

SOCIAL STANDARD VERIFICATION AND CERTIFICATION REPORT

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

SC Monitoring Period: 26/09/2016 to 25/06/2018

Report No.: SC-VER-CTC-2018001

Report Date: 26/12/2018



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and Certification Group Co., Ltd

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Summary:

China Building Material Test and Certification Group Co., Ltd (CTC), commissioned by Swiss Carbon Value Ltd.(Hereinafter referred to as South Pole), has performed the Social Carbon Point Four periodic verification of the Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China (hereafter referred to as "the Project") covering the monitoring period from 26/09/2016 to 25/06/2018, with regard to the relevant requirements for VCS and Social Carbon project activities.

The Project has been registered as a VCS project (VCS Registration No. 438) under VCS 2007.1 using approved CDM methodology AMS-I.D- "Grid connected renewable electricity generation" (Version 13.0) with the first renewable crediting period from 28/03/2006 to 27/03/2016. And the project has been updated the second crediting period from 28/03/2016 to 27/03/2026 under Verified Carbon Standard (VCS) Version 3.7 using the approved CDM methodology AMS-I.D. "Grid connected renewable electricity generation" (Version 18.0) on 7th April 2017.

The verification process includes three phases:

- 1) Desk review of documents;
- 2) On-site visit and follow-up interviews;
- 3) Issuance of the final verification report and opinion.

CTC appointed a qualified verification team in accordance with internal procedures to perform the

verification.

In the course of the verification, No Corrective Action Request (CAR) or Clarification Requests (CL) was raised.

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 Four, the subsequent interviews, and the further cross-check of references have provided by CTC with sufficient evidences to determine the fulfilment of stated criteria in the guideline.

CTC herewith confirms that the project has meets all relevant Social Carbon Standard requirements and recommend the project for issuance by Social Carbon Standard.

Abbreviations:

BE	Baseline emissions
CAR	Corrective Action Request
CTC	China Building Material Test and Certification Group Co., Ltd
CDM	Clean Development Mechanism
CL	Clarification request
CO ₂	Carbon dioxide
CCPG	Central China Power Grid
CSPG	China Southern Power Grid
CEC	China Environmental United Certification Centre Co., Ltd.
DOE	Designated operational entity
DNA	Designated National Authority
DR	Document Review
EIA	Environmental Impact Assessment
EB	Executive Board
EF	Emission factor
ETN	Electricity Transaction Note
FAR	Forward action request
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
NDRC	China National Development Reform Commission (DNA)
NGO	Non-governmental Organization
PCP	Project Cycle Procedure
PDD	Project Design Document
PP	Project Participant
SC	Social Carbon
SCR	Social Carbon Report
SD	Sustainable Development
SHP	Small Hydropower Project
tCO ₂ e	Tonne of carbon dioxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Voluntary Carbon Standard
VCU	Voluntary Carbon Unit

YINGOS	Yunnan International Non-government Organization Society
JGI	The Jane Goodall Institute
YSVA	Yingjing Sunshine Volunteer Association

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1 INTRODUCTION

1.1 Objective

Swiss Carbon Value Ltd. has commissioned CTC to verify and provide a verification statement of the Social Carbon Report Point Four of the Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China (hereafter referred to as “the Project”) which is located in Chongqing City, Sichuan Province, Guizhou Province and Yunnan Province, People's Republic of China for the fourth monitoring period from 26/09/2016 to 25/06/2018, with regard to the relevant requirements for Social Carbon project activities. The verification team have reviewed the implementation plan in the Social Carbon Point Zero report.

This report summarizes the findings and conclusions of this Social Carbon Point Four periodic verification of the above-mentioned Social Carbon Point Zero report.

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 and Criteria

The verification of this project is based on the VCS PD, the Social Carbon Report, 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, Version 3.0 13th September 2017 /1/;

- Final VCS Validation Report by China Building Material Test and Certification Group Co., Ltd Version 1.1 13th September 2017 /2/;
- 7th VCS Monitoring Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R. China, Version 2.0, 26th Dec 2018 /3/;
- 7th VCS Final Verification Report by China Building Material Test and Certification Group Co., Ltd Version 2.0, 26th Dec. 2018 /4/;
- Social Carbon Standard, Version 5.0, July 2013 /5/;
- Guide for Completing Social Carbon Reports, Version 4, September 2013 /6/;
- Indicators for Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P. R. China Version 1.1, July, 2015 /7/;
- Point Zero Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R. China, 15th October 2010 /8/;
- Point One Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R. China, 25th July 2012 /9/;
- Point Two Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R. China, 16th July 2015 /10/;
- Point three Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R. China, 15th January 2017 /11/;
- Point four Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R. China, 19th December 2018 /12/;

1.3 Level of Assurance

CTC has undertaken a reasonable assurance engagement in accordance with VCS Standard (Version 3.7) /13/ and Social Carbon Standard (Version 5.0)/5/. The verification conclusion is based on the VCS-PD /1/ and SCR4 /12/, and supporting evidences made available to the verifier and information collected through performing interviews and during the on-site inspection.

1.4 Summary Description of the Project

The Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China is a grouped project under VCS (Version 3.7) /13/, which consists of 88 run-of-river hydropower stations in less-developed rural areas of south-western China.

People in those areas are ground down by poverty and even hunger. The vulnerable population of the region is mostly made of elders and children, since there is a significant migration of young people to distant metropolitan areas for work. The main economic activities of the villagers surrounding the project are agriculture, tourism, sugar-refinery and mining industry.

The project increases the share of renewable energy generation in China while contributing to avoiding the construction of new fossil-fuel-fired power plants. Compared to these power plants, the project reduces CO₂, SO_x and NO_x emissions significantly, thus consequently mitigate air pollution and its adverse impacts on human health.

With small installed capacities and almost no reservoirs with regulating ability, the hydropower plants use only the hydraulic heads for power generation, therefore there were no resettlements of buildings or houses required. Moreover, there is no endanger fishes or other aquatic species found in the hydrologic basin of the project activities, and there is no impact on the terrestrial ones.

Point Zero

According to the Point Zero Social Carbon Report /8/, 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 Swiss Carbon Value Ltd. and organized by YINGOS in March 2011 in Lishadi Village. An agricultural training program has been held. 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/9/, 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 Swiss Carbon Value 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 21th October 2013 and 22th October 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 Shuncaihydropower 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/10/, the above social activities have been described and evaluated. Several indicators have been improved accordingly.

Point Three

During the Point Three period, a series of social activities were financed by Swiss Carbon Value Ltd.

The first activity was organized a free physical examination for the local stakeholders on 7th Nov 2016, including the children and elder persons. 34 persons from Zhongxin village participated in the programs. Further, 28 copies of free drugs, including the Vitamin C, Radix Isatidis, cold granules, were offered to the local stakeholders. Swiss Carbon Value Ltd. financed the initiative.

The second activity was organized the first aid training and environmental protection education for the local stakeholders and employees on 8th Nov 2016, including the children and elder persons. 28 persons from Luolong village participated in the programs. Swiss Carbon Value Ltd. financed the initiative.

According to the Point Three Social Carbon Report/11/, the above social activities have been described and evaluated. All indicators are in line with the Point Two Social Carbon Report/10/.

Point Four

During the Point Four period, a series of social activities were financed by Swiss Carbon Value Ltd.

The first activity was organized a free physical examination for the local stakeholders on 7th Nov 2016, including the children and elder persons. 34 persons from Zhongxin village participated in the programs. Further, 28 copies of free drugs, including the Vitamin C, Radix Isatidis, cold granules, were offered to the local stakeholders. Swiss Carbon Value Ltd. financed the initiative.

The second activity was organized the first aid training and environmental protection education for the local stakeholders and employees on 8th Nov 2016, including the children and elder persons. 28 persons from Luolong village participated in the programs. Swiss Carbon Value Ltd. financed the initiative.

The third activity was organized an education program for local students from Miaogang village, Yingjing county on 12th Nov, 2018, which included visits to the Museum, Library and Science Museum in Yingjing county. 95 children participated in the program. The education program was held by the Yingjing Sunshine Volunteer Association (YSVA) and financed by Swiss Carbon Value Ltd.

According to the Point Four Social Carbon Report /12/, the above social activities have been described and evaluated. All indicators are in line with the Point Two Social Carbon Report/10/.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using CTC internal procedures.

CTC verified the Project against the requirements set in VCS Standard (Version 3.7) /13/ and Social Carbon Standard (Version 5.0) /5/, and other relevant SC requirements.

The following sections outline each step in more detail.

2.2 Document 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 previous SC Report (Point zero, one, two and three)/8//9//10//11/ and the last VCS PD including the VCS monitoring report/1//3/;
- the social carbon validation report/14/;
- the previous SC Verification Report (Point one, two and three)/15//16//17/;
- the final submitted SC Report (Point four)/12/;

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

Appendix A of this report contains a complete list of all documents and proofs reviewed by the verification team.

2.3 Interviews

From 13/12/2018 to 16/12/2018, The verification team performed interviews with the project participants to confirm selected information and to resolve issues identified in the document review.

Swiss Carbon Value Ltd., was interviewed. The main topics of the interviews are summarized in below table.

Date: 13/12/2018 to 16/12/2018	
Interview topics	Interviewed Organizations and persons
- 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	Swiss Carbon Value Ltd. Sui Yang, Project Manager

2.4 Site Inspections

The on-site assessment involved following activities,

- 1) An assessment of the implementation and operation of the project activity as per the VCS-PD /1/ and Social Carbon Report Point four/12/;

- 2) A review of information flows for generating, aggregating and reporting the social carbon indicators;
- 3) An interview of the relevant documents evidence for the social activities reported in the Social Carbon Report Point four;

2.5 Resolution of Findings

The objective of this phase of the validation is to resolve issues that require further elaboration, research or expansion prior to CTC's positive conclusion on the project design.

A Corrective Action Request (CAR) is raised, if one of the following situations occurs:

- a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable, verifiable and additional emission reductions;
- b) The applicable Social Carbon requirements have not been met;
- c) There is a risk that emission reductions cannot be monitored or calculated.

A Clarification Request (CL) is raised, if information is insufficient or not clear enough to determine whether the applicable SC requirements have been met.

A Forward Action Request (FAR) may also be raised during validation, to identify issues related to project implementation that require review during the first validation of the project activity.

There is no CAR, CL and FAR raised during the verification.

2.5.1 Forward Action Requests

No Forward Action Requests were raised during this verification.

2.6 Eligibility for Validation Activities

The verification was conducted by a verification team that was designated by CTC in accordance with its internal procedures. The competence and impartiality of the verification team are the key elements that have been considered by CTC when appointing the verification team. The details of the verification team and technical reviewer are as follows:

Name	Role	Qualification	Sectoral Scope/Technical Area	Onsite Visit
Mr. Zhang Yi	Team Leader	Leader Verifier	TA1.2	Yes
Ms. Zhao Jinlan	Team Member	Verifier	TA1.2	Yes
Mr. Tang Zhi'ang	Technical	Leader Verifier	TA1.2	No

	Reviewer			
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The above verification team and technical reviewer are competent for conducting the verification and the impartiality is well guaranteed. Meanwhile, the Certificates of Competence are enclosed in Appendix C to this report.

3 VERIFICATION FINDINGS

3.1 Project Implementation Status

The proposed Grouped Project involves the installation and operation of 88 run-of-river hydropower plants in Chongqing City, Sichuan Province, Guizhou Province and Yunnan Province, People's Republic of China.

11 hydropower stations are located in Wanzhou County along the Northeast direction from Chongqing city, China (project numbers included: 5~7, 9~13, 15, 18, 21).

Besides 49 hydropower stations are located in Wulong County to the Southeast of Chongqing (project numbers included: 1~4, 22~25, 27~42, 44~63, 65~69).

2 hydropower stations are located in Ebian County (project numbers included: 87, 88).

And 11 in Ya'an County within Sichuan province, China, southwest of Sichuan's capital city Chengdu (project numbers included: 76~86).

There are 9 power stations in Yunnan Province, China (project numbers included: 90~98), sparsely distributed throughout the entire province with borders to Myanmar, Laos and Vietnam.

Meanwhile, there are 6 project locations in Guizhou province, China (project numbers included: 70~75).

3.2 SOCIALCARBON RESULTS

"Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R.China – Point Four Social Carbon Report" was issued in 19th Dec, 2018 by Swiss Carbon Value Ltd. with assessment of the Indicators of the Social Carbon Standard and their evolution since Point Zero, Point One, Point Two and Point Three.

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

3.2.1 Social Resource

Indicator	1. Local socioeconomic conditions
Situation	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.																
No knowledge about the socioeconomic conditions of the project location.	There is knowledge about the socioeconomic conditions of the project location but the project implements no activities to attend the local needs.	There is knowledge about the socioeconomic conditions of the project location and the project implements activities to attend the local needs.	The implementation of activities is carried on in partnership with a local entity.	The activities are integrated with one of the following: - Existing activities developed by the project owners or; - Existing activities developed by other local organizations or; - Existing laws, policies or governmental programs.	Additional programs are integrated with at least two of the following: - Existing activities developed by the project owners or; - Existing activities developed by other local organizations or; - Existing laws, policies or governmental programs.												
Score	<table> <tr> <td>Index Wulong cluster:</td> <td>4</td> </tr> <tr> <td>Index Wanzhou cluster:</td> <td>4</td> </tr> <tr> <td>Index Yunnan cluster:</td> <td>4</td> </tr> <tr> <td>Index Guizhou cluster:</td> <td>4</td> </tr> <tr> <td>Index Ebian cluster:</td> <td>2</td> </tr> <tr> <td>Index Ya'an cluster:</td> <td>4</td> </tr> </table>					Index Wulong cluster:	4	Index Wanzhou cluster:	4	Index Yunnan cluster:	4	Index Guizhou cluster:	4	Index Ebian cluster:	2	Index Ya'an cluster:	4
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	Average index:	3.7	
Justification	The verification team is through checking the project activity record of Guizhou cluster in Nov 2016 /18/, it is confirmed that a free physical examination for the local stakeholders was organized, including the children and elder persons. 34 persons from Zhongxin village participated in the programs. 28 copies of free drugs, including the Vitamin C, Radix Isatidis, cold granules, were offered to the local stakeholders. All of the programs were held and financed by Swiss Carbon Value Ltd. Also, through checking the project activity record of Guizhou cluster in Nov 2016 /18/, it is confirmed that a first aid training and environmental protection education for the local stakeholders and employees was organized, including the children and elder persons. 28 persons from Luolong village participated in the programs. Swiss Carbon Value Ltd. financed the initiative. All of the programs were held and financed by Swiss Carbon Value Ltd. Also, through checking the project activity record of Ya'an cluster in Nov 2018 /21/, it is confirmed that an education program was held for local students from Miaogang village, Yingjing county, in Ya'an cluster, which included visits to the Museum, Library and Science Museum in Yingjing county. 95 children participated in the program. The education program was held by the Yingjing Sunshine Volunteer Association (YSVA) and financed by Swiss Carbon Value Ltd. Perspectives: None at the moment.		
Evidence	The project activity record of Guizhou cluster in Nov 2016, Ya'an cluster in Nov 2018, included training attendance sheet, feedbacks and pictures /18//21/.		

Indicator	2. Social impact of the project				
Situation	Evaluates the relevant socio-economic impacts: - Use of electricity in households (i.e for lighting, cooking, electronic equipment) - 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				
The project has no social impact.	The project has social impact in one of the areas below:	The project has social impact in two of the areas below:	The project has social impact in three of the areas below:	The project has social impact in all of the areas below:	In addition to scenario 5, the project has an action plan to

	- Households - Public services - Systems for water pumping - Development of industries	- Households - Public services - Systems for water pumping - Development of industries	- Households - Public services - Systems for water pumping - Development of industries	- Households - Public services - Systems for water pumping - Development of industries	improve the social benefits of the project long-term.														
Score	<table> <tr> <td>Index Wulong cluster:</td> <td>4</td> </tr> <tr> <td>Index Wanzhou cluster:</td> <td>4</td> </tr> <tr> <td>Index Yunnan cluster:</td> <td>4</td> </tr> <tr> <td>Index Guizhou cluster:</td> <td>4</td> </tr> <tr> <td>Index Ebian cluster:</td> <td>4</td> </tr> <tr> <td>Index Ya'an cluster:</td> <td>4</td> </tr> <tr> <td>Average index:</td> <td>4</td> </tr> </table>					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
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	Average index:	4																	
Justification	The verification team is though checking the point zero verification report of the project, it is confirmed that the project has social impact especially in household appliances, irrigation, sugar-refinery and mining industry. Perspectives: None at the moment.																		
Evidence	Point Zero Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, 15th October 2010/8/.																		

Indicator	3. Social programs for the elderly				
Situation	Evaluates programs to address elderly needs.				
There is no knowledge of the vulnerability of elderly people in the	There is knowledge of the vulnerability of elderly people in the	There is a formal action plan to implement social programs to	One social program was held regarding the needs of the elderly	A social program was held regarding the needs of the elderly	Two or more social programs were held regarding the needs of the

region.	region, but nothing has been done.	elderly people.	people, but there was no association with local NGOs.	people in partnership with local NGOs.	elderly people in partnership with local NGOs.														
Score	<table><tr><td>Index Wulong cluster:</td><td>2</td></tr><tr><td>Index Wanzhou cluster:</td><td>2</td></tr><tr><td>Index Yunnan cluster:</td><td>2</td></tr><tr><td>Index Guizhou cluster:</td><td>4</td></tr><tr><td>Index Ebian cluster:</td><td>2</td></tr><tr><td>Index Ya'an cluster:</td><td>2</td></tr><tr><td>Average index:</td><td>2.3</td></tr></table>					Index Wulong cluster:	2	Index Wanzhou cluster:	2	Index Yunnan cluster:	2	Index Guizhou cluster:	4	Index Ebian cluster:	2	Index Ya'an cluster:	2	Average index:	2.3
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	Index Guizhou cluster:	4																	
	Index Ebian cluster:	2																	
	Index Ya'an cluster:	2																	
	Average index:	2.3																	
Justification	The verification team is through checking the project activity record of Guizhou cluster in Nov 2016 /18/, it is confirmed that a free physical examination for the local stakeholders was organized, including 16 elder persons whose age are above 60 years old from Zhongxin village participated in the programs. And all of them got the free drugs, including the Vitamin C, Radix Isatidis, cold granules. Also, through checking the project activity record of Guizhou cluster in Nov 2016 /18/, it is confirmed that a first aid training and environmental protection education for the local stakeholders and employees was organized, including 10 elder persons whose age are above 60 years old from Luolong village participated in the programs. Swiss Carbon Value Ltd. financed the initiative. All of the programs were held and financed by Swiss Carbon Value Ltd. Perspectives: Implement social program for the elderly, such as storytelling in connection with local schools, in at least two clusters.																		
Evidence	The project activity record of Guizhou cluster in Nov 2016, included training attendance sheet and pictures/18/.																		

3.2.2 Human Resource

Indicator	4. Capacity of local association
Situation	Evaluates the creation local associations to address project owners collective issues

There is no local association.	There is a local association, but it is informal.	There is a local association and it is recognized by local legislation, but it does not meet neither of the following requirements: - It represents all project owners. - It has a democratic election.	There is a local association and it is recognized by local legislation, but it does not meet one of the following requirements: - It represents all project owners. - It has a democratic election.	There is a local association that is recognized by local legislation and that has an administration that represents all project owners democratically.	In addition to scenario 5, the association also addresses community needs.														
Score	<table><tr><td>Index Wulong cluster:</td><td>5</td></tr><tr><td>Index Wanzhou cluster:</td><td>5</td></tr><tr><td>Index Yunnan cluster:</td><td>5</td></tr><tr><td>Index Guizhou cluster:</td><td>1</td></tr><tr><td>Index Ebian cluster:</td><td>1</td></tr><tr><td>Index Ya'an cluster:</td><td>1</td></tr><tr><td>Average index:</td><td>3</td></tr></table>					Index Wulong cluster:	5	Index Wanzhou cluster:	5	Index Yunnan cluster:	5	Index Guizhou cluster:	1	Index Ebian cluster:	1	Index Ya'an cluster:	1	Average index:	3
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Index Guizhou cluster:	1																		
Index Ebian cluster:	1																		
Index Ya'an cluster:	1																		
Average index:	3																		
Justification	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. 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. 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.
Evidence	Final Verification Report Point Two Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China/16/

Indicator	5. Capacity of local community																		
Situation	Evaluates the contributions (capacity training, equipment donations etc) by project owners in the main economic activities of the region, such as: - Agriculture - Tourism - Mining																		
Not known.	The project does not contribute to any main economic activity in the region.	The project contributes to one of the main economic activities of the region.	The project contributes to one of the main economic activities of the region plus other industries (i.e. local commerce).	The project contributes to two of the main economic activities of the region.	The project contributes to two of the main economic activities of the region plus other industries (i.e. local commerce).														
Score	<table><tr><td>Index Wulong cluster:</td><td>3</td></tr><tr><td>Index Wanzhou cluster:</td><td>3</td></tr><tr><td>Index Yunnan cluster:</td><td>4</td></tr><tr><td>Index Guizhou cluster:</td><td>3</td></tr><tr><td>Index Ebian cluster:</td><td>3</td></tr><tr><td>Index Ya'an cluster:</td><td>4</td></tr><tr><td>Average index:</td><td>3.3</td></tr></table>					Index Wulong cluster:	3	Index Wanzhou cluster:	3	Index Yunnan cluster:	4	Index Guizhou cluster:	3	Index Ebian cluster:	3	Index Ya'an cluster:	4	Average index:	3.3
Index Wulong cluster:	3																		
Index Wanzhou cluster:	3																		
Index Yunnan cluster:	4																		
Index Guizhou cluster:	3																		
Index Ebian cluster:	3																		
Index Ya'an cluster:	4																		
Average index:	3.3																		
Justification	The verification team is 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. The verification team is checking the project activity record, it is confirmed that in 2018, the education program held in Ya'an cluster included visits to Museum, Library and Science Museum in Yingjing county, Ya'an city, Sichuan province, which benefited the tourism of Yingjing county. 95 children participated. The education program was held by the YSVA and financed by Swiss Carbon Value Ltd. Perspectives: None at the moment.
Evidence	The project activity record of Yunnan cluster in 2013, and Ya'an cluster in 2018 included training attendance sheet and pictures/19//21/

Indicator	6. Training and capacity building programs				
Situation	Evaluates whether the project invests in training and capacity building programs for its employees				
The project did invest neither in isolated lectures nor in continuous professional training for staff.	The project organized isolated lectures, but not to all employees.	The project organized isolated lectures to all employees.	The project provided continuous professional training, but not to all employees.	The project provided continuous professional training to all employees.	In addition to scenario 5, the training provided by the project is linked to the Human Resource Policies for promotion.
Score					
	Index Wulong cluster:			3	
	Index Wanzhou cluster:			3	
	Index Yunnan cluster:			1	
	Index Guizhou cluster:			2	
	Index Ebian cluster:			1	
	Index Ya'an cluster:			1	

	Average index:	2	
Justification	Training and capacity building programs for Wulong and Wanzhou clusters were verified by TÜV NORD JI/CDM Certification Program in point two monitoring period/16/. The verification team is through checking the project activity record of Guizhou cluster in Nov 2016/18/, it is confirmed that the first aid training and environmental protection education was organized by Longqiao Hydroelectric Plant (No. 68). The first aid training was about the skills of first aid and safety, for example, how to save someone if he fell into the river accidentally including the cardiopulmonary resuscitation for the local stakeholders, especially for the elder persons. Furthermore, the activity introduced the importance of environment protection to the local stakeholders, including the children. The training was organized by Longqiao Hydroelectric Plant and financed by Swiss Carbon Value Ltd. 28 local stakeholders participated in the training. Perspectives: None at the moment.		
Evidence	The project activity record of Guizhou cluster in Nov 2016, included training attendance sheet and pictures /18/ Final Verification Report Point Two Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China /16/		

Indicator	7. Gender diversity							
Situation	Evaluates the employment opportunities provided by the project to women							
There is currently no woman employed.	There is currently no woman employed, but the companies have started a selective process.	Less than 15% of employees are women.	Between 15 ≤ 30% of employees are women.	More than 30% of employees are women.	In addition to more than 30% of employees being women, the companies present initiatives or combat gender discrimination .			
Score	<table><tr><td>Index Wulong cluster:</td><td>4</td></tr></table>						Index Wulong cluster:	4
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	
Justification	In all 6 clusters, according to a site visits made by South Pole, Ecochain and DOEs during VCS verification, it is confirmed that about 20 to 30% of project employees are female workers. In total there are about 240 women. Perspectives: None at the moment.		
Evidence	Final Verification Report Point Two Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China /16/		

3.2.3 Financial Resource

Indicator	8. Sale of Credits				
Situation	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				
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.	Credits with high aggregated value, above the market average.
Score					
	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	
Justification	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. Perspectives: None at the moment.		
Evidence	Final Verification Report Point Two Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China /16/		

Indicator	9. Funds for social & environmental co-benefits				
Situation	Evaluates if strategic planning and funds for implement programs to achieve continual improvement goals are available and how much.				
There are no funds nor strategic planning for additional programs.	Up to USD 10,000.00 (per cluster) in funds were invested in cobenefits, but in isolated initiatives.	Up to USD 10,000.00 (per cluster) in funds were directed to cobenefits, according to strategic planning for progressive initiatives, thru investments of certain project owners individually.	More than USD 10,000.00 (per cluster) in funds were directed to cobenefits, according to strategic planning for progressive initiatives, thru investments of certain project owners individually.	More than USD 10,000.00 (per cluster) in funds were directed to cobenefits, according to strategic planning for progressive initiatives, thru an organized association of project owners.	More than USD 30,000.00 (per cluster) in funds were directed to cobenefits, according to strategic planning for progressive initiatives, thru an organized association of project owners.

Score	Index Wulong cluster:	2
	Index Wanzhou cluster:	2
	Index Yunnan cluster:	2
	Index Guizhou cluster:	2
	Index Ebian cluster:	1
	Index Ya'an cluster:	1
	Average index:	2
Justification	According to the social carbon verification report of point two, in Wulong, Wanzhou, Yunnan and 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. Meanwhile, by interview with the Carbon Credit Buyer South Pole, there is not newly invested in cobenefits during this monitoring period. Perspectives: None at the moment.	
Evidence	Final Verification Report Point Two Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China/16/.	

Indicator	10. Economic performance					
Situation	Evaluates if the economic performance of the project met the expectations of the shareholders and directors regarding yuan per megawatt.					
Very low performance. Economic goals for power sale established have not been reached.	Low performance. Economic goals and expectations established for power sale have been partially reached.	Moderate performance. Economic goals and expectations established have almost been accomplished.	Adequate performance. Economic goals and expectations established have been accomplished.	Good performance. Economic goals and expectations established have been accomplished and, in some cases, surpassed.	Outstanding performance. Economic goals and expectations established have all been surpassed.	

Score	Index Wulong cluster:	3
	Index Wanzhou cluster:	3
	Index Yunnan cluster:	3
	Index Guizhou cluster:	3
	Index Ebian cluster:	3
	Index Ya'an cluster:	3
	Average index:	3
Justification	The economic performance of the project basically met the expectations of the shareholders. Perspectives: None at the moment.	
Evidence	Final Verification Report Point Two Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China /16/	

3.2.4 Natural Resource

Indicator	11. Environmental impacts and compliance with regulation				
Situation	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).				
Inadequate fulfilment of environmental legal obligations. Therefore, the environmental license was suspended.	The environmental license has been issued, but there are uncertainties regarding the environmental impact since there are no studies.	The environmental license has been issued, but studies show high environmental impact and mitigation measures for such impacts are not yet in place.	The environmental license has been issued, but studies show high environmental impact and mitigation measures for such impacts were taken.	The environmental license has been issued and studies show neutral environmental impact.	In addition to scenario 5, the project implements new technologies or innovative processes to prevent environmental impacts.

Score	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
Justification	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. Perspectives: None at the moment.	
Evidence	Final Verification Report Point Two Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China /16/	

Indicator	12. Support from NGOs					
Situation	Evaluates the support from NGOs and Institutes to the project's activities.					
The project has no support from NGOs.	The project has the support of only one NGO.	The project has the support of two NGOs.	The project has the support of more than two NGOs.	In addition to scenario 4, the project and the NGOs developed environmental programs, but there are still uncertainties	In addition to scenario 5, the project and the NGOs developed environmental programs which have reported great impacts	

				about the benefits.	on the environment.
Score					
	Index Wulong cluster:			2	
	Index Wanzhou cluster:			2	
	Index Yunnan cluster:			3	
	Index Guizhou cluster:			1	
	Index Ebian cluster:			1	
	Index Ya'an cluster:			2	
	Average index:			2	
Justification	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. In Ya'an cluster, YSVA, a NGO, organized the education program for the local students. Those are verified through checking the project activity records/18//19//20//21/. Perspectives: None at the moment.				
Evidence	the project activity records /18//19//20//21/				

Indicator	13. Community environmental education programs				
Situation	Evaluates the relevant environmental education programs related to the project, including additional programs to the stakeholders and broader community.				
The project did not offer any environmental education activities.	The project offered only one environmental education activity.	The project offered two environmental education activities.	The project offered three environmental education activities.	The project offered four environmental education activities.	The project offered more than four environmental education activities.
Score					

	Index Wulong cluster:	2
	Index Wanzhou cluster:	2
	Index Yunnan cluster:	3
	Index Guizhou cluster:	2
	Index Ebian cluster:	1
	Index Ya'an cluster:	2
	Average index:	2
Justification	According to the previous social carbon verification report/15//16//17/, one environmental education programs had been implemented in Wulong, Wanzhou and two environmental education programs had been implemented in Yunnan clusters. Furthermore, through checking the project activity record/18/, it is confirmed that one environmental protection education for the local stakeholders, including the children of Guizhou cluster, which are mainly about the importance of environmental protection, was organized by Longqiao Hydroelectric Plant (No. 68) and financed by Swiss Carbon Value Ltd.. The verification team checked the project activity record /21/, it is confirmed that in 2018, the education program held in Ya'an cluster included visits to Museum, Library and Science Museum in Yingjing county, Ya'an city, Sichuan province, which benefited the tourism of Yingjing county. 95 children participated. The education program was held by the YSVA and financed by Swiss Carbon Value Ltd. Perspectives: Implement education programs similar to the previous initiatives in at least two clusters.	
Evidence	the previous social carbon verification report/15//16//17/ and the project records /18//21/	

3.2.5 Biodiversity/Technology Resource

Situation	Evaluates 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				
Not know or	Very limited	Good range	Good range	Good access	In addition to

no assessment of range of access to electricity.	access to the electricity provided, due to absence of grid connection.	of grid connection, but people have difficulties regarding the access to electricity due to the high cost.	of grid connection and accessible costs, but facing some gaps due to the low quality or effectiveness of delivery of electricity.	to electricity services, with minor or no gaps in grid connection, costs and quality of the electricity provided.	the previous scenario, there is at least one additional program that gives users discounts on electricity bills.														
Score	<table><tr><td>Index Wulong cluster:</td><td>4</td></tr><tr><td>Index Wanzhou cluster:</td><td>4</td></tr><tr><td>Index Yunnan cluster:</td><td>4</td></tr><tr><td>Index Guizhou cluster:</td><td>4</td></tr><tr><td>Index Ebian cluster:</td><td>4</td></tr><tr><td>Index Ya'an cluster:</td><td>4</td></tr><tr><td>Average index:</td><td>4</td></tr></table>					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
	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																	
Justification					According to the questionnaires made by South Pole, and previous DOEs during Social Carbon verification/19/, it is confirmed that all households in the 6 clusters, are connected to the grid. The electricity is stable. The electricity interruption is less than once a week according to the questionnaires collected. The locals pay 0.55 RMB/kwh (about 0.09 USD/kwh) and it is affordable. They are using traditional electric housewares (TV, washing machine, refrigerator etc). Perspectives: None at the moment.														
Evidence					Questionnaires made by South Pole, and previous DOEs during Social Carbon verification /22/														

Indicator	15. Technological benefits of electricity
Situation	Evaluates the technological benefits brought by the electricity provided by the

	project, such as: - Irrigation - Mechanization - Household appliances - IT and communication																		
The electricity provided by the project brought no benefits.	The electricity provided by the project brought benefits to one of the areas below: - Irrigation - Mechanization - Household appliances - IT and communication	The electricity provided by the project brought benefits to two of the areas below: - Irrigation - Mechanization - Household appliances - IT and communication	The electricity provided by the project brought benefits to three of the areas below: - Irrigation - Mechanization - Household appliances - IT and communication	The electricity provided by the project brought benefits to all the areas below: - Irrigation - Mechanization - Household appliances - IT and communication	In addition to scenario 5, the electricity provided by the project brought other types of benefits, such as the development of the commerce.														
Score	<table><tr><td>Index Wulong cluster:</td><td>3</td></tr><tr><td>Index Wanzhou cluster:</td><td>4</td></tr><tr><td>Index Yunnan cluster:</td><td>3</td></tr><tr><td>Index Guizhou cluster:</td><td>3</td></tr><tr><td>Index Ebian cluster:</td><td>3</td></tr><tr><td>Index Ya'an cluster:</td><td>3</td></tr><tr><td>Average index:</td><td>3.5</td></tr></table>					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
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																		
Justification	Through checking the questionnaires collected/22/, 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/22/. Through checking the questionnaires collected/22/, 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. Through cheking the questionnaires collected/22/, it is confirmed that more than half of the people in the sample population own a telephone. About half have access to internet. Perspectives: Monitor the infrastructural improvement through questionnaires.
Evidence	Questionnaires made by South Pole, and previous DOEs during Social Carbon verification /22/

Indicator	16. Operational performance					
Situation	Evaluates if the operational performance of the project met the expectations of the shareholders and directors in relation to megawatts generated.					
Very low performance. Operational goals established have not been reached.	Low performance. Operational goals and expectations established have been partially reached.	Moderate performance. Operational goals and expectations established have almost been accomplished.	Adequate performance. Operational goals and expectations established have been accomplished.	Good performance. Operational goals and expectations established have been accomplished and, in some cases, surpassed.	Outstanding performance. Operational goals and expectations established have all been surpassed.	
Score						
	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	
Justification	The operations of the plants are normal. The previous social carbon verifications all has good results. Perspectives: None at the moment.		
Evidence	Interview		

3.2.6 Carbon Resource

Indicator	17. Project performance					
Situation	Evaluates performance of project, verified by comparison with estimates of emissions reductions under the PDD.					
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 100% of carbon credits predicted for the period were effectively generated.	Excellent: More than 100% of carbon credits predicted for the period were effectively generated.	
Score						
	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	
Justification	704,598 Credits were expected from 26/09/2016 to 25/06/2018. The amount monitored from 26/09/2016 to 25/06/2018 was 605,109, so 86% of the expected credits has been achieved. This is verified checking against the latest VCS verification report/4/. Perspectives: Achieve at least 76% of carbon credits predicted.		
Evidence	7 th VCS Final Verification Report by China Building Material Test and Certification Group Co., Ltd Version 2.0, 26 th Dec. 2018 /4/		

Indicator	18. Stakeholder consultation				
Situation	Evaluates the methodology used for stakeholder consultation. The stakeholder consultation consists of interviews, workshops or questionnaires made with people who are involved or interact with climate change projects.				
No stakeholder consultation was carried out during the period analyzed.	A stakeholder consultation was conducted but it did not meet any of the following requirements: - Frequency: once a year; - Invitations: most of stakeholders' groups were invited; - Record: comments were recorded.	At least one of the following requirements was met: - Frequency: once a year; - Invitations: most of stakeholders' groups were invited; - Record: comments were recorded.	At least two of the following requirements was met: - Frequency: once a year; - Invitations: most of stakeholders' groups were invited; - Record: comments were recorded.	All of the following requirements were met: - Frequency: once a year; - Invitations: most of stakeholders' groups were invited; - Record: comments were recorded.	As well as the previous scenario, the project developer maintains open channels of communication with stakeholders.
Score					

	Index Wulong cluster:	4	
	Index Wanzhou cluster:	4	
	Index Yunnan cluster:	4	
	Index Guizhou cluster:	4	
	Index Ebian cluster:	1	
	Index Ya'an cluster:	1	
	Average index:	3	
Justification	In Wulong cluster, a stakeholder consultation was organized by Wulong Small Hydropower Station Association and Swiss Carbon Value Ltd. in 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 Swiss Carbon Value Ltd. in 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 Swiss Carbon Value Ltd. in 2013 and it was both questionnaire and meeting. The participants were local villagers and project owners. This is verified by TÜV NORD JI/CDM Certification Program during the Social Carbon point two monitoring period. In Guizhou cluster, a stakeholder consultation was organized by Longqiao Hydroelectric Plant (No.68) and Xinmin Stage II Hydroelectric Plant(No.73) in 2016 and it was both questionnaire and meeting. The participants were local villagers and project employees. There are 62 questionnaires were collected. These are verified checking against the project activity records/18//19//20/. Perspectives: None at the moment.		
Evidence	the project activity records /18//19//20/		

Indicator	19. Green marketing
Situation	Evaluates whether the project has marketing appeal regarding the list below: - Location - Pictures - Human related events

The project does not show marketing appeal based on their environmental practices.	The project shows marketing appeal regarding just one of the following aspects: - Location - Pictures - Human related events	The project shows marketing appeal regarding two of the following aspects: - Location - Pictures - Human related events	The project shows marketing appeal regarding all of the following aspects: - Location - Pictures - Human related events	The project shows marketing appeal regarding all of the following aspects plus one other: - Location - Pictures - Human related events	The project shows marketing appeal regarding all of the following aspects plus two other: - Location - Pictures - Human related events														
Score	<table><tr><td>Index Wulong cluster:</td><td>4</td></tr><tr><td>Index Wanzhou cluster:</td><td>4</td></tr><tr><td>Index Yunnan cluster:</td><td>4</td></tr><tr><td>Index Guizhou cluster:</td><td>4</td></tr><tr><td>Index Ebian cluster:</td><td>1</td></tr><tr><td>Index Ya'an cluster:</td><td>4</td></tr><tr><td>Average index:</td><td>3.5</td></tr></table>					Index Wulong cluster:	4	Index Wanzhou cluster:	4	Index Yunnan cluster:	4	Index Guizhou cluster:	4	Index Ebian cluster:	1	Index Ya'an cluster:	4	Average index:	3.5
Index Wulong cluster:	4																		
Index Wanzhou cluster:	4																		
Index Yunnan cluster:	4																		
Index Guizhou cluster:	4																		
Index Ebian cluster:	1																		
Index Ya'an cluster:	4																		
Average index:	3.5																		
Justification	Via checking the project activity record in Yunnan, Wulong, Wanzhou, Ya'an and Guizhou/18//19//20//21/, it is confirmed in Yunnan, Wulong, Wanzhou, Ya'an and Guizhou clusters, social carbon activities were organized in 2013, 2015, 2016 and 2018 and there are lots of pictures are available/18//19//20//21/. While, in Ebian, 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. Perspectives: None at the moment.																		
Evidence	the project activity records /18//19//20//21/.																		

3.3 ANALYSIS OF SOCIALCARBON RESULTS

3.3.1 Current Performance

The current report (Point Four) uses the “Indicators for Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P. R. China Version 1.1, July 2015”/7/, which considers entirely different criteria and evaluates all 6 clusters.

The overall results of this monitoring period (26/09/2016 to 25/06/2018) assessed by CTC verification team as follow:

Resource	Critical	Satisfactory	Sustainable	Average Score	Performance
Social	33.3%	66.7%	0.0%	3.3	Satisfactory
Human	25.0%	75.0%	0.0%	3.1	Satisfactory
Financial	33.3%	66.7%	0.0%	3.0	Satisfactory
Natural	66.7%	0.0%	33.3%	3.0	Satisfactory
Biodiversity	0.0%	100.0%	0.0%	3.8	Satisfactory
Carbon	0.0%	66.7%	33.3%	3.8	Satisfactory

3.3.2 Historical Performance

In Point Zero and One it was used the “Indicators for Micro and Small-Scale Hydropower Grouped Project Version 1.1, June 2011” /23/ and focused on partial of selected clusters.

In Point two, point three and the current report (Point Four) uses the “Indicators for Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P. R. China Version 1.1, July 2015”/7/.

Monitoring Period	Point Zero	Point One	Point Two	Point Three	Point Four
Social	3.5	4.5	3.0	3.2	3.3
Historic Analysis: The Social Resource had a satisfactory performance in this monitoring period (Point Four), because of the comprehensiveness of local socio-economic conditions and the social impact of the project especially regarding household appliances and irrigation, especially, the free physical examination had been held for the elderly in Guizhou Cluster and organized the education program to local students from Miaogang Village in Ya'an Cluster. And it has been slightly improved.					
Monitoring Period	Point Zero	Point One	Point Two	Point Three	Point Four
Human	3.5	4.0	2.5	3.0	3.1
Historic Analysis: The Human Resource had a satisfactory performance in this monitoring period (Point Four), because of the training provided to staff members, the relatively high number of					

women working in the project and the creation of associations. And a first aid training and environmental protection education was held in Guizhou cluster and organized the education program to local students from Miaogang Village in Ya'an Cluster in this monitoring period (Point Four), therefore, the score is increased. Moreover, 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.

Monitoring Period	Point Zero	Point One	Point Two	Point Three	Point Four
Financial	4.0	4.0	3.0	3.0	3.0

Historic Analysis: The Financial Resource had a satisfactory performance in this monitoring period (Point Four), because of the stability of the project offset price compared to the market average price. But need to pay more attention regarding funds for social and environmental co-benefits during the next monitoring period, it is not achieved the prospect of point two and point three.

Monitoring Period	Point Zero	Point One	Point Two	Point Three	Point Four
Natural	4.0	4.0	3.0	3.0	3.0

Historic Analysis: The Natural Resource also had a satisfactory performance in this monitoring period (Point Four), because of the stability of compliance with regulations and because of environmental education programs. Furthermore, the environment education was held in Guizhou cluster and an education program was organized to local students from Miaogang Village in Ya'an Cluster during the Point Four period. Implement similar initiatives in the other clusters and/or find more support from NGOs will help to increase the score.

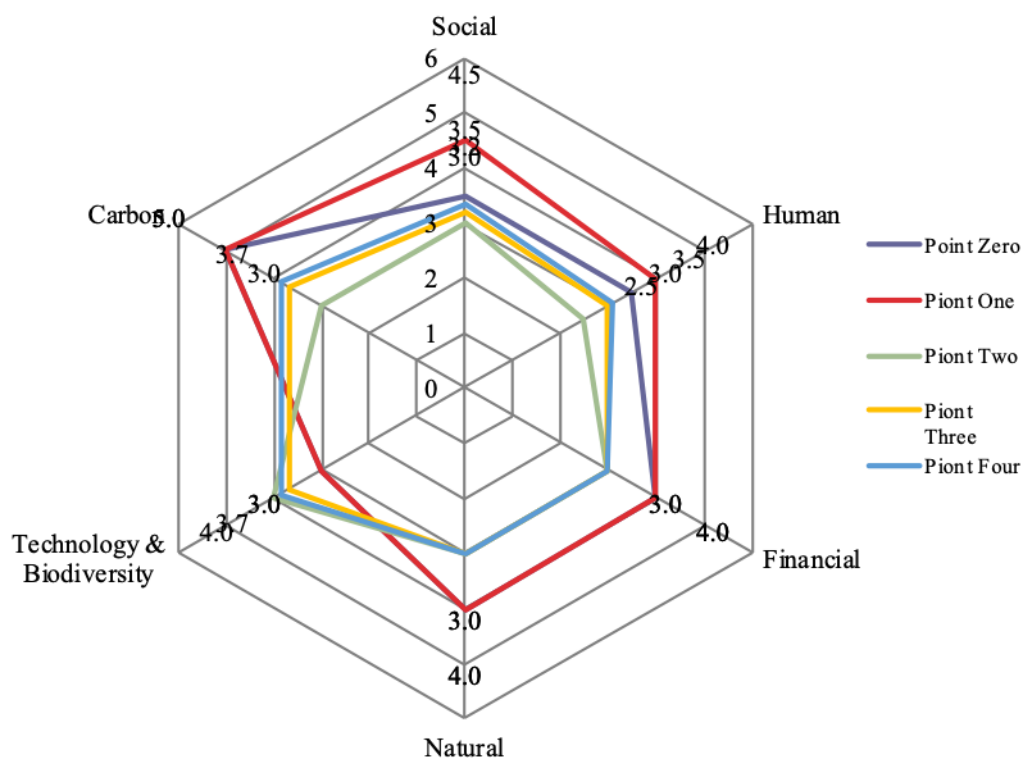
Monitoring Period	Point Zero	Point One	Point Two	Point Three	Point Four
Biodiversity	3.0	3.0	4.0	3.7	3.8

Historic Analysis: The Technological Resource also had a satisfactory score due to the good provision of electricity and operational performance, resulting in various benefits for the community surrounding the project. Promote the technological benefits of electricity in the other cluster will increased score.

Monitoring Period	Point Zero	Point One	Point Two	Point Three	Point Four
Carbon	5.0	5.0	3.0	3.7	3.8

Historic Analysis: The Natural Resource also had a satisfactory performance in this monitoring period (Point Four), especially with the project performance, in addition, a local stakeholder's consultation had been organized, a free physical examination was held for the local stakeholders in Guizhou cluster and organized an education program to local students from Miaogang Village in Ya'an Cluster. Stakeholders consultations and better green marketing must be made in the other clusters in order to increase the score.

3.3.1 Performance Hexagon



3.4 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 this report.
Detail	Point 2,3 and 4 presented additional programs that benefited the population surrounding the project, such as agricultural education events for adults, donations to students and provision of books and other materials for schools, free physical examination for local elders, first aid training for local villagers, education program for local students. The verification team confirmed it through checking the project records /18/ /19//20//21/ and communication with the PP.

Social Resource	
Indicator	Socioeconomic issues
Prospect	Further assessments will be carried out in the other clusters.
Detail	Point 2,3 and 4 redesigned the entire methodological approach and the indicators to assess social & economic impacts in all 6 clusters.

Natural Resource	
Indicator	Additional environmental programs
Prospect	Provide environmental education for kids
Detail	Eco education programs were held during Point 2 monitoring period. Education program about environmental protection was held during Point 4 monitoring. The verification team confirmed it through checking the project records /18/ /19//20//21/and communication with the PP.

2. Not achieved prospects

Financial Resource	
Indicator	Costs for additional programs
Prospect	Experience will improve the planning of additional programs for future implementation.
Detail	Yunnan cluster is yet to complete financial planning for additional programs. Nevertheless, despite the lack of a formally structured plan, there were investments in additional education programs in 4 clusters, including Yunnan and Guizhou, which shows that a systematic approach is under development .

Biodiversity/ Technology Resource	
Indicator	Additional technology and biodiversity programs
Prospect	Provide equipment for computer classrooms building
Detail	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.
Detail	The foreseen program is no longer an interest.

3. Prospects In the next SCR

Social Resource	
Indicator	Social programs for the elderly
Current Score	2.3
Action	Implement social program for the elderly and children, such as first aid training or environment protection education in local villages.
Timescale	Will be checked during next monitoring period

Human Resource	
Indicator	Capacity of local association
Current Score	3
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	2
Action	Improve scores for at least two clusters

Timescale	Will be checked during next monitoring period
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Natural Resource	
Indicator	Community environmental education programs
Current Score	2
Action	Implement education programs similar to the previous initiatives in at least two clusters
Timescale	Will be checked during next monitoring period

Biodiversity/ Technology 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	5
Action	Achieve at least 76% of carbon credits predicted.
Timescale	Will be checked during next monitoring period

4 VERIFICATION CONCLUSION

China Building Material Test and Certification Group Co., Ltd (CTC), commissioned by Swiss Carbon Value Ltd., has performed the Social Carbon Point Four periodic verification of the Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China (hereafter referred to as "the Project") covering the monitoring period from 26/09/2016 to 25/06/2018, with regard to the relevant requirements for VCS and Social Carbon project activities.

The Project involves the installation and operation of 88 run-of-river hydropower plants in Chongqing, Sichuan, Guizhou and Yunnan Provinces, People's Republic of China.

The Project has been registered as a VCS project (VCS Registration No. 438) under VCS 2007.1 using approved CDM methodology AMS-I.D- "Grid connected renewable electricity generation" (Version 13.0) with the first renewable crediting period from 28/03/2006 to 27/03/2016. And the project has been updated the second crediting period from 28/03/2016 to 27/03/2026 under Verified Carbon Standard (VCS) Version 3.7 using the approved CDM methodology AMS-I.D. "Grid connected renewable electricity generation" (Version 18.0) on 7th April 2017.

The verification process includes three phases:

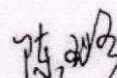
- 1) Desk review of documents;
- 2) On-site visit and follow-up interviews;
- 3) Issuance of the final verification report and opinion.

CTC appointed a qualified verification team in accordance with internal procedures to perform the verification.

In the course of the verification, No Corrective Action Request (CAR) or Clarification Requests (CL) was raised.

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 Three, the subsequent interviews, and the further cross-check of references have provided by CTC with sufficient evidences to determine the fulfilment of stated criteria in the guideline.

CTC herewith confirms that the project has meets all relevant Social Carbon Standard requirements and recommend the project for issuance by Social Carbon Standard.



Chen Lu
Deputy General Manager

APPENDIX A: REFERENCE

Documents provided by the Project Participant and relevant background documents have been reviewed or referenced for the periodic verification conclusions.

Ref no.	Reference Document
/1/	VCS Project Description of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, Version 3.0 13 th September 2017
/2/	Final VCS Validation Report by China Building Material Test and Certification Group Co., Ltd Version 1.1 13 th September 2017
/3/	7 th VCS Monitoring Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, Version 2.0, 26 th Dec 2018
/4/	7 th VCS Final Verification Report by China Building Material Test and Certification Group Co., Ltd Version 2.0, 26 th Dec. 2018
/5/	Social Carbon Standard, Version 5.0, July 2013
/6/	Guide for Completing Social Carbon Reports, Version 4, September 2013
/7/	Indicators for Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P. R. China Version 1.1, July, 2015
/8/	Point Zero Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, 15 th October 2010
/9/	Point One Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, 25 th July 2012
/10/	Point Two Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R.China, 16 th July 2015
/11/	Point Three Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R. China, 15 th Jan 2017
/12/	Point Four Social Carbon Report of Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou provinces, P.R. China, 19 th Dec 2018
/13/	VCS Standard (Version 3.7)
/14/	SOCIALCARBON Validation Report-Grouped Hydro-20101015
/15/	Final Verification Report Point One Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China
/16/	Final Verification Report Point Two Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China
/17/	Final Verification Report Point Three Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China
/18/	The project activity record of Guizhou cluster in Nov 2016, included training attendance sheet and pictures

/19/	The project activity record of Yunnan cluster in 2013, included training attendance sheet and pictures
/20/	The project activity record of wulong & wanzhou cluster in 2015, included training attendance sheet and pictures
/21/	The project activity record of Ya'an cluster in 2018, included training attendance sheet, feedback and pictures
/22/	Questionnaires made by South Pole, and previous DOEs during Social Carbon verification
/23/	Indicators for Micro and Small Scale Hydropower Grouped Project Version 1.1, June 2011

APPENDIX B: RESOLUTION OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS

Table 1. CL from this verification

CL ID	N/A	Section no.	N/A	Date: N/A
Description of CL				
N/A				
Project participant response				Date: N/A
N/A				
Documentation provided by project participant				
N/A				
DOE assessment				Date: N/A
N/A				

Table 2. CAR from this verification

CAR ID	N/A	Section no.	N/A	Date: N/A
Description of CAR				
N/A				
Project participant response				Date: N/A
N/A				
Documentation provided by project participant				
N/A				
DOE assessment				Date: N/A
N/A				

Table 3. FAR from this verification

FAR ID	N/A	Section No.	N/A	Date: N/A
Description of FAR				

N/A	
Project participant response	Date: N/A
N/A	
Documentation provided by project participant	
N/A	
DOE assessment	Date: N/A
N/A	

APPENDIX C: CERTIFICATES OF COMPETENCE

 中国建材检验认证集团股份有限公司
China Building Material Test & Certification Group Co., Ltd.

CERTIFICATE OF APPOINTMENT

Mr. Zhang Yi

Satisfies the requirements as specified in the CTC CCP and is
hereby appointed as

CDM Validator/verifier.

The present appointment will terminate on 2019-12-01.

Date of Issue: 2016-12-01.



Ma Zhenzhu
CTC General Manager

 中国建材检验认证集团股份有限公司
China Building Material Test & Certification Group Co., Ltd.

CERTIFICATE OF APPOINTMENT

Ms. Zhao Jinlan

Satisfies the requirements as specified in the CTC CCP and is
hereby appointed as

CDM Validator/verifier.

The present appointment will terminate on 2020-11-30.

Date of Issue: 2017-11-30.



Ma Zhenzhu
CTC General Manager

 中国建材检验认证集团股份有限公司
China Building Material Test & Certification Group Co., Ltd.

CERTIFICATE OF APPOINTMENT

Mr. Tang Zhi'ang

Satisfies the requirements as specified in the CTC CCP and is
hereby appointed as

CDM Validator/verifier.

The present appointment will terminate on 2019-12-01.

Date of Issue: 2016-12-01.



Ma Zhenzhu
CTC General Manager