 1.1, June 2011 Indicators for Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P. R. China Version 1.1, July, 2015
/SCR0/	Point Zero Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, 15 th October 2010
/SCR1/	Point One Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, 25 th July 2012
/SCS/	Social Carbon Standard Version 5.0 July 2013
/SCT/	Social Carbon Report Template version 4, 4 th , Aug. 2013
/SCVAL/	Final Validation Social Carbon Report by TÜV Rheinland Japan Ltd. 15 th October 2010 (Point Zero)

Reference	Document
/SCVER/	Final Verification Social Carbon Report by TÜV Rheinland Japan Ltd. 15 th October 2010 (Point One)
/TEF/	"Tool to calculate the emission factor for an electricity system" (Version 01.1, EB 35)

Table 7-3: Websites used

Reference	Link	Organisation
/jgi/	http://www.jgichina.org/cn/	Jane Goodall Institute China
/sc/	http://www.socialcarbon.org	Social Carbon Standard
/spl/	https://www.southpolecarbon.com	South Pole Carbon Asset Management Ltd.
/unfccc/	http://cdm.unfccc.int	UNFCCC
/vcs/	http://v-c-s.org	Verified Carbon Standard
/yingos/	http://www.yingos.net	Yunnan International Non-government Organization Society

Table 7-4: List of interviewed persons

Reference	Mol ¹		Name	Organisation / Function
/IM01/	V	☒ Mr. ☐ Ms	Yang Xuan	South Pole Carbon Asset Management Ltd./ Regional Director of Emission Reductions China & ROW

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)

ANNEX

A1: Statements of Competence of involved Personnel

ANNEX 1: STATEMENTS OF COMPETENCE OF INVOLVED PERSONNEL

TUV NORD Certification		
Statement of Competence Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program		
Ms. Fancy Zhao		
SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2015-12-07
VCS / ISO 14064-2	Lead Assessor	2015-12-07
Authorization status for technical areas within sectoral scopes:		
CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewables	
230 - Rev. 3, Date: 2015-06-05		
T:\envi_2011\14064-2\2015-06-05_rev 3.doc		
2011-VACS/430-04-01/2012-12-26		

TUV NORD Certification		
Statement of Competence Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program		
Mr. Yongjun Li		
SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2016-06-20
VCS / ISO 14064-2	Senior Assessor (Validation, Verification) Technical Reviewer	2016-06-20
Authorization status for technical areas within sectoral scopes:		
CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewable Energies	1.2.1 Hydropower 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Tidal
13.1	Waste Handling and Disposal	
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