
Project Title	WCD Assessment of Sujiahekou Hydropower Station
Report Date	31 May 2011
Report Status	Final Report
Client Name	Tricorona Carbon Asset Management Co Ltd
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Version Control	Date
Draft Report	11 May 2011
Final Report	31 May 2011

Project Title	WCD Assessment of the Sujiahekou Hydropower Station
Project Location	The project is located on the Binglangjiang River in Tengchong County, within the prefecture of Baoshan City, Yunnan Province,
Country	PR China
Project Parties	People's Republic of China (host); Sweden
Project Participants	Yunnan Baoshan Binglangjiang Hydropower Development Co., Ltd. (as the Project Owner; Carbon Asset Management Sweden Pte Ltd (CER Buyer)
Methodology used	ACM0002 (Version 12.1.0): "Consolidated baseline methodology for grid-connected electricity generation from renewable sources"
Methodology version number	Version 01
Estimated Annual Average Emission Reductions	880,979 tCO ₂ e
Crediting Period	The project activity utilises the renewable crediting period (7 years×3), and the estimation of the emission reduction in the first crediting period from 2012 to 2018.

Summary

Yunnan Baoshan Binglangjiang Hydropower Development Co., Ltd (the Project Owner) and the Carbon Asset Management Sweden Pte Ltd (CER Buyer) intended to register the Sujiahekou Hydropower Station, a 315MW newly built hydro-electric development (the Project) located on Binglangjiang River in Tengchong County, within the prefecture of Baoshan City, Yunnan Province, PR China under the Clean Development Mechanism (CDM). As part of the registration process, ERM CVS was contracted by Tricorona Carbon Asset Management Co Ltd to validate the compliance of the Project against Article 11 B (6) of the EU Emissions Trading Directive which requires hydropower projects over 20MW to have respected the World Commission on Dams November 2000 Report "*Dams and Development – A New Framework for Decision-Making*", during their development.

The assessment is not meant to provide any consulting services for Tricorona Carbon Asset Management Co Ltd. However, the stated audit findings may provide useful input for improvement of the Project.

As mentioned-above, the Project is built on the Binglangjiang River and lies within the administrative area of Houqiao Township, Tengchong County, within the jurisdiction of Baoshan City, Yunnan Province, Southwest China (the site location and site layout plans of the Project are provided in Appendices D and E, respectively). The main infrastructure for the Project includes a dam, water diversion systems, a power generation system, transmission lines, workers' dormitory and an administrative office. The project dam is located approximately 410m downriver of the confluence of the Binglangjiang and Xiongjiagou rivers. It is about 80km west of Tengchong and about 220km west of Baoshan City. The submerged area of the reservoir is approximately 5.47km², located within the boundary of Houqiao Township, Tengchong County. A total of 465 people have been directly impacted by the project. These include 196 people who were impacted through acquisition of all or part of their cultivated land and 269 requiring resettlement due to construction of the project and inundation of the reservoir area. The relevant stakeholders have been informed of both the direct impacts of the development of the hydropower project on their own residences and land holdings and on the wider impacts on the Binglangjiang River. The local communities have generally supported the Project and compensation has been paid to those impacted by land acquisition.

Based on discussion with the site management and observations made by the ERM CVS team, the Project will include three generator sets rated at 105MW each, giving a total installed capacity of 315MW. At the time of the ERM CVS site visit, the general civil infrastructure of the Project was close to completion and the first generator set (105MW) was under trial operation. The site management reported that the Project is expected to be in formal operation in early 2012.

This assessment has been performed by ERM CVS through a review of available documentation and, from 12 to 14 April 2011, a site visit, during which time interviews were undertaken with the project developer, their technical advisors, local authorities and selected project affected stakeholders. Based on the review of the Project, the strategic priorities of the WCD are found to have been respected during project development. With respect to on-going compliance, four Forward Action Requests (FAR) have been raised below to be addressed at appropriate times in the future.

Forward Action Request (FARs):

FAR1: To ensure compliance with regulatory requirements, an abstraction permit should be obtained from the local Water Resources Management Bureau and a copy of it maintained onsite for record purposes. It is understood that a water abstraction permit will be applied for and is expected to be received before the Project commences full operations in early 2012. The site management should ensure that the abstraction permit is applied for to allow sufficient time for it to be processed by the various levels of government and issued before the Project is due to commence operation.

FAR2: Due to the construction of the dam the natural flow of the river will be obstructed and the ecosystem will be negatively affected by the project. Based on a statement made by the site management in discussions with the local EPB during the

site visit, ERM CVS understands that the Site plans a periodic fish release into the river upstream of the project, based on the condition of fish stocks in the river after the power plant becomes operational. In order to ensure that mitigation of this potential impact on the aquatic ecosystem takes place, the anticipated expense related to the activity of periodically releasing juvenile fish fry into the river should be included in the Project's financial plan.

FAR3: The Project should obtain a CAI approval within three months of commencement of trial operations, extendable up to one year after commencement.

FAR4: The project developer should implement an ESMMP once the project commences operations and conduct regular monitoring of the implementation status of the ESMMP.

Client	Carbon Asset Management Sweden Pte Ltd	
Client Representative	Ms Ting Wang	
Report approved by		Signature 
Name: Melanie Eddis		
Date: 31 May 2011		

Table of Contents

1. Introduction

1.1. Objective

1.2. Approach

2. Approach

2.1 Report Structure

2.2 Assessment Process

2.3 Documentation Review and Expert Interviews

2.4 Internal Quality Control

3. Conclusion

3.1 Gaining Public Acceptance

3.2 Comprehensive Options Assessment

3.3 Addressing Existing Dams/ Hydroelectric Projects

3.4 Sustaining Rivers and Livelihoods

3.5 Recognising Entitlements and Sharing Benefits

3.6 Ensuring Compliance

3.7 Sharing Rivers for Peace, Development and Security

Appendix A: Compliance Report Assessing Application of Article 11 B (6) Of Emissions Trading Directive to Hydroelectric Project Activities Exceeding 20 MW (Final Version of 17 November 2008)

Appendix B: Remediation Form

Appendix C: Photo log

Appendix D: Site Location

Appendix E: Site Layout Map

Abbreviations

CAI	Completion Acceptance Inspection
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
Co	Company
COD	Chemical Oxygen Demand
CVS	Certification and Verification Services
DOE	Designated Operational Entity
DRC	Development and Reform Commission
DNA	Designated National Authority
EIA	Environmental Impact Assessment
EPB	Environmental Protection Bureau
EHS	Environmental Health & Safety
ERM	Environmental Resources Management
ESMMP	Environmental and Social Management and Monitoring Plan
etc	'and other things' or 'and so on' (Latin: <i>et cetera</i>)
EU	European Union
GHG	Greenhouse Gas
g/s	Grams per second
GWh	Gigawatt hours
FAR	Forward Action Request
FSR	Feasibility Study Report
ID	Identification
hm ³	Cubic hectometre
i.e	That is (Latin: <i>id est</i>)
km	Kilometre
km ³	Cubic kilometre (or kilometre cubed)
KT or kt	Kilo tonne
KV or kV	Kilovolt
Ltd	Limited
M or m	Metre
m ²	Square metre (or metre squared)
m ³	Cubic metre (or metre cubed)
m ³ /s	Cubic metres per second
mn	Manganese
MW	Megawatt
MWh	Megawatt hour
N/A	Not applicable
NDRC	National Development and Reform Commission
PAPs	Project-Affected People
PD	Project Developer

PDD	Project Design Document
pH	Measure of the strength of acidity or alkalinity
PRC	People's Republic of China
RMB	Renminbi (or Chinese Yuan)
t CO ₂ e	Tonnes of Carbon Dioxide Equivalent
TV	Television
UK	United Kingdom
W/m ²	Watts per square metre
WCD	World Commission on Dams
WRA	Water Resource Assessment
yr	Year

1. Introduction

1.1 Objective

ERM CVS was contracted by Tricorona Carbon Asset Management Co Ltd (Tricorona) to validate the compliance of the Sujiahekou Hydropower Station against Article 11 B (6) of the Emissions Trading Directive, which requires hydroelectric projects over 20MW to have respected the World Commission on Dams November 2000 Report “*Dams and Development – A New Framework for Decision-Making*” during their development. The Sujiahekou Hydropower Station (the Project) is a newly built hydropower facility located on the Binglangjiang River in Tengchong County, within the prefecture of Baoshan City, Yunnan Province in China, with a total electrical generating capacity of 315 MW.

1.2 Approach

The site visit was conducted by ERM CVS's Assessment Team (see table below) from 12 to 14 April 2011. The site visit comprised interviews with the project management team, local governmental officials and Project affected people, a field inspection of the facilities and the surrounding environment and a review of relevant documentation.

Name	Role	Affiliate
Mr David Arthur	Technical Review	ERM CVS
Ms Mickey Liu	Lead Assessor	ERM CVS
Mr Peng Huang	Assessor	ERM CVS

David Arthur -- is a Chartered Engineer (UK) with more than 40 years experience in construction engineering and environmental management. He has acted as Technical Reviewer for more than 35 WCD assessments of CDM hydro projects.

Mickey Liu -- is a certified EHS Auditor. She has over three years of working experience specialising in EHS and Social Due Diligence auditing. She has acted as Lead Assessor and Assessor for more than ten WCD assessments of CDM hydro projects.

Peng Huang – has over ten years of working experiences specialising in CDM projects. He has acted as lead assessor for more than 30 CDM hydro projects.

2. Approach

2.1 Report Structure

The approach adopted by ERM CVS for this assessment is in accordance with requirements defined in Article 11b (6) of the European Commission linking Directive 2003/87/EC as amended by Directive 2004/101/EC. By adopting this latter directive, the European Union has undertaken to ensure that development of hydroelectric projects respect relevant international guidelines, represented by those contained in the World Commission on Dams (WCD) November 2000 Report “*Dams and Development – A New Framework for Decision-Making*” before issuing a Letter of Approval (LoA) agreeing to accept CERs under the EU ETS. As the WCD guidelines are generally considered at least as stringent as other relevant international guidelines, compliance with the WCD guidelines is generally accepted as meeting the requirements of Article 11b (6).

The WCD guidelines cover seven (7) strategic priorities, which in turn can be sub-divided under a number of specific headings. On 1 July 2009, a voluntary agreement was reached between EU Member State DNAs on a standard reporting structure for WCD reports on the basis of these seven strategic priorities and their subdivisions. The two key tables under Appendices A and B within this report follow this reporting template, as detailed in the table below.

Strategic Priority 1	Gaining Public Acceptance
1.	Stakeholder Analysis
2.	Negotiated Decision- Making Processes
3.	Free, Prior and Informed Consent
Strategic Priority 2	Comprehensive Option Assessment
4.	Strategic Impact Assessment for Environmental, Social, Health and Cultural Heritage Issues
5.	Project- Level Impact Assessment for Environmental, Social, Health and Cultural Heritage Issues
6.	Multi-Criteria Analysis
7.	Life Cycle Assessment
8.	Greenhouse Gas Emissions
9.	Distributional Analysis of Projects

10.	Valuation of Social and Environmental Impacts
11.	Improving Economic Risk Assessment
Strategic Priority 3	Addressing Existing Dams
12.	Ensuring that Operating Rules Reflect Social and Environmental Concerns
13.	Improving Reservoir Operations
Strategic Priority 4	Sustaining Rivers and Livelihoods
14.	Baseline Ecosystem Surveys
15.	Environmental Flow Assessment
16.	Maintaining Productive Fisheries
Strategic Priority 5	Recognizing Entitlements and Sharing Benefits
17.	Baseline Social Conditions
18.	Improvement Risk Analysis
19.	Implementation of the Mitigation, Resettlement and Development of Action Plan
20.	Project Benefit-Sharing Mechanisms
Strategic Priority 6	Ensuring Compliance
21.	Compliance Plans
22.	Independent Review Panels for Social and Environmental Matters
23.	Performance Bonds
24.	Trust Funds
25.	Integrity Pacts
Strategic Priority 7	Sharing River for Peace, Development, and Security
26.	Procedures for Shared Rivers

Source: WCD, 2000

2.2. Assessment Process

The assessment process adopted employed standard auditing techniques involving data review and cross-checks via publically available information and an on-site inspection and interviews with relevant stakeholders. The WCD Assessment Team comprised of staff with appropriate environmental and social assessment expertise and sound knowledge of the WCD Strategic Priorities and reporting expectations. The assessment report and associated documents have undergone a thorough technical review by ERM CVS before being submitted to the project developer for issuance to the appropriate DNA for an LoA (Letter of Approval) in support of a CDM application.

The WCD assessment consisted of the following key phases:

- (i) A desktop review of relevant documentation, including but not limited to (1) Project Design Document (PDD); (2) Water Resource Assessment Report; (3) Feasibility Study Report (FSR) or/and Preliminary Design Report (PDR); (4) Environmental Impact Assessment (EIA); (5) Land Acquisition and Resettlement Plan; (6) Compensation Contract or/and Record; (7) Safety Plan; and (8) the related project approvals from the relevant authorities.
- (ii) A visit to the project site, including an inspection of the facility, interviews with the personnel responsible for the development of the project, including the project owner, appropriate governmental agencies and local stakeholders directly affected by resettlement and/or permanent or temporary land acquisition.
- (iii) Assessment of a description of the project prepared on behalf of the Project Developer as set out within the tabular reporting template agreed for WCD Reports.
- (iv) Preparation of a set of draft comments on the project description prepared on behalf of the Project Developer, identifying areas where further information or clarification is required in the description provided, based on the information gathered during the first two stages of the assessment, and where there appear to be non-compliances with local regulations or misalignment with the strategic priorities of the WCD. These issues are raised as follow:
 - Requests for Clarification (CLs): These are raised where information in the project description is insufficient or unclear and further clarification or new information is required.
 - Corrective Action Requests (CARs): These are raised where an apparent non-conformance has been identified with either local regulations or the WCD strategic priorities.
 - Forward Action Requests (FARs): These are raised to highlight issues that typically require to be implemented at some future time within the project's development, either to comply with a regulatory requirement, or to meet requirements set out in appropriate permits, or in order to meet internationally expected practice.

- (v) Technical Review of the draft assessment report by one of ERM CVS's experienced senior WCD specialists and incorporation of review comments and any additional information required into the reporting text.
- (vi) Issuance of a draft assessment report to the Project Developer, to enable the Project Developer to address and close out all of the CLs and CARs that have been raised and to agree on how any FARs will be addressed and closed in the future in line with the requirements of the appropriate issuing DNA.
- (vii) On receipt of acceptable evidence that issues raised in the draft report have been adequately clarified or addressed and agreement has been reached on how to address any outstanding FARs, the report will be finalised ready for submission to the appropriate DNA.

2.3 Documentation Review and Expert Interviews

The assessment is based primarily on a review of relevant documentation and interviews with key stakeholders, typically including the project developer, any retained consultant, local authorities responsible for permitting, the local resettlement office and representatives of the directly impacted communities. The local water resources bureau may also be consulted in terms of strategic plans relating to the river catchment and water use and conservation in the catchment area.

Key documents reviewed as part of this assessment and used as sources of information are listed below:

Document Number	Document Title
DOC/001	<i>Clean Development Mechanism Project Design Document Form (CDM-PDD) for Sujiahekou Hydropower Station, Version 03, in effect as of 28 July 2006</i>
DOC/002	<i>Approval of Baoshan Municipal Sujiahekou Hydropower Station, Yunfagai Energy Resource [2006] No.848, issued by Yunnan Provincial Development and Reform Commission (DRC), on 24 July 2006</i>
DOC/003	<i>Approval of Baoshan Municipal Binglangjiang River River Section between Leidashi and Sujiahekou Hydropower Stations, Yunfagai Energy Resource [2005] No.1201, issued by Yunnan Provincial DRC, on 25 December 2005</i>
DOC/004	<i>Land Use Opinion for Binglangjiang River Sujiahekou Hydropower Station, Guotuzi Letter [2007] No. 690, issued by State's Ministry of Land Resources, on 31 August 2007</i>
DOC/005	<i>Feasibility Study Report (FSR) of Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station, prepared by Engineering Consulting Kunming Company of Water Conservancy and Hydroelectric Power of China, in January 2006</i>
DOC/006	<i>Approval of Water Resource Assessment Report of Binglangjiang River Sujiahekou Hydropower Station, Yunshuizheng Zi [2006] No.55, issued by Yunnan Provincial Water Resources Bureau, on 30 June 2006</i>
DOC/007	<i>Environmental Impact Assessment (EIA) Report of the Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station, prepared by Engineering Consulting Kunming Company of Water Conservancy and Hydroelectric Power of China, in April 2006</i>
DOC/008	<i>EIA Approval of the Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station, Yunhuan Xuzhun [2006] No.74, issued by Yunnan Provincial Environmental Protection Bureau (EPB), on 19 June 2006</i>
DOC/009	<i>Soil and Water Conservation Preliminary Plan of Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station, prepared by Yunnan Provincial Ecological Engineering & Planning Institute, in May 2006</i>
DOC/010	<i>Approval of Soil and Water Conservation Preliminary Plan of Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station, Yunshuibao [2006] No. 72, issued by Yunnan Provincial Water Resources Bureau, on 30 May 2006</i>
DOC/011	<i>Opinion Letter of the Permanent Forest Land Acquisition, Linzi Approval [2006] No.158, issued by State's Forest Bureau, 2006</i>
DOC/012	<i>Approval of the Temporary Forest Land Acquisition, Lindishen Zi [2006] No.141, issued by Yunnan Provincial Forest Bureau, on 8 May 2006</i>
DOC/013	<i>Approval of the Temporary Forest Land Acquisition, Lindishen Zi [2006] No. 156, issued by Yunnan Provincial Forest Bureau, on 8 May 2006</i>
DOC/014	<i>Appraising Report of Yunnan Provincial Baoshan Municipal Sujiahekou Hydropower Station Impounding, issued by Completion Commitment of Sujiahekou Hydropower Station, on 10 April 2010</i>
DOC/015	<i>Flood Impact Emergency Response Plan for Yuannan Baoshan</i>

	<i>Binglangjiang River Cascade Project (i.e. Sujiahekou and Songshan hekou Hydropower Station), developed by Yunnan Baoshan Binglangjiang Hydropower Development Co., Ltd, in April 2010</i>
DOC/016	<i>Approval of Flood Impact Emergency Response Plan for Yuannan Baoshan Binglangjiang River Cascade Project (i.e. Sujiahekou and Songshan hekou Hydropower Station), Tengying Lianfang Xuzhi [2010] No. 1, issued both by Flood Impact Emergency Response Headquarter of Tengchong and Yingjiang County, on 15 May 2010</i>
DOC/017	<i>Fire-fighting Design Report of Middle River Section of Binglangjiang River Sujiahekou Hydropower Station, prepared by Engineering Consulting Kunming Company of Water Conservancy and Hydroelectric Power of China, in May 2009</i>
DOC/018	<i>Notice on Compensation Standard regarding the Land Acquisition and Resettlement for Tengchong County Binglangjiang River Sujiahekou Hydropower Station, Tengzheng Fa [2006] No.42, issued by People's Government of Tengchong County, on 3 October 2006</i>
DOC/019	<i>Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station, prepared by Engineering Consulting Kunming Company of Water Conservancy and Hydroelectric Power of China, in May 2006</i>
DOC/020	<i>Approval of Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station, Yunyiji [2006] No. 11, issued on 26 May 2006</i>
DOC/021	<i>Resettlement Monitoring Report of Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station, prepared by Sujiahekou Hydropower Station Resettlement Monitoring Centre of Yunnan Provincial Resettlement and Development Centre, in May 2009</i>
DOC/022	<i>Construction Land Measurement Report of Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station, prepared by Yunnan Weiyao Guotu Measuring Co., Ltd, on 15 March 2006</i>
DOC/023	<i>48 Copies of Questionnaire (Samples), prepared for Sujiahekou Hydropower Station Public Consultation</i>
DOC/024	<i>The Lump Sum Work Agreement of Land Acquisition and Resettlement Task for Yunnan Province Tengchong County Binglangjiang River Sujiahekou Hydropower Station, signed between Yunnan Baoshan Binglangjiang River Co., Ltd and Baoshan Municipal Resettlement Bureau, on 12 October 2006</i>
DOC/025	<i>16 Copies of Land Acquisition and Resettlement Agreement (Samples), signed between Yunnan Baoshan Binglangjiang River Co., Ltd and project-affected households in 2009</i>
DOC/026	<i>Copy of Resettlement Monitoring Report of Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station, prepared by Yunnan Provincial Resettlement Service & Technology Centre, on 30 June 2009</i>

Expert interviews took place on site, via telephone, email, and face-to-face with the personnel responsible for developing the project and the various stakeholders as indicated above. The site visit took place between 12 and 14 April 2011. ERM CVS staff attending the site visit included Mickey Liu (lead assessor) and Peng Huang (assessor). The site visit included a tour of the physical extent of the project site, including the area where the dam is constructed, the power house from where the project site is operated, and the location for the employee's dormitory. The site visit also included a visit to the Centralized Resettlement Site, which has been established by the local government as part of the contribution of the project to the local society. Interviews carried out with staff from the, Yunnan Baoshan Binglangjiang Hydropower Development Co., Ltd as the project owner; the local consultant (Tricorona), responsible for the development of the project; local governmental agencies; as well as representatives of the local communities directly affected by the development of the project and the document review, took place at the offices of the project owner. A list of interviewees, and the main topics discussed with each can be found in the table below:

Date	Name	Position	Subject Discussed
Site Management			
12 April 2011	Mr Li	Local project manager of Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station, Tricorona	<ul style="list-style-type: none"> Basic conditions of the project Progress and timeline of the project Current status of the development of the Binglangjiang River Livelihoods of the number of local rural residents who are affected by land
	Ms Wang		
	Mr Chen	Official in charge of the Project, as well as the vice manager of Yunnan	

		Baoshan Binglangjiang Hydropower Development Co., Ltd	<div>acquisition and resettlement due to development of the project</div> <ul style="list-style-type: none">• The current status of land acquisition activities• The current status of the project, including the status of submissions for the approval of land acquisition and compensation arrangements• Preparation of the post-development support plan for the local rural residents affected by land acquisition• Grievance mechanism records and social donations made by the project owner as part of the project's support to the local communities• Future planning at/around the project area
	Ms Penlian Duan	Coordinator of the Project, as well as the administrator of Yunnan Baoshan Binglangjiang Hydropower Development Co., Ltd	

Local Stakeholders			
12 April 2011	Mr Zhang	Official in Tengchong County Resettlement Bureau	<ul style="list-style-type: none">• Confirmation of the regulations for land acquisition and compensation at different administrative levels• Confirmation of the number and the livelihood status of the local stakeholders affected by land acquisition• Confirmation of the progress of the release of the compensation for physical resettlement and land acquisition activities• Positive and negative impacts arising from the development of the project• Usage of the Grievance Mechanism• Expectations of post-development support• Expectations of post-development support
	Mr Ou	Official in Techong County EPB	
	Mr Zhang	Official in Techong County DRC Office	
	Mr Su	Village Representative of Huashui Group, Dong Village, Houqiao Township, Tengchong County, Baoshan City, Yunnan Province, PR China	
	Mr Wu	Village Representative of Huashui Group, Dong Village, Houqiao Township, Tengchong County, Baoshan City, Yunnan Province, PR China	
	Mr Wang	Village Representative of Huashui Group, Dong Village, Houqiao Township, Tengchong County, Baoshan City, Yunnan Province, PR China	

ERM CVS would like to thank all those who participated in the interviews and inspections during the site assessment. Their time and cooperation are gratefully acknowledged.

2.4 Internal Quality Control

As indicated above, the process of the WCD assessment and decisions of the ERM CVS Assessment Team has been subject to an independent Technical Review. The scope of the Technical Review process has been to independently assess that all procedures have been followed, necessary requirements have been met and all conclusions are justified. The final assessment report is based on the findings and conclusions of the Assessment Team, in assessing the compliance of the project development with the WCD strategic priorities and the technical evaluation of the independent technical review. After final technical review, the final report will be approved and signed off by an authorised signatory within ERM CVS.

3. Conclusion

The key results of WCD compliance at the site are summarized in the following sections.

3.1 Gaining Public Acceptance

The Chinese *EIA Law (2003)* requirements state that public consultation should take place during the EIA process. This includes the identification of relevant stakeholders, the provision of information about key project impacts and the opportunity for

those affected to provide comments and raise concerns about the project that are then required to be addressed prior to project approval. Based on a review of available documentation, an interview with local governmental agencies, site management and the selected Village Party Secretaries and affected people, this approach, resulted in informed participation by relevant local stakeholders and their acceptance of key decisions. This was confirmed by the project affected households. From this point of view, the Project is in compliance with Chinese regulations and is considered to have respected the WCD strategic priorities.

3.2 Comprehensive Options Assessment

Based on the information available, the need for the Project is demonstrated at the local level as the demand for energy and water is increasing and hydropower is the preferred option. At the national level, hydropower is supported as part of China's efforts to diversify its energy supply, improve energy security by utilizing local resources, and reduce greenhouse gas emissions. At the site level, the Project has been designed to minimize its negative impacts to the local environment and community. As such, the Project is considered in line with WCD strategic priorities as the need for the Project has been demonstrated before project implementation.

3.3 Addressing Existing Dams/ Hydroelectric Projects

According to the *FSR (DOC/005)* and confirmed by the site management and other local stakeholders, there are two planned hydropower stations within 50 km of the Sujiahekou Project and one operating hydropower station is located approximately 20km upstream of the Project at the time of the preparation of this report that has water intakes in the Binglangjiang River.

Name of Hydropower Project	Class of Cascade	Installed Generation Capacity (MW)	Status	Location
Sanchahekou	1 st	156	Under Planning	Under Planning
Houqiao	2 nd	48	Under operation	Approximately 20km upstream of the Project
The Project	3 rd	315	The first set of generators was under trial operation at the time of the site visit	location is at the 98°11'24" Longitude East and 25°15'00" Latitude North
Songshanhekou	4 th	168	Under operation	Approximately 11km downstream of the Project

A brief internet search identified no compliance issues relating to the social and environmental performance of the existing hydropower plant on the Binglangjiang River. Therefore, the project is considered to be aligned with WCD strategic priorities.

3.4 Sustaining Rivers and Livelihoods

The *EIA Report (2003)* provides an assessment of the environmental, social and ecological impacts caused by this Project. Potential negative environmental impacts include soil erosion, water quality, water flow reduction and ecological impacts. A minimum flow has been prescribed to satisfy the ecological requirements downstream of the dam. Based on the available information and the onsite interviews, local livelihoods are not strongly linked with the rivers as the community does not derive income from fishing or fisheries and does not utilise water from the river for its use. According to the *EIA Report*, the following measures are required:

- Reducing the visual impact of the Project through the planting of appropriate trees and vegetation to act as a screen;
- Complying with the requirements set out in the Soil and Water Conservation Plan (SWCP) to achieve environmental improvement; and
- Ensuring the continued ecological life of the river downstream of the plant by ensuring that the minimum environmental flow of 5.98m³/s is maintained at all times in accordance with the requirements of the *EIA*. In addition, monitoring the ecological life of the river and introducing appropriate fish fry on a regular basis in order to maintain the current ecological both upstream and downstream of the Project.

The above-mentioned mitigation requirements have been developed by a licensed EIA Institute and were approved by the Yunnan Provincial EPB on 19 June 2006. Forward Action Requests (**FAR1 & FAR 2**) have been raised with regard to reducing the negative impact of the Project on the aquatic ecosystem.

Based on the information available and the Project Developer's confirmation that the requirements of the EIA will be implemented, the Project is considered to be in compliance with Chinese regulations and aligned with WCD strategic requirements with respect to sustaining rivers and livelihoods.

3.5 Recognising Entitlements and Sharing Benefits

In China, compensation standards regulate the compensation amounts to be paid to households impacted by development projects. Based on the available information from the impacted households and local government representatives, after collecting the total amount required for compensation from the project owner, the local government redistributed the compensation to the impacted household based on the regulated compensation standards. A representative of the impacted residents indicated that in general, the impacted residents are satisfied with the compensation amounts and the arrangements which have been organized by the local government. As steps have been taken to provide compensation in accordance with

required standards and those affected appear to be satisfied with their compensation, the project is considered to have respected the WCD strategic priorities.

3.6 Ensuring Compliance

Based on information obtained from the selected project affected households, the local governments have distributed appropriate compensation to the project affected households. Environmental issues relating to the project came under the jurisdiction of the Yunnan Provincial EPB during the construction phase, and these will be transferred to come under the jurisdiction of the Tengchong County EPB once operations commence. The project developer is required to obtain relevant CAI Approvals (i.e. Environmental CAI Approval, Water and Soil Conservation CAI and Resettlement CAI Approval) from the relevant governmental bureaus before the project starts formal operation. The project developer should also develop and implement an ESMMP detailing arrangements for environmental monitoring during the operation phase and include arrangements for monitoring and evaluating the socio-economic impacts associated with the Project. FARs 3 and 4 have been raised to ensure that these issues will be addressed as part of ongoing processes to be implemented by the Project Developer. The Project is considered to have appropriate mechanisms in place to reasonably ensure on-going compliance with Chinese regulations and respect for the WCD strategic priorities.

3.7 Sharing Rivers for Peace, Development and Security

This is not a trans-boundary project; therefore, this section is not applicable in terms of the assessment.

Appendix A: Compliance Report Assessing Application of Article 11 B (6) of Emissions Trading Directive to Hydroelectric Project Activities Exceeding 20 MW (Final Version of 17 November 2008)

Project Description

1. Summary description of the CDM project activity	Description
Name of the project	Sujiahekou Hydropower Station
Location	The Project is located on the Binglangjiang River in Tengchong County, within the prefecture of Baoshan City, Yunnan Province, which is in the far southwest part of China. The project dam is located 410m downriver of the confluence of the Binglangjiang and Xiongjiaogou Rivers. The exact geographical coordinates of the Project are 98°11'24" Longitude East and 25°15'00"Latitude North.
Name of the watercourse	The Project is built on the Binglangjiang River, in the Shangyuan catchment of the Dayingjiang River. Water from the Binglangjiang River eventually flows into the Dayingjiang River in Xincheng Township, Yingjiang County in the Dehong Daizu & Jingpozu Autonomous Prefecture.
Date of completion of the Compliance Report	May 2011
1.1. Project area	
1. Description of the watershed:	
<ul style="list-style-type: none"> Political and administrative boundaries 	The Project falls within the administrative area of Houqiao Township, Tengchong County, within the prefecture of Baoshan City, Yunnan Province, Southwest China
<ul style="list-style-type: none"> Communities located along 	<p>As detailed in the document <i>Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station (DOC/019)</i> and confirmed by the site management and local stakeholders, the nearest communities to the Project include five villages in Houqiao Township, Tengchong County:</p> <ul style="list-style-type: none"> Dong Village; Houqiao Village; Jinjia Village; Shangjie Village; and Yongxing Village.

- Principal land use patterns

According to the document *Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station (DOC/019)*, the major land use patterns within the project area are listed as below;

Land type	Area (μ u*)	Area (km^2)	Proportion of the total area (%)
Farmland	10582.3	7.05	44.8
Forested land	9720.3	6.48	41.2
Buildings	82.5	0.06	0.4
Unused land	3230.0	2.15	13.6
Total	23615.1	15.73	100

* 1 Chinese μ u = 666.67 m^2

- Existing and planned river flow modifications

The Sujiahekou Hydropower Station is a run-of-river project that will divert water from the Binglangjiang River some 5.5 km downstream to a power house from where the water is returned to the river. As reported by the site management and local stakeholders, in addition to the Project, there are a number of existing and planned hydropower projects on the Binglangjiang River:

Name of Hydropower Project	Class of Cascade	Installed Generation Capacity (MW)	Status
Sanchahekou	1 st	156	Under Planning
Houqiao	2 nd	48	Under operation
The Project (Sujiahekou Hydropower Station)	3 rd	315	The first set of generators was under trial operation at the time of the site visit
Songshanhekou	4 th	168	Under operation

According to a statement by an Official in Techong County DRC Office, all the potential impacts to the upstream and downstream projects have been taken into consideration in the hydropower development plan.

- Average annual runoff

Based on the *Feasibility Study Report (FSR) of Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station (DOC./005)*, the average annual runoff is $18.89 \times 10^8 \text{m}^3$

- Average annual river flow (m^3/s)

Based on the *FSR (DOC./005)*, the average annual river runoff is $59.9 \text{m}^3/\text{s}$

- Average annual river runoff before and after the project's implementation

No information was available to identify the average annual river runoff before and after the Project's implementation, but there should be little overall impact given that the water diverted for power generation is returned to the river after the power house.

4. State briefly what impacts other hydrological projects have had on the river basin within 50 km (untouched, affected, and significantly affected by other activities).

According to the *FSR (DOC/005)* and confirmed by the site management and other local stakeholders, there are three operating or planned hydropower stations within 50 km of the Sujiahekou Project at the time of the preparation of this report that have water intakes in the Binglangjiang River.

Name of Hydropower Project	Class of Cascade	Installed Generation Capacity (MW)	Location
Sanchahekou	1 st	156	Under Planning
Houqiao	2 nd	48	Approximately 20km upstream of the Project
The Project	3 rd	315	location is at the 98°11'24" Longitude East and 25°15'00"Latitude North
Songshanhekou	4 th	168	Approximately 11km downstream of the Project

According to an official from Techong County DRC Office, all the potential impacts to the upstream and downstream projects have been taken into consideration in the hydropower development plan. No significant hydrological and/or ecological impacts on the river basin are highlighted by the *FSR (DOC/005)*, or by the local responsible governmental agencies from the existing hydrological infrastructures found within 50km of the Sujiahekou Hydropower Project site.

5. Ecological description of the surroundings (forest, cultivated land, wasteland, cultural heritage sites etc.) conservation value

For the purpose of this section of the report, the surroundings are considered as the affected areas due to the construction of the Project. According to the document *Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station (DOC/019)*, the dominant land patterns in the project affected areas include cultivated land, forest land and unused land. The areas of both permanent and temporary land acquisition for the development of the Project are listed as below (*DOC/019* provided as reference).

Land type	Area (mu^*)	Area (km^2)	Proportion of the total area (%)
Farmland	10582.3	7.05	44.8
Forested land	9720.3	6.48	41.2
Buildings	82.5	0.06	0.4
Unused land	3230.0	2.15	13.6
Total	23615.1	15.73	100

Note: 1 Chinese mu equals to approximately $666.7 m^2$.

According to the *Environmental Impact Assessment (EIA) Report of the Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station (DOC/007)* and its' subsequent approval (*DOC/008*), confirmed by the site management and local stakeholders, no cultural heritage sites were found on the Binglangjiang River Basin within the project area.

In addition, the Project is located in an area which is forested, with small farming communities located along the river bank. Higher areas are barren and there is some marshland adjacent to the river. Based on the statement given by an official from the local EPB, as well as the *EIA (DOC/007)* and its' subsequent approval (*DOC/008*), neither national protected species nor provincial level protected species were identified within the project area.

No visual evidence of ecological concern was observed on any of the immediately surrounding properties.

1.2. Project-related activities

- | | |
|--|---|
| 1. Type of water infrastructure (i.e. storage reservoir, run-of-river, other) | Run-of-river |
| 2. Related infrastructure being built as part of the project (i.e. roads, transmission lines, bridges) | <p>As indicated in the document <i>Clean Development Mechanism Project Design Document Form (CDM-PDD) for Sujiahekou Hydropower Station (DOC/001)</i> and confirmed by the site management, the infrastructure being built as part of the project includes:</p> <ul style="list-style-type: none"> • A dam; • Discharge water tunnel; • Power house and transmission line; • Administrative office combines with employee's dormitory and auxiliary production houses; and • Road with approximately 5.5 km length between Tengchong County and Mizhina State, Burma; as well as • Road with approximately 5 km length along with the submerged area. |

WCD Assessment Report



3. Installed generation capacity (MW)	315 MW (3 generator sets of 105 MW each)
4. Load factor	According to the <i>CDM-PDD for Sujiahekou Hydropower Station (DOC/001)</i> , the power load factor is 47.23%.
5. Average annual energy production (MWh)	According to the <i>CDM-PDD for Sujiahekou Hydropower Station (DOC/001)</i> , the annual power delivered to the grid is 1,234,902 MWh.
6. What role does the project play in the national/regional electricity supply (base load, peak load, load balancing services for the grid, support for intermittent renewables, etc.)?	Load balancing for the Yunnan Provincial Power Grid, which is connected to the South China Power Grid (SCPG).
7. Estimated annual emission reduction potential (tCO ₂ e)	According to <i>CDM-PDD for Sujiahekou Hydropower Station (DOC/001)</i> , the estimated potential annual emission reduction in the first crediting period is 880, 979tCO ₂ e.
8. At what stage is the project's construction at the time of this application?	At the time of the site visit, the general civil infrastructure of the Project was basically completed and the first generator set (105MW) was under trial operation.
9. What other direct purposes does the project serve (irrigation, flood control, water storage for drought protection, water-based transport, leisure facilities, aqua- culture, industrial and municipal water supply, etc.)?	Based on the <i>FSR (DOC /005)</i> , the specified purpose of this Project is for power generation.
1.3. Project components	
Water-flow: structures and changes	
1. Production capacity/submerged area (W/m ²)	61.5W/m ²
2. Retention structure/retarding structure (if present)	Not applicable
3. Type of water diversion	Pressure-type water diversion
4. Length of diversion	5,543m
5. Type of water inlet	Bank-town intake
Reservoir (if present)	
6. Dam height (from the foundation)	137.3m
7. Crest length	424.0m
8. Reservoir area at average water level	1,590.0m
9. Total reservoir capacity (m ³)	2.25×10 ⁸ m ³
10. Backwater length	13.3km
11. Submerged area in total	5,120,000 m ²
12. Submerged residential area	207,437 m ²
13. Submerged farmland/grassland	3,101,550 m ²
14. Number of displaced inhabitants	In total, 465 local inhabitants were either physically and/or economically displaced (impacted by land acquisition).

Section 2: WCD Assessment

WCD Criteria	Description	Sources	Validator's Assessment
1. Gaining Public Acceptance			
1.1. Stakeholder consultation			
1. Describe how the relevant stakeholders were identified.	<p>Stakeholders were identified during the preparation of the <i>Environmental Impact Assessment (EIA) Report of the Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station</i>, prepared by the Engineering Consulting Kunming Company of Water Conservancy and Hydroelectric Power of China, in April 2006. The company is the holder of a Class A EIA licence granted by China's Ministry of Environmental Protection (MEP). The EIA Report has been approved by the Yunnan Provincial Environmental Protection Bureau (EPB). It should be noted that in China, there is a requirement under the EIA regulations for the public to be consulted and any concerns to be addressed.</p> <p>People living within the project affected area and adjacent villages were identified as the principal impacted stakeholders. They were subsequently invited to join the public consultation process. Most of the identified stakeholders are the residents of the Project affected areas.</p>	<p>DOC/007 DOC/008</p> <p>Interview with the affected local stakeholders</p>	<p>Public participation is a key aspect of a Chinese EIA study. According to the <i>Environmental Impact Assessment Law</i> (2003), public participation is required for construction projects that might cause significant environmental impact and therefore require the preparation of an <i>EIA Report</i>. The role of public participation in this process has been of significantly increasing importance since the enactment of the law as the Chinese Government has focused on maintaining social harmony within society.</p> <p>Stakeholders interviewed by ERM CVS during the site visit are listed below:</p> <ul style="list-style-type: none"> Government Agencies, including: <ul style="list-style-type: none"> Tengchong County Resettlement Bureau; Techong County Environmental Protection Bureau (EPB); and Techong County Development and Reform Commission (DRC) Office. Representatives of households, who have been affected by both land acquisition and physical displacement. <p>The Stakeholders were identified as part of the <i>EIA Report</i> process in accordance with Chinese regulatory requirements. According to the <i>EIA Report</i> prepared in April 2006 and ERM CVS's onsite interviews with the above selected stakeholders, the Project is found to have properly identified stakeholders in relation to internationally accepted guidelines and these groups were invited to participate in the development of the Project.</p>

WCD Criteria	Description	Sources	Validator's Assessment
2. Are any of these people minority groups, especially indigenous people and if so, what special efforts were taken to identify and meet their needs?	<p>According to the <i>EIA Report</i> and the information from the site management, there are two ethnic groups in the affected area. These are the Lisu minority group and the Han majority group.</p> <p>According to the <i>EIA Report</i>, there are no significant additional social impacts on minority groups; therefore, no special measures were developed to mitigate the impacts beyond what would be required for all groups.</p> <p>According to the <i>EIA Report</i> with its' subsequent approval and the document <i>Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station</i>, and statements given by the site management, local governmental agencies and representatives of those to be resettled, the Project has led to the improvement of local road conditions and the installation of water supply facilities. It has also provided more work opportunities and has helped to improve the basic living conditions of the impacted residents.</p>	<p>DOC/007 DOC/008 DOC/019</p> <p>Interview with the affected local stakeholder</p>	<p>According to available documentation, site management, and interviews with the affected local stakeholders, the majority of the people in the project affected area are from the minority group. The available documentation e.g. the <i>EIA Report</i> indicates there are no impacts from the project that would significantly impact the minority group compared with other groups. Direct negotiations and consultation with project affected people from the minority group were conducted during the land acquisition and resettlement process to identify and meet their needs.</p>
3. How many people have to be resettled due to the project?	<p>According to <i>Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station</i>, a total of 269 local inhabitants have been required to be resettled due to the development of the Project.</p>	<p>DOC/019</p> <p>Interview with the affected local stakeholder</p>	<p>The number of affected people who have to be resettled due to the project was confirmed through interviews with the site management, selected representatives of governmental authorities and project affected households. The process adopted appears to have followed the requirements laid down in the relevant Chinese regulations.</p>
4. Resettled people/annual energy production (number/GWh).	<p>269 people/ 1,234.9 GWh=0.22 people/ GWh</p> <p>1,234,902 MWh = 1,234.9 GWh (1 GWh = 1,000 MWh)</p>	<p>DOC/005 DOC/019</p> <p>Interview with the affected local stakeholder</p>	<p>Based on the information obtained from the relevant documents and an interview with the site management, this is correct.</p>
5. How many people were otherwise affected by the project (e.g. through loss of land, reduced productivity of fishing or hunting, etc.)?	<p>According to the document <i>Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station</i>, a total of 196 were impacted by the loss of all or part of their cultivated lands due to the project.</p>	<p>DOC/019</p> <p>Interview with the affected local stakeholder</p>	<p>Information on the overall number of people affected by land acquisition and productive resources is based on the most up-to date approved documentation including the <i>Land Acquisition and Resettlement in FSR Planning</i>, which confirms that no other people will be otherwise affected by the project construction or operation.</p>
6. Describe how the affected local	<p>According to the site management and the local governmental agency, since 2005 the People's</p>	<p>DOC/007 DOC/008</p>	<p>An approved <i>EIA</i> that includes what is considered as</p>

WCD Criteria	Description	Sources	Validator's Assessment
people and other relevant stakeholders have been informed and involved in the decision-making process of building the power plant.	<p>Government of Tengchong County has given wide publicity to the development of the hydropower project on the Binglangjiang River Basin through newspaper advertising TV and village meetings.</p> <p>Based on the <i>EIA Report</i>, three types of public consultation were conducted by the Engineering Consulting Kunming Company of Water Conservancy and Hydroelectric Power of China between August and November 2005. These were through a questionnaire survey during the preparation of EIA as part of the project approval process. Affected people and identified stakeholders participated in the public consultation. 220 questionnaires were sent out and 128 written replies were received. The respondents represented a cross-section of the local communities with different ages and different educational backgrounds. After the survey, the opinions from the public participation process were reportedly incorporated into the <i>EIA Report</i>, which was then reviewed by a government assigned expert panel to evaluate the completeness of the assessment, the appropriateness of the proposed mitigation/control measures. The panel indicated its satisfaction that relevant national and local regulations had been appropriately followed.</p> <p>Furthermore, in order to be in compliance with the <i>Land Compensation and Resettlement Regulations for Land Requisitioned for Building Large and Medium-sized Water Conservancy Projects and Hydroelectric Power Projects (Order of the State Council, No.471)</i>, Tengchong County Resettlement Bureau was established in July 2004 under the organization of the People's Government of Tengchong County. As reported by an official from Tengchong County Resettlement Bureau, as well as the selected stakeholder representative, several meetings had been organized by the local governmental authorities from 2005 to August 2006 in order to:</p> <ul style="list-style-type: none"> • Increase awareness of development of the Sujiahekou Hydropower Project to the local residents; • Discuss the land acquisition and resettlement plan that was proposed by the Engineering Consulting Kunming Company of Water Conservancy and Hydroelectric 	Interview with the affected local stakeholder	<p>satisfactory public consultation by the EIA approval panel is one of the prerequisites for the project in order to obtain overall project development approval from the Yunnan Provincial Development and Reform Commission (DRC) on 24 July 2006.</p> <p>According to the <i>EIA Report (2006)</i>, the results of questionnaire survey and interviews with the local community members show that the communities generally supported the project and none had any specific objections.</p> <p>Based on the information obtained, decision making is considered to have been undertaken with the informed participation and acceptance of the affected people and aligns with the strategic priorities of the WCD.</p>

WCD Criteria	Description	Sources	Validator's Assessment
	<p>Power of China; and</p> <ul style="list-style-type: none"> Implement the land acquisition and resettlement plan. <p>The group leaders and the secretaries of the affected villages were invited to participate in those meetings as the village representatives.</p>		
7. Describe how the affected local people and relevant stakeholders have been informed about the impacts of the project on their quality of life.	<p>These impacts were identified as follows:</p> <ul style="list-style-type: none"> Impact on the development of the local economy through the construction of the Project; Impact on potential employment opportunities; Impact on individual's income and expenditure; Attitude regarding the necessary land acquisition; and Stakeholder's expectations of the Project. <p>The returned questionnaires show that the proposed project benefits received strong support from local people. 100% of the participants, who responded to a sample survey, supported the development of the Project. The Project was seen as bringing significant positive impacts to the local economy and to the livelihoods of local people through increased job opportunities and improved road conditions.</p> <p>In addition, as reported by the site management, from October to November 2005, a land survey and asset inventory was conducted with the participation of local stakeholders, local government agencies, the project owner and the Engineering Consulting Kunming Company of Water Conservancy and Hydroelectric Power of China. During the process, the working group visited the project affected households to explain the impacts of the project on their lives, the compensation policy and resettlement plan. They also measured and calculated the acquired land and assets and answered any questions raised by the project affected households.</p>	<p>DOC/007 DOC/008 DOC/023</p> <p>Interview with the affected local stakeholders</p>	<p>According to the <i>EIA</i> and site interviews undertaken by ERM CVS with representatives of the site management, project affected households and the local government agencies, the relevant stakeholders had been informed of both the impacts of the development of the Project and the direct Project impacts. As mentioned above in Section 1.1, Question 1, an early public consultation exercise was performed by the Engineering Consulting Kunming Company of Water Conservancy and Hydroelectric Power of China in April 2006 during the preparation of the <i>EIA</i>. Stakeholders were informed about the Project and its likely impacts on their quality of life.</p> <p>The approach appears to align with accepted international practice.</p>

WCD Assessment Report

WCD Criteria	Description	Sources	Validator's Assessment
8. How have the affected local and indigenous communities participated in the decision-making process?	<p>As shown in Section 1.1, Question 2, there are two ethnic groups in the affected area. These are the Lisu minority group and the Han majority group.</p> <p>As stated above in Section 1.1, Question 6, local people have been invited to provide comments and suggestion about the Project through the public questionnaire survey as well as face-to-face interviews carried out at the project planning stage and during EIA preparation.</p>	<p>DOC/007 DOC/008 DOC/019</p> <p>Interview with the affected local stakeholder</p>	<p>Based on discussions with site management and local governmental bureaus, as well as interviews with selected group leaders and Project affected households, people of the Lisu minority are the main group impacted by land acquisition due to the development of the Project.</p> <p>As stated above in Question 6, based on a review of the <i>EIA</i>, interviews with the project owner and the selected households, the local communities were invited to participate in the decision-making process in alignment with the strategic priorities of the WCD.</p>
9. How will the economic and social impacts of the project on the affected local communities, indigenous people and/or other relevant stakeholders be addressed?	<p>Major economic and social impacts of the Project include loss of land and physical relocation. Economic and social impacts were mainly addressed by:</p> <ul style="list-style-type: none"> The implementation of a community resettlement scheme for the local rural residents to reduce the impacts generated from the resettlement; The payment of compensation in accordance with national regulatory guidelines to ensure that the affected local people's quality of life will be improved; Allocation of new cultivated land for households affected by land acquisition; and Provision of social security and a 20-year post-resettlement support plan for the Project affected people. 	<p>DOC/005 DOC/007 DOC/019 DOC/024</p> <p>Interview with the affected local stakeholder</p> <p><i>Order of the State Council, No.471</i></p>	<p>Based on the information obtained and interviews with the relevant stakeholders, the compensation fee has been paid by the Local Government to the Project affected people office in line with Chinese regulatory requirements and agreed compensation in advance, in order to ensure the development of the project can be implemented smoothly. The affected stakeholders received the compensation in cash in a timely manner, from January to August 2006. Afterwards, the compensation fee has been paid by the project owner to the Local Government resettlement office in line with the requirement of project timeline in the <i>Lump Sum Work Agreement of Land Acquisition and Resettlement Task for Yunnan Province Tengchong County Binglangjiang River Sujiahekou Hydropower Station</i>, which signed between Yunnan Baoshan Binglangjiang River Co., Ltd and Baoshan Municipal Resettlement Bureau, on 12 October 2006. The level of compensation for the project is in compliance with Chinese regulations and the social impacts of the affected communities have been addressed in line with WCD guidelines.</p>
10. How do compensation and benefit agreements correspond with the identified needs and rights of the stakeholders negatively affected upstream and	<p>As above-mentioned, the economic and social impacts of the Project were identified as temporary and permanent land acquisition, as well as the physical relocation. The following regulations and laws were used to determine the amount of compensation loss of land and physical relocation:</p> <ul style="list-style-type: none"> <i>Law of People's Republic of China on Forest (1998);</i> <i>Implementing Regulation for People's Republic of</i> 	<p><i>National and Provincial Laws</i></p> <p>DOC/005 DOC/007 DOC/019 DOC/020 DOC/024</p> <p>Interview with the affected local stakeholder</p>	<p>Local compensation standards are updated by the relevant local bureaus every few years throughout China and these are used to calculate compensation payments for land acquisition throughout the country. This approach is undertaken nationwide with each local area maintaining its own standards based on analysis of local economic conditions.</p> <p>According to interviews with the site management and the local governmental agencies, the resettlement work</p>

WCD Criteria	Description	Sources	Validator's Assessment
downstream due to the project?	<p><i>China Forest Law (Order from State Council No.278);</i></p> <ul style="list-style-type: none"> <i>Law of the Peoples Republic of China on Land Contract in Rural Areas (2003);</i> <i>Law of the Peoples Republic of China on Ethnic Group Autonomous (2001);</i> <i>Regulations on Land Requisition Compensation and Resettlement for Construction of Large and Medium-sized Hydropower Projects (2006);</i> <i>The Design Criteria for Land Acquisition and Resettlement for Hydropower Projects (SL290-2003);</i> <i>Policy regarding on Post-supporting for Resettlement of Large and Medium-sized Hydropower Projects (Order from State Council No. 17);</i> <i>Current Land and its Use Classification (GB/T21010-2007);</i> <i>Yunnan Provincial Land Administration Measures, 24 September 1999; and</i> <i>Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station, prepared by Engineering Consulting Kunming Company of Water Conservancy and Hydroelectric Power of China, in May 2006</i> <p>The compensation standard proposed in the <i>Resettlement Plan</i> has been adopted to determine the amount of compensation for land acquisition and physical resettlement. This standard was then applied to the lands and buildings surveyed during the resettlement investigation run by the project developer in association with the local resettlement bureau between October and November 2005 to determine the specific monetary compensation amounts to be paid to the affected households.</p> <p>No upstream and downstream communities have been identified as negatively affected by the project and hence no compensation agreements have been signed with such groups.</p>	<p>DOC/007 DOC/008 DOC/025</p>	<p>was completed in August 2006. The project owner offered the resettled residents cash compensation prior to the land acquisition and relocations, which was confirmed through interview with the selected project affected households. In addition, the centralized resettlement site was constructed by the local government through the funding of compensation. Where the project affected people occupied buildings, the project owner stated that an agreement regarding the land acquisition and resettlement compensation has been signed in association with the local governmental agencies so that these displaced persons could be resettled legally without having to face the risk of forced eviction. The relevant documentation regarding the land acquisition and resettlement compensation agreement signed between the project owner and the Baoshan Municipal Resettlement Bureau was provided for review at the time of the site visit. (<i>DOC/024</i> provided as reference).</p> <p>In general, the land acquisition and resettlement compensation plan between the project owner and the local governments corresponds with the requirements of the laws in China and is in line with similar agreements for other such projects, and can meet the needs of the affected people.</p> <p>Following a review of the selected impacted households and local government, it would appear that average incomes have increased and the quality of life within the local communities has been generally improved. The compensation paid to the impacted households was found to have been agreed as acceptable as it actually meets the needs of the affected communities. Therefore, the project is considered to have respected the WCD strategic priorities.</p>
11. Was a Stakeholders Forum held with a	As described above under Section 1.1, Question 6, the Project stakeholders were consulted and involved in the decision making process through outreach activities carried		Based on interviews with the site management and local governmental agencies, the local governmental officials explained the land acquisition and

WCD Criteria	Description	Sources	Validator's Assessment
broad local community participation (based on a customary and national law)? Describe the process and its outcome, and the response of project developer local and national authorities?	<p>out during the Project planning process and within the EIA drafting process. Measures were taken to identify the interests, problems, concerns and needs of local residents who were living in and around the affected area. Public consultation for the EIA included sending questionnaires to local stakeholders such as local government departments and impacted local rural residents. According to the <i>EIA Report</i>, there was broad community participation and the key project issues were discussed with no objections raised by the participants.</p> <p>In addition, during the time period from October to November 2005, a land survey and asset inventory were conducted with the participation of local stakeholders, local government agencies, the project developer in association with the local resettlement bureau. During the process, the working group visited the project affected households to explain the potential impacts of the proposed project on their lives, the proposed compensation policy and resettlement plan, and to answer any questions raised from the project affected households through informal interviews or consultation with the local communities.</p>	Interview with the affected local stakeholder	<p>compensation standards to local communities and asked their opinions and suggestions through informal interviews or consultation with local communities. The relevant documentation regarding the land acquisition and resettlement compensation agreement signed between the project owner and the project-affected household was provided for review during the time of the site visit. (<i>DOC/025</i> provided as reference).</p> <p>This Project is in compliance with Chinese regulations. According to available information and interviews with government agencies and selected local stakeholders, there was broad community participation in EIA preparation and resettlement planning and the key impacts (i.e. compensation for land acquisition and house demolition) was discussed in the local communities with no objections raised.</p>
1.2. Transparency			
1. Was key project documentation (e.g., social and environmental impact assessments) made publicly available before a decision to start construction was made?	Findings from the <i>EIA Report</i> , which in China covers social impacts, were made available to affected stakeholders through the stakeholder consultation process as discussed above. Details of the Project background and environmental and social impacts were provided in the questionnaires and introduced by the EIA institute during the interviews and meetings prior to the decision to start construction.	<p>DOC/007 DOC/008</p> <p>Interview with the affected local stakeholder</p>	According to onsite interviews with the site management and the local stakeholders, which included local governmental agencies and the representatives of the resettled communities/residents, key information was made available before construction start-up.
2. In what form was project documentation made available to stakeholders? Was it the original EIA etc. or was it in another form e.g. a	As mentioned above, the Engineering Consulting Kunming Company of Water Conservancy and Hydroelectric Power of China that conducted the EIA provided the local residents with a project summary prior to starting public consultation, as part of the stakeholder survey. The summary included details of the project background and environmental and social impacts such as the area to be flooded and the plans for resettlement.	<p>DOC/007 DOC/008</p> <p>Interview with the affected local stakeholder</p>	According to onsite interviews with the site management and the local stakeholders, which included local governmental agencies, the representative of the resettled communities/residents and the selected project-affected people, key information on the potential positive and negative impacts of the Project were available before construction start-up.

WCD Criteria	Description	Sources	Validator's Assessment
	summary of positive and negative effects of the hydrological construction.		
3. How many of the total number of stakeholders have had access to the key documentation and have been actively involved?	Based on the <i>EIA Report</i> , three public consultations were conducted by the Engineering Consulting Kunming Company of Water Conservancy and Hydroelectric Power of China between August and November 2005 through a questionnaire survey during the preparation of EIA as part of the project approval process. Affected people and identified stakeholders participated in the public consultation and 220 questionnaires were sent out and 128 written replies were received. These people were involved in the consultation process and were provided with an opportunity to comment on the project. According to the <i>EIA Report</i> , they were provided with information (based on the EIA summary) on the potential project impacts during the survey.	DOC/007 DOC/008 DOC/023 Interview with the affected local stakeholder	According to onsite interviews with the site management and the local stakeholders, including local government departments, village committee members and selected project-affected people, key information was available to all the stakeholders and they were actively involved in the consultation process before construction start-up. All affected households accepted the results of the land and building survey.
4. Is there a negotiated agreement between the stakeholders and Project Developer(s)? If so, is it publicly available?	Compensation payments between the project owner and the project affected households were coordinated by the appropriate local government department as required under Chinese law. Approximately 30 officials from the Tengchong County Resettlement Bureau were involved on behalf of the project owner for the coordination of project affairs, including land acquisition, related public meetings and compensation payments. Agreements have been developed based on national locally prescribed compensation standards. The amount of compensation to be paid is set out in the regulations and hence there was no direct negotiated agreement between the stakeholders and the project owner.	<i>National and Provincial Laws</i> DOC/024 Interview with the affected local stakeholder	Based on official compensation records, the project developer has made a lump sum payment to the local resettlement for distribution to the local farmers affected by the land acquisition and resettlement. This is consistent with Chinese requirements and is considered to be in compliance with international expectations. The following agreements: <i>Lump Sum Work Agreement of Land Acquisition and Resettlement Task for Yunnan Province Tengchong County Binglangjiang River Sujiahekou Hydropower Station</i> , signed between Yunnan Baoshan Binglangjiang River Co., Ltd and Baoshan Municipal Resettlement Bureau, on 12 October 2006, and the samples of electronic copies of <i>Land Acquisition and Resettlement Agreement</i> signed between Yunnan Baoshan Binglangjiang River Co., Ltd and project-affected households in 2009, were provided for review during the site visit. Documentation indicating the exact timing of when the affected households signed the compensation agreements and when they received their compensation from the local people's government was reviewed at the site.

WCD Criteria	Description	Sources	Validator's Assessment
Validator's Conclusions concerning Priority 1:			
<p>The Chinese <i>EIA Law (2003)</i> requirements state that public consultation should take place during the EIA process. This includes the identification of relevant stakeholders, the provision of information about key project impacts and the opportunity for those affected to provide comments and raise concerns about the project that are then required to be addressed prior to project approval. Based on a review of available documentation, an interview with local governmental agencies, site management and the selected Village Party Secretaries and affected people, this approach, resulted in informed participation by relevant local stakeholders and their acceptance of key decisions. This was confirmed by the project affected households. From this point of view, the Project is in compliance with Chinese regulations and is considered to have respected the WCD strategic priorities.</p>			
2. Comprehensive Options Assessment			
2.1 Needs			
1. What priority is given to hydropower in national development or energy planning (e.g. relevant government decisions)?	The National Development and Reform Commission (NDRC) issued a <i>National Instructive Catalogue for Industrial Structure Adjustment</i> in 2005, which was updated in 2007. This Catalogue stipulates priorities and restrictions on project development in different industrial sectors. It classifies hydroelectricity projects as "promoted" in the energy sector. Furthermore, the Chinese Central Government promulgated the <i>Renewable Energy Act</i> in 2006 to strengthen the government's support for the development of renewable energy (including hydropower).	<i>National Instructive Catalogue for Industrial Structure Adjustment (2007)</i>	There is clear support at the national level for the development of hydropower in China.
2. What are the needs for hydropower at regional and local level?	<p>At the provincial level, the <i>11th Five-Year Plan of Yunnan Province (2006-2010)</i> indicates that hydropower development is an important component of energy development in Yunnan Province.</p> <p>According to the <i>FSR</i> and <i>EIA Report</i>, the construction of the hydropower plant will help balance the electricity demand which is growing rapidly in Yunnan Province. In addition, developing a sustainable energy industry will help to reduce the amount of forest cut down to meet local energy demands, benefiting soil conservation, helping to protect the ecological system and reducing local CO₂ emissions. The development of hydropower will also help to promote local economic development.</p>	<p>DOC/005 DOC/007 DOC/008</p> <p>Interview with the affected local stakeholder</p>	Regional and approved local assessments have been undertaken to demonstrate the need for hydroelectricity in the region. There is clear support for the development of hydropower in the area, where there is a present and anticipated future shortage of electricity generating capacity.
3. What are the regional/ national supply needs of the electric system (renewable base)	As indicated in the <i>FSR</i> , with consideration to the national <i>Energy Transfer from the West to the East Project</i> , the development of the regional and national economy and associated social development relies on the rapid increase in power generation capacity as China continues to	DOC/005	The need for hydropower in the local area is clearly demonstrated in the <i>FSR</i> .

WCD Criteria	Description	Sources	Validator's Assessment
load, peak load or load balancing of the grid, support of intermittent renewable)?	develop and urbanise. Distinctions between base, peak and load balancing are not available but it is known that power generated by the Project will be used for load balancing in the local grid.		
4. Describe safeguards for equitable access to water resources. How do hydropower projects contribute to efficient water resources management?	<p>China's <i>Regulation of Water Resources Assessment for Construction Projects (2002)</i>, provides the main safeguards to ensuring effective water resources management. Projects, including the Sujiahekou Hydropower Station, require a water resources assessment, which assesses the project's impacts on access to water resources and efficient water resources management. The assessment report needs to be reviewed and approved by the Provincial Water Resources Administration.</p> <p>The <i>Water Resources Assessment Report</i> specific to the Project was not able to be located by the site management at the time of site visit. However, the corresponding approval of the <i>Water Resources Assessment Report</i> was provided for review. (<i>DOC/006</i> provided as reference). The Project was approved by Yunnan Provincial Water Resources Bureau, on 30 June 2006 on the condition that the indicated minimum environmental flow must be maintained. Both the approvals for regional water resources assessment and the water resources assessment specific to the Project indicate that there is no domestic use or industrial water extraction activities within the Binglangjiang River Basin.</p>	<p>DOC/003 DOC/006</p> <p>Interview with the affected local stakeholder</p>	<p>Water resources are assessed by a government approved agency as part of the project permitting process. In the case of this project, the environmental flow i.e. 5.98m³/s has been identified as the key safeguard to ensuring equitable access to water resources. This is consistent with the Chinese regulatory approach and aligns with international norms.</p> <p>Based on an interview with the site management and the local communities, there is no domestic use or industrial water extraction activities within the Binglangjiang River Basin. As reported by the local governmental official, as well as the site management, the <i>Water Resource Assessment Report</i> concluded that access to water resources by the project is safe, equitable and efficient.</p>
5. Does this hydropower project provide financial incentives to develop a multi-purpose project?	No. According to the <i>EIA Report</i> , the only specified purpose of this project is for power generation.	DOC/007 DOC/008	The EIA Report was conducted by a licensed EIA institute in China and approval was issued by the Yunnan Provincial Environmental Protection Bureau (EPB), on 19 June 2006.

WCD Criteria	Description	Sources	Validator's Assessment
2.2. Alternatives			
1. Describe the examination of alternatives to the project that have been considered (include details of feasibility studies and do-nothing options analysis that have been conducted).	<p>As mentioned above, the <i>11th Five-Year Plan of Yunnan Province (2006-2010)</i> indicates that hydropower project development is an important component of energy development in Yunnan Province.</p> <p>The Project <i>CDM-PDD</i> provides a comprehensive analysis of alternatives to the Project that were considered during the Project design phase, including:</p> <ul style="list-style-type: none"> Construction of a fuel-fired power plant with equivalent installed capacity or annual electricity generation; Construction of a power plant using other renewable energy, such as a solar power plant with an equivalent installed capacity or annual electricity generation; and The proposed project itself, but not undertaken as a CDM project activity. <p>Following a comprehensive comparison between the natural resources available, regulatory requirements, financial attraction, emissions reduction and other parameters, these alternatives were all excluded and the development of a hydropower plant as a CDM project was finally chosen.</p> <p>Furthermore, according to the <i>EIA</i> and <i>FSR Reports</i>, the Binglangjiang River has a stable water flow, good topographical and geological conditions, and therefore hydropower was considered the best option. In addition, as discussed in Section 2.1 Questions 1 and 2, there is a clear national and regional need for hydropower development.</p>	<p>DOC/001 DOC/005 DOC/007 DOC/008</p> <p>Interview with the affected local stakeholder</p>	<p>As confirmed by the local governmental departments the development of the Sujiahekou Hydropower Station is expected to improve the power supply to the local communities, thereby promoting the development of local industry.</p> <p>The Project <i>CDM-PDD</i>, as well as the <i>FSR Report</i> assessed various design options for the Project and based on the information obtained, there is no non-compliance observed when compared with Chinese regulations. The examination of alternatives is also considered to comply with WCD requirements.</p>
2. Have stakeholders been involved in the identification of the options? Describe process and outcome of that involvement.	<p>During the pre-feasibility study phase, a group of hydropower experts reviewed several alternative options and made decisions on aspects of safety, financial investment and technology.</p> <p>The stakeholders were involved in the decision-making process for the original project planning through to stakeholder engagement during the EIA process. The EIA was conducted by a licensed EIA institution and was approved by the Yunnan Provincial EPB.</p>	<p>DOC/007 DOC/008</p> <p>Interview with the affected local stakeholder</p>	<p>The approach employed by the project is consistent with Chinese regulatory requirements and decision making is considered to have been undertaken with the informed participation and acceptance of the affected people.</p>

WCD Criteria	Description	Sources	Validator's Assessment
3. What are the main reasons behind the project choice and site selection (social, environmental, economic, and technical)?	<p>See the answer to Question 1 above.</p> <p>The site location was based on a technical review of the Project with regards to utilizing hydrological resources safely by minimizing landslide risks to workers, the facility and the local community. Additional comments are included in Question 5 of this section.</p>	<p>DOC/001 DOC/005 DOC/007 DOC/008 DOC/019</p>	The assessment of social, environmental, technical and economical aspects has been conducted to evaluate the feasibility of this Project, and all required approvals have been obtained.
4. What are the consequences of non-action for the local and global environment?	<p>There is a growing electricity demand in the project region. If the project had not been built, the limitations of the generating capacity within the regional grid may have meant that local demand could not be fully met, at least in the short term. Also, had the hydropower project not been constructed, the same capacity and electricity output as the proposed project would need to be provided by an alternative means, most likely, via new fossil fuel power plants. The electricity generated from fossil fuels will generate CO² and SO² emissions to the atmosphere adding to the 'greenhouse' effect and adding to the potential for acid rain.</p> <p>Operation of the facility will add to the local economy in terms of tax revenues, employment opportunities and the requirement for local services.</p> <p>According to the project owner, inaction would imply that trees will be cut down by local residents for heating and cooking. It is also likely that over time, the growing shortage of power in the area would have been addressed by the burning of fossil fuel elsewhere in the supply network.</p>	<p><i>National Instructive Catalogue for Industrial Structure Adjustment</i> (2007)</p> <p>DOC/001 DOC/005 DOC/007 DOC/008</p> <p>Interview with the affected local stakeholder</p>	Relevant assessments have been conducted to demonstrate the consequences of non-action for the local environment include increased deforestation and added CO ² and SO ² emissions to the atmosphere to aggravate the 'greenhouse' effect and increase the potential for acid rain.
5. On the project assessment level, describe project variants and types of technology considered in comparison with the selected option.	<p>The Project <i>CDM-PDD</i> provides a comprehensive analysis of other alternatives to the Project that could be considered during the Project design phase, including:</p> <ul style="list-style-type: none"> • Construction of a fuel-fired power plant with equivalent installed capacity or annual electricity generation; • Construction of a power plant using other renewable energy, such as solar power plant with an equivalent installed capacity or annual electricity generation; and • The proposed project itself, but not undertaken as a CDM project activity. 	<p>DOC/001 DOC/005</p>	Based on the available information, an assessment of alternative power generation capacities was carried out.

WCD Criteria	Description	Sources	Validator's Assessment
	<p>Following a comprehensive comparison between the natural resources available, regulatory requirements, financial attraction, emissions reduction and other parameters, these alternatives were all excluded and the development of a hydropower plant as a CDM project was finally chosen.</p> <p>In addition, according to FSR, in order to optimize the cost-benefit ration and increase the availability of water resource from Binglangjiang River, the decision to go head with the current installed capacity was based on four-cascades hydropower system, comparing with five cascades hydropower system in Binglangjiang River.</p>		

Validator's Conclusions concerning Priority 2:

Based on the information available, the need for the Project is demonstrated at the local level as the demand for energy and water is increasing and hydropower is the preferred option. At the national level, hydropower is supported as part of China's efforts to diversify its energy supply, improve energy security by utilizing local resources, and reduce greenhouse gas emissions. At the site level, the Project has been designed to minimize its negative impacts to the local environment and community. As such, the Project is considered in line with WCD strategic priorities as the need for the Project has been demonstrated before project implementation.

3. Addressing Existing Dams/hydroelectric Projects

1. For hydroelectric projects with dams, please describe the national requirements and routines for monitoring and reporting regarding:	<p>According to the <i>Regulation on Dam Safety Management for Hydroelectric Projects (2005)</i>, the national requirements are listed as follows:</p> <ul style="list-style-type: none"> In the event of an emergency, operators should report immediately to the administrative departments and upper-level flood prevention command, and be prepared to undertake rescue activities; In the event of dam collapse, operators should issue an emergency warning to the potential inundated area and prepare to evacuate those affected; Rescue equipment should be maintained onsite, and provisions made to ensure that communication and warning systems are in good condition; Undertake regular meteorological and hydrological forecasting; Prohibit unqualified staff from operating the sluice gate, flood gate or other facilities. Employees are to comply with related regulations during operation. No 	<p><i>Regulation on Dam Safety Management for Hydropower Project (2005)</i></p> <p><i>Environmental Protection Law of the People's Republic of China (1986)</i></p> <p><i>Water Law of the People's Republic of China (amended 2002)</i></p> <p><i>Law of the People's Republic of China on the Prevention and Control of Water Pollution (amended 2008)</i></p> <p><i>Law of the People's Republic of China on Flood Control (1997)</i></p> <p><i>Law of the People's Republic of China on Water and Soil Conservation (1991)</i></p>	<p>According to the <i>FSR and EIA Reports</i>, four cascade power plants are planned and located within the Binglangjiang River. The Project is the 3th (the third) Cascade Hydropower Project located on the Binglangjiang River. All four plants are listed in the table below.</p> <table border="1"> <thead> <tr> <th>Name of Hydropower Project</th><th>Class of Cascade</th><th>Installed Generation Capacity (MW)</th><th>Location</th></tr> </thead> <tbody> <tr> <td>Sanchahekou</td><td>1st</td><td>156</td><td>Under Planning</td></tr> <tr> <td>Houqiao</td><td>2nd</td><td>48</td><td>Under operation</td></tr> <tr> <td>The Project</td><td>3rd</td><td>315</td><td>The first set of generators was under trial operation</td></tr> </tbody> </table>	Name of Hydropower Project	Class of Cascade	Installed Generation Capacity (MW)	Location	Sanchahekou	1 st	156	Under Planning	Houqiao	2 nd	48	Under operation	The Project	3 rd	315	The first set of generators was under trial operation
Name of Hydropower Project	Class of Cascade	Installed Generation Capacity (MW)	Location																
Sanchahekou	1 st	156	Under Planning																
Houqiao	2 nd	48	Under operation																
The Project	3 rd	315	The first set of generators was under trial operation																

WCD Assessment Report

WCD Criteria	Description	Sources	Validator's Assessment			
<ul style="list-style-type: none"> social impact, implementation of compensation agreements. 	<ul style="list-style-type: none"> unauthorised persons or parties are permitted to disturb the normal operation of the dam; A qualified dam safety management expert should be appointed, and a dam safety management plan should be established including rules and safe work procedures; The dam operators should carry out safety supervision and monitoring on dam safety according to relevant technical guidelines. The monitoring data should be analysed at regular intervals in order to ensure the safe operating condition of the dam; and Regular maintenance should be carried out to ensure the dam, dam gates, and associated facilities are in good working condition. 	<p><i>Compensation and Resettlement of Migrants for Large and Medium Water Conservation and Power Construction Projects (2006)</i></p> <p>DOC/005 DOC/007</p> <p>Interview with the affected local stakeholder</p>				at the time of the site visit
			Songshanhekou	4 th	168	Under operation

Regarding potential environmental and social impacts caused by the development of the hydropower project with a dam, China has established a complete set of technical standards and regulations. The national requirements are listed as follows:

- Enterprises that construct projects that cause pollution to the environment must observe the state provisions concerning environmental protection for such projects. The environmental impact assessment on a construction project must include the pollution the project is likely to produce and its impact on the environment and stipulate the preventive and curative measures. The assessment shall, after initial examination by the authorities in charge of the construction project, submit them by specified procedures to relevant departments of the environmental protection administration for approval.
- Measures must be taken to protect the ecological environment while natural resources are being developed or utilized.
- The project shall incorporate the work of environmental protection into their plan and establish a responsibility system for environmental protection, and adopt effective measures to prevent and control the pollution

WCD Assessment Report

WCD Criteria	Description	Sources	Validator's Assessment
	<p>and harm caused from construction/operation activities.</p> <ul style="list-style-type: none"> • Discharge of the pollutants must be reported and registered with the relevant authorities in accordance with the provisions of the relevant department of environmental protection administration under the State Council. • The entire national water resources planning must be decided by the central government. The comprehensive planning of important rivers and lakes are approved at the national level in accordance with the guidelines for harnessing rivers and water resources development. • If discharge of heated waste water into any water body is to be made, measures shall be taken to ensure that the temperature of the water body conforms to the water environment quality standards. • In the course of construction and operations, water and soil conservation measures should be adopted, and shall be responsible for the rehabilitation of the soil eroded. If an enterprise or institution is unable to carry out the rehabilitation, the department of water administration shall undertake the task, and the cost thus entailed shall be borne by the enterprise or institution that has caused the soil erosion. • The expense associated with the prevention and control of soil erosion arising in the course of construction shall be allocated from the capital construction investment; the expenses for the prevention and control of soil erosion arising during operations shall be allocated from the operations cost. <p>Regarding the implementation of the compensation agreements, the <i>Regulation on Land Requisition Compensation and Resettlement for Large and Medium Water Conservation and Power Construction Projects (2006)</i>, the total compensation for land requisition and resettlement should be 16 times the average annual land value of the last three years.</p> <p>The project's specific requirements for environmental</p>		

WCD Assessment Report



WCD Criteria	Description	Sources	Validator's Assessment
	impact, social impact and implementation of compensation agreements can be found in the sections covering strategic priorities 4, 5 and 6, respectively.		
2. For non-dam projects, describe details of the continuous monitoring of the project (environmental and quality assurance).	Not applicable as there is no existing non-dam hydropower project along the Binglangjiang River.	N/A	Not applicable as there is no existing non-dam hydropower project along the Binglangjiang River.
3. How have relevant outstanding social and environmental issues from existing dams/hydroelectric projects in the river basin been addressed?	<p>As reported by the site management and the local stakeholders, and described in the <i>FSR (DOC/005)</i>, in addition to the 315 MW Sujiahekou Hydropower Station Project, at the time of the preparation of this report, there are three planned or existing hydropower stations within 50 km of the Project with water intake in the Binglangjiang River.</p> <p>No outstanding social and environmental issues relating to the three hydropower projects along the Binglangjiang River were reported based on a review of the available documents and information.</p>	<p>DOC/005 DOC/007 DOC/026</p> <p>Interview with the affected local stakeholder</p>	No outstanding issues were reported by site management or the local government agencies with regard to the other Cascade Hydropower Plants. No information was available regarding social or environmental issues from other existing hydroelectric projects on the Binglangjiang River.
4. Have national regulations been enforced for existing dams and what can be concluded with regard to compliance?	<p>According to information from the official websites of the Yunnan Provincial Water Resource Bureau (WRB) and Yunnan Province Baoshan Municipal Environmental Protection Bureau (EPB), no non-compliance issues relating to other existing hydropower plants on the Binglangjiang River have been identified.</p> <p>No non-compliances with national or local regulations were found with regard to the existing plants.</p>	<p>Yunnan Provincial WRB: http://www.wcb.yn.gov.cn/</p> <p>Yunnan Province Baoshan Municipal EPB http://www.bsepb.gov.cn/</p> <p>Interview with the affected local stakeholder</p>	A brief internet search did not identify any information regarding the compliance status of or any compliance issues relating to the existing hydroelectric projects on the Binglangjiang River.
5. Will the implementation of safety measures and evacuation plans be independently audited?	See above (Section 3, Question 1), which provides details on safety requirements. These measures will be subject to regular compliance checks by the relevant governmental departments in line with Chinese regulations.	<p><i>Regulation on Dam Safety Management for Hydroelectric Project (2005)</i></p> <p>DOC/005 DOC/007</p> <p>Interview with the affected local stakeholder</p>	No information regarding safety measures and evacuation plans for the existing hydropower plants was made available by site management during the site visit. The evacuation plans and safety measures are subject to regular compliance checks by the relevant government departments.
6. Provisions for	None of the governmental approvals issued to the Project stipulates a requirement for decommissioning funds and	N/A	Based on the information obtained, there is no non-compliance observed with regards to applicable

WCD Assessment Report

WCD Criteria	Description	Sources	Validator's Assessment
maintenance and decommissioning	other such arrangements. Provisions have not been included in the final design for emergency drawdown, and none are legally required in China. The Project developer is responsible for maintenance and refurbishment of the facility over its operating life.		Chinese regulations. The project developer is responsible for maintenance and refurbishment.
<ul style="list-style-type: none"> What provisions have been made for maintenance and refurbishment (e.g. a maintenance and refurbishment fund)? What arrangements are made for decommissioning at the end of the plant lifetime, if any (e.g. decommissioning set aside fund)? 	<p>In order to standardize the works of reservoir downgrading and decommissioning, the PRC Water Resources Department issued the <i>Management Methods for Reservoirs Downgrade and Discard (Trial)</i> in 2003. Deficient dam maintenance and abandonment require major investments and financial support from governments at all levels. In recent years, the Chinese Central Government has strengthened dam maintenance and decommissioning of deficient reservoirs. According to the Plan Exclusively for Reinforcement and Rehabilitation of Deficient Dams in China, project developers must obey the following procedures:</p> <ul style="list-style-type: none"> The Review of appraisal report of "the category 3 dams (the deficient dams)". Dam Safety Appraisal Organization Unit should report appraisal materials to the Dam Safety Management Centre of the National Ministry of Water Resources, and the Centre is in charge of review and verification of the appraisal results of "the category 3 dams". Examination and approval of feasibility study report and preliminary design of dam reinforcement and rehabilitation. Large reservoirs are examined and approved by their river-basin management agencies; and medium-sized and small reservoirs by the provincial Planning Committees. If the investment surpasses a certain scale it should be approved by the corresponding river-basin management agencies. The Dam Safety Appraisal Organization Unit should report the following material to the National Ministry of Water Resources: dam safety appraisal reports as well as the appraisal results of "the category 3 dams reviewed and verified by the Dam Safety Management Centre" approved documents of preliminary design and written 	<p><i>Management Methods for Reservoirs Downgrade and Discard (Trial) (2003)</i></p>	<p>Based on the information obtained, there is no non-compliance observed with regards to applicable Chinese regulations.</p>

WCD Assessment Report



WCD Criteria	Description	Sources	Validator's Assessment
	<p>promises of corresponding capital given by local administrations.</p> <ul style="list-style-type: none"> Relevant documents approved by the National Ministry of Water Resources are reported to the National Planning Committee for approval of project inception report and arrangement of investment plans. 		
<ul style="list-style-type: none"> Describe provisions for emergency drawdown and decommissioning. 	Not required	N/A	This is not a requirement under Chinese regulations.
<ul style="list-style-type: none"> Are they sufficiently flexible to accommodate changing future needs and values, including ecosystem needs and ecosystem restoration (Guideline 12)? 	Not required	N/A	This is not a requirement under Chinese regulations.
<ul style="list-style-type: none"> Does the licence for project development define the responsibility and mechanisms for financing decommissioning costs? 	Not required	N/A	This is not a requirement under Chinese regulations.

WCD Criteria	Description	Sources	Validator's Assessment
<ul style="list-style-type: none"> Describe economic, environmental, social and political factors that may point against future decommissioning, if this has been recognised as the best solution. 	Not required	N/A	This is not a requirement under Chinese regulations.

Validator's Conclusions concerning Priority 3:

According to the *FSR (DOC/005)* and confirmed by the site management and other local stakeholders, there are two planned hydropower stations within 50 km of the Sujiahekou Project and one operating hydropower station is located approximately 20km upstream of the Project at the time of the preparation of this report that has water intakes in the Binglangjiang River.

Name of Hydropower Project	Class of Cascade	Installed Generation Capacity (MW)	Status	Location
Sanchahekou	1 st	156	Under Planning	Under Planning
Houqiao	2 nd	48	Under operation	Approximately 20km upstream of the Project
The Project	3 rd	315	The first set of generators was under trial operation at the time of the site visit	location is at the 98°11'24" Longitude East and 25°15'00" Latitude North
Songshanhekou	4 th	168	Under operation	Approximately 11km downstream of the Project

A brief internet search identified no compliance issues relating to the social and environmental performance of the existing hydropower plant on the Binglangjiang River. Therefore, the project is considered to be aligned with WCD strategic priorities.

4. Sustaining Rivers and Livelihoods

4.1. Water use ratio

Water use ratio (ratio of natural flow, agricultural water, industrial water, domestic water...)	The following data has been obtained from the <i>FSR and EIA Reports</i> , as well as the document <i>Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station</i> .	DOC/005 DOC/007 DOC/019 Interview with the affected local	The <i>FSR, EIA Reports</i> and the report <i>Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station</i> were prepared by appropriately licensed institutes and approved by the Provincial government agencies as required. The
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WCD Criteria	Description	Sources	Validator's Assessment
including:	1. Population of the river basin: The Project is located within the Binglangjiang River Basin, falling into the administrative area of Houqiao Township, Tengchong County, which is within the prefecture of Baoshan City, Yunnan Province. According to the report <i>Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station</i> , the total population of Houqiao County is approximately 25,000 residents, of which the agricultural population accounts (24,000 residents) for the major part downstream of the Project.	stakeholder	numbers quoted are confirmed.
1. population of the river basin area (10 ⁶ inhabitants);			Based on a review of appropriate documentation, the Project appears to have been developed based on a comprehensive plan for the development of the Binglangjiang River. ERM CVS understands that the Project is a run-of river type, with reduced flow caused by the water diversion along the river for a distance of approximately 5.5km between the dam and power house. There is no demand for domestic and industrial water between the dam and the power house. The required minimum ecological flow requirement is aimed at maintaining the ecology of the river directly downstream of the dam, along the 5.5 km stretch before the diverted water is returned to the river course.
2. natural mean flow (km ³ /year);			
3. demand (km ³ /year);			
4. water use ratio (%);			
5. comparison of water demand with natural mean flow;			
6. storage capacity (km ³);			
7. annual water consumption by type of users (hm ³ /year): agricultural and farming, domestic use, industrial use			
	2. Natural mean flow: 0.599 km ³ /year;		As the water diverted to the powerhouse of the hydropower station is entirely returned to the river basin through a tailrace, both the site management and the governmental agencies consider that the retention structures will not have significant influence on the nature of the overall flow along the Binglangjiang River.
	3. Domestic/industrial water demand: Indicated as limited industrial water demand (220m ³ /h) and limited domestic water demand (approximately 100 m ³ /h) during the construction phase of the Project. As confirmed with the site management and the local governmental agencies, there is no domestic use or industrial water extraction activities within the Binglangjiang River Basin.		
	4. Water use ratio: According to the <i>FSR Report</i> , as well as the <i>Approval of Water Resource Report</i> , the ratio of water used for electricity production to natural flow is 77% but this water is returned to the river downstream of power house.		Under the <i>Water Law</i> (2002) and the <i>Implementation Method of Water Abstraction Permitting</i> (1993), water abstraction permits are required for water abstraction activities. Based on an interview with the local EPB, the water abstraction permitting system has been implemented in Tengchong County. Such a permit typically specifies the maximum allowable abstraction amount from the ground, river or other water body..
	5. Comparison of water demand with natural mean flow: As indicated under Question 3 above, demand by the local population for water from the river for industrial, household and agricultural use is likely to be less than 5% of the average river flow.		
	6. Storage capacity: 0.225 km ³		At the time of the site visit, no water abstraction permit had been obtained by the Site from the local Water Affairs Bureau. The site management stated that the Site was currently preparing a pre-application for a water abstraction permitting and that a water abstraction permit is expected to be received before the Project officially becomes operational.
	7. Annual water consumption by type of users (hm ³ /year): No public data is available for domestic use, but due to the low density of the local population,		
			Forward Action Request 1 (FAR1)
			To ensure compliance with regulatory requirements, an

WCD Criteria	Description	Sources	Validator's Assessment						
	this is likely to be small. As reported by the site management and the local government agencies, there are negligible domestic or industrial water extraction activities within the Binglangjiang River Basin.		abstraction permit should be obtained from the local Water Resources Management Bureau and a copy of it maintained onsite for record purposes. It is understood that a water abstraction permit will be applied for and is expected to be received before the Project commences full operations in early 2012. The site management should ensure that the abstraction permit is applied for to allow sufficient time for it to be processed by the various levels of government and issued before the Project is due to commence operation.						
4.2. Impact Assessment (Note: both positive and negative impacts should be included here) What Impact Assessments have been carried out and on which regulations were they based? – Describe the major impacts in each of the following categories and the mitigation measures for negative impacts:	In China, the Environmental Protection Law of the PRC (1989) and the Environmental Impact Assessment Law of the PRC (2003), require that an Environmental Impact Assessment (EIA) be undertaken during the feasibility phase of a project, for all new, expansion or renovation projects. The EIA document must be approved by an appropriate level Environmental Protection authority (local EPB, provincial EPB or Ministry of Environmental Protection) depending on the type, complexity and likely investment of the project) prior to securing a construction and operating permit. The EIA approval specifies the environmental regulations and standards with which the facility must comply. There are three levels of EIA documentation requirements, depending on the aspects indicated above. These range from a simple registration for small projects with little environmental impact to full “EIA Reporting” in the conventional sense. Hydropower projects typically require full EIA reporting.	--	--						
4.2.1. Environmental Impacts									
Describe environmental impacts of the project (including impact on water quality (temperature, oxygen, etc.), soil, air quality, GHG emissions, biodiversity, habitats, risk of erosion caused by inundation etc.)	<p>In China, preparing an EIA and obtaining its approval is a prerequisite for any major development. According to the <i>EIA Report</i> prepared in April 2006and its approval issued by Yunnan Provincial EPB on 19 June 2006, the impacts caused by the Project to the environment and the specified mitigation measures are:</p> <table border="1"><thead><tr><th>Identified environmental impacts</th><th>Measures to be taken</th></tr></thead><tbody><tr><td colspan="2">Water pollution</td></tr><tr><td>Construction Site</td><td>Wastewater generated during construction will be subject to sedimentation</td></tr></tbody></table>	Identified environmental impacts	Measures to be taken	Water pollution		Construction Site	Wastewater generated during construction will be subject to sedimentation	<p>DOC/007 DOC/008</p> <p>Interview with the affected local stakeholder</p>	<p>The <i>EIA</i> report was prepared by a Class A EIA institute and approved by Yunnan Provincial EPB, and is consistent with the information identified through interviews with local government agencies, the site management and selected local stakeholders.</p> <p>Besides the benefits mentioned in the column on the left, according to the site management, the positive environmental benefits of this project include the supply of hydroelectricity to local households reducing emissions and health problems caused by the burning of fossil fuel or charcoal in indoor environments.</p>
Identified environmental impacts	Measures to be taken								
Water pollution									
Construction Site	Wastewater generated during construction will be subject to sedimentation								

WCD Assessment Report

WCD Criteria	Description	Sources	Validator's Assessment
		before discharge back to the river.	
	Wastewater from the staff	Treated via a septic tank prior to discharge to the river.	
	Solid waste		
	Waste during construction period	To be transported to specific landfill sites.	
	Waste during operation period	To be collected and transported to local waste treatment station	
	Impact on human health		
	External diseases may be brought into construction area	Hygiene care will be enhanced in the construction area; trash will be appropriately treated and managed to minimise impacts on human health.	
	Air pollution		
	Dust during the construction	Water spray to be used during road construction and in other dusty locations. Concrete production to cease on windy days. Cement will be properly containerised or covered when transported and stored.	
	Noise pollution		
	Blast and excavation during construction	Equipment should be chosen that minimizes noise pollution, construction hours should be planned in advance, and construction activity should stop at night.	
	Biodiversity and ecosystems		
		Re-forest and restore the previous ecosystem after construction is completed. The Project will discharge	

WCD Criteria	Description	Sources	Validator's Assessment
	operation of the Project.	a minimum of 5.98m ³ /s of water flow to the river section downstream of the dam and before the power house to meet the ecosystem needs of the river.	
	Erosion impact assessment		
	Land erosion in the project area occurring prior to the project activity, e.g. caused by the movement onsite of construction-related vehicles	Measures will be taken to minimise soil erosion, such as tree planting and revegetation.	

According to the *EIA Report* and the site management, the positive environmental benefits of this Project include:

- Creation of work opportunities (mainly labour work) in the hydro power station for some local residents;
- The local government will receive the tax payment benefits of the Project that will help to address some of the issues relating to a lack of basic facilities in the area;
- Other benefits from the project that the project owner will help to address relate to the lack of basic facilities in the local area, such as improvement of local transportation facilities. These will be enhanced by the improvement of local roads and bridges due to the project; and
- The supply of hydroelectricity is expected to reduce greenhouse gas emissions caused by the burning of fossil fuel for thermal power generation.

4.2.2. Environmental Flow Assessment

1. Describe how the environmentally safe minimum flow has been determined.	Based on the <i>EIA Report</i> and <i>Approval of Water Resource Assessment Report of Binglangjiang River Sujiahekou Hydropower Station</i> , prepared by a licensed institute and approved by Yunnan Provincial Water Resources Bureau, the environmental minimum water flow is 5.98m ³ /s, in order	DOC/006 DOC/007 DOC/008 Interview with the affected local	The assessment reports were prepared by licensed institutes and subsequent approvals were obtained. The figure is considered as the minimum value to safeguard the ecological balance of the river's ecosystem. This approach is consistent with the
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WCD Criteria	Description	Sources	Validator's Assessment
	to maintain the ecological balance of the river ecosystem based on The Guidelines for the Assessment of Water Extraction and Utilization in Construction Projects (SL/Z322-2005).	stakeholder	<p>Guideline for the Assessment of Water Extraction and Utilization in Construction Project (SL/Z322-2005). The required environmental minimum flow is also mentioned in the approvals issued by the relevant government authorities, and this was confirmed during the time of site visit.</p> <p>Based on the information obtained, no non-compliance is observed with regard to the applicable Chinese regulations.</p>
2. Describe the measures taken to minimise the impact of reduced flow in the affected river.	<p>As stated in Question 1 above, the environmentally safe minimum flow of 5.98m³/s will be discharged from the reservoir to minimise the impact of reduced flow in the downstream portion of the river and maintain the river's ecology.</p> <p>In accordance with the EIA minimum discharge requirements outlined above, a special water discharge pipe has been included in the project's design; meanwhile, the requirement to regularly monitor the status of the river and introduce fish fry into the river if and when fish stocks are required as well, in order to minimise the impact of reduced flow on the river ecology.</p>	<p>DOC/006 DOC/007 DOC/008</p> <p>Interview with the affected local stakeholder</p>	<p>The <i>EIA and Water Resources Assessment Report</i> were prepared by licensed institutes and subsequent approvals were obtained.</p> <p>The first power generator set for the Sujiahekou Hydropower Station had been installed and was undergoing trial operations during the time of the site visit. Due to the potential impact of the Project on the ecological environment of the Binglangjiang River, the Project has installed an environmental flow discharge pipe in order to mitigate the downstream ecological impacts as required by the local EPB. An engineering drawing showing arrangements for maintaining the ecological flow in the river was provided for ERM CVS's review at the time of the site visit.</p>
3. Describe the measures taken to maintain ecosystems, productive fisheries and other aqua-cultures downstream and upstream.	<p>According to the <i>EIA Report</i> and an interview with the site management, as well as the representative of local EPB, no rare fish species or migratory fish species are found in the Binglangjiang River.</p> <p>According to interviews with the local governmental agencies and the village committee, the local community was not engaged in any commercial river fishing or other aquaculture activities before construction of the Project.</p> <p>The following requirements are stipulated by the EIA:</p> <ul style="list-style-type: none"> As described above, a 5.98m³/s water release rate is required from the reservoir to maintain an acceptable level of ecology in the river; Strengthened soil and water conservation, preventing deforestation; Arrangements for the project developer to pay 	<p>DOC/007 DOC/008</p> <p>Interview with the affected local stakeholder</p>	<p>The approaches mentioned in the <i>EIA Report</i> are consistent with the WCD strategic guidelines.</p> <p>According to an interview with a representative of the local EPB, the submerged area has been cleared of vegetation and infrastructure. This had been inspected to prevent pollution and disease before inundation. Furthermore, it is emphasizing that adequate supervision will be required by the project management to ensure that the ecological conditions in the river are properly maintained.</p> <p>Forward Action Request 2 (FAR2)</p> <p>Due to the construction of the dam the natural flow of the river will be obstructed and the ecosystem will be negatively affected by the project. Based on a statement made by the site management in discussions with the local EPB during the site visit,</p>

WCD Assessment Report

WCD Criteria	Description	Sources	Validator's Assessment
	<p>compensation fees to the local authority for periodical fish release into the river, based on the condition of fish stocks after the power plant becomes operational; and</p> <ul style="list-style-type: none"> Improving awareness of construction workers to prevent them from hunting protected wild life. 		ERM CVS understands that the Site plans a periodic fish release into the river upstream of the project, based on the condition of fish stocks in the river after the power plant becomes operational. In order to ensure that mitigation of this potential impact on the aquatic ecosystem takes place, the anticipated expense related to the activity of periodically releasing juvenile fish fry into the river should be included in the Project's financial plan.
4. Describe the activities the project developer will undertake before flooding the land (e.g. clearing of vegetation or other preparations).	<p>As stated by the site management, the vegetation on the reservoir bed was cleared before flooding commenced. Hygienic cleaning and necessary treatment to ensure no pollution sources were left on the reservoir bed were undertaken before flooding the basin. These activities were undertaken by the local governmental offices, with funding provided by the project developer.</p> <p>According to the <i>EIA Report</i>, the vegetation on the reservoir bed would need to be cleared before starting the flooding process as required under the <i>Regulation of Hydropower Project Reservoir Flooding Management Design (DL/T5064-1996)</i>. Hygienic cleaning and necessary treatment to ensure no pollution sources were left on the reservoir bed (including areas from average water level to 2m below dead water level) should be undertaken before flooding the land.</p>	<p>DOC/007 DOC/008</p> <p>Interview with the affected local stakeholder</p>	The approach is consistent with Chinese regulatory safeguards and mitigation measures and also aligns with international practice.
5. Describe any other compensatory measures addressing environmental impacts of the project	No other compensatory measures were considered necessary to be implemented to address potential environmental impacts of the Project.	N/A	Based on the reviewed documents and interviews with site management and local governmental departments, no other compensatory measures are necessary to be implemented to address the environmental impacts of the project.
4.2.3. Social Impact Assessment			
1. Describe social impacts of the project (including resettlement,	According to the <i>EIA Report and Land Acquisition and Resettlement in FSR Planning Report</i> , the main identified social impacts from the development of the Project relate to physical displacement and land acquisition. In total of 465 local inhabitants were physically and economically	<p>DOC/007 DOC/008 DOC/019 DOC/020 DOC/024</p>	The <i>EIA Report and Land Acquisition and Resettlement in FSR Planning Report</i> were prepared by appropriately qualified institutes and approved by the Yunnan Provincial EPB and Yunnan Provincial People's Government, respectively. The information it

WCD Assessment Report

WCD Criteria	Description	Sources	Validator's Assessment
impacts on other land or river use e.g. fishing, agriculture, hunting and use of other types of natural resources and including benefits to individuals and communities)	<p>displaced due to the development of the project.</p> <p>Based on official compensation records which were obtained through household interviews, the project developer has made a lump sum payment to the local government and the local government has distributed this to local households affected by land acquisition and physical displacement, in accordance with Chinese regulations.</p> <p>The following negative social impacts were identified in the <i>EIA Report</i> through interviews with surveyed households:</p> <ul style="list-style-type: none"> • Loss of land and physical displacement; and • Negative impacts due to large numbers of workers at the construction area, including poor conditions for drinking and eating, and a lack of accommodation which might result in the spread of infectious disease within the local community. Specific concerns are hepatitis and dysentery. <p>Based on reviewed documentation and discussions with the site management and representatives of local government, the river is not used for commercial fishing and local inhabitants do not rely on it for their livelihoods. Most of the local inhabitants are farmers and use small amounts of water from the river to irrigate their crops.</p> <p>Based on interviews with local governments and rural residents; and a review of the <i>EIA Report</i>, positive social impacts were identified as the following:</p> <ul style="list-style-type: none"> • Support for the local power supply and economic development within the area of interest of the Project; • Creation of work opportunities (mainly labour work) in the hydro power station for some local residents; • Improved road conditions and local transportation infrastructure; and • An increase in governmental tax income and an increase in the economic income of local residents within the area of the Project through support of local industry after the construction phase of the Project. 	<p>DOC/025</p> <p>Interview with the affected local stakeholder</p>	contains is consistent with information identified through interviews with local governmental agencies, and the representatives of project affected stakeholders.

WCD Criteria	Description	Sources	Validator's Assessment
2. Describe any identified health impacts due to the project.	As described above in Section 4.2.3, Question 1, there is a risk of infectious diseases being spread from the migrant workers to the local population during the construction phase. To minimise the above risks, hygiene care will be enhanced in the construction area and trash will be properly treated and managed to minimise impacts on human health.	DOC/007 DOC/008 Interview with the affected local stakeholder	This is a relatively short-term common risk identified with project developments in China when there is an influx of temporary workers. As the first generator set for the power project had already been installed and was under commissioning during the site visit, the major part of the temporary workforce had already left the site. Thus no further mitigation measures are required to reduce the potential health impacts due to the development of the Project.
3. Describe impacts on religious and cultural heritage.	According to the EIA Report, there are no religious or cultural heritage features within the Project area.	DOC/007 DOC/008 Interview with the affected local stakeholder	Based on approved documentation and interviews with government agencies, site managers, the village committee and selected households, there is no significant religious or cultural heritage in the project area at risk from the development.
4. Describe the liability provisions safeguarding the implementation of the planned measures.	<p>According to the <i>EIA Report</i>, the following measures are recommended:</p> <ul style="list-style-type: none"> Reducing the visual impact of the Project through the planting of appropriate trees and vegetation to act as a screen; Complying with the requirements set out in the Soil and Water Conservation Plan (SWCP) to achieve environmental improvement; and Ensuring the continued ecological life of the river downstream of the plant by ensuring the minimum environmental flow of 5.98m³/s is maintained at all times in accordance with the requirements of the <i>EIA</i>. In addition, monitoring the ecological life of the river and introducing appropriate fish fry on a regular basis as necessary to maintain an ecological balance. <p>Furthermore, the local resettlement office has the responsibility for monitoring the implementation of the planned measures.</p>	DOC/007 DOC/008 Interview with the affected local stakeholder	These are common mitigation measures for identified environmental, social and ecological impacts.
5. Is the project planned in a responsible way in order to sustain	The Project complies with applicable laws and is part of a regional plan for hydropower development that brings energy to an isolated community. The environmental, ecological and social impacts have been addressed in the	DOC/006 DOC/007 DOC/008 DOC/019	The <i>EIA Report</i> was prepared by a Class A institute and approved by Yunnan Provincial EPB on 19 June 2006.

WCD Criteria	Description	Sources	Validator's Assessment
livelihoods and the environment?	<p>approved <i>EIA Report</i>.</p> <p>As stated in Section 4.2.2, Question 1, the minimum environmental flow for the Project is 5.98m³/s to maintain a safe downstream ecological river flow.</p> <p>As stated in Section 4.2.3, Question 1, the Project Developer has made a lump sum payment via the local government to local affected stakeholders according to compensation agreements (details see Section 1.1, Question 10).</p> <p>According to Site management and interviewed affected households, a preferential work opportunity (mainly labour work) was provided by the project developer to the local people during the construction phase.</p> <p>The local resettlement office is responsible for monitoring the implementation of the planned measures. According to an officer of Tengchong County Resettlement Bureau, a 20 years Post-resettlement Support Plan will be prepared by the local government authorities with assistance from the project developer.</p>	<p>DOC/020 DOC/024 DOC/025</p> <p>Interview with the affected local stakeholder</p>	<p>According to interviews with selected project affected households, it is confirmed that the compensation has been distributed and received by the project affected local stakeholders.</p> <p>In addition, a 20 year Post-resettlement Support Plan will be prepared by the local government authorities with assistance from the project developer. According to a statement by a representative of Tengchong County Resettlement Bureau, an amount of RMB 600 per person in annual compensation will be released through a livelihood restoration plan.</p> <p>Based on the interviews with government agencies and selected project affected households, the project is generally welcomed by the local communities. The project owner has taken additional and voluntary steps described in Section 1.1, Question 9 and Section 4.2.3, Question 4 to address the livelihood issues associated with the government-led resettlement process.</p>

4.3 Cumulative Impacts

Describe the cumulative impacts of all hydrological structures existing in the river basin using variables such as:	As reported by the site management and the local stakeholders, in addition to the 315 MW Sujiahekou Hydropower Station, there are a number of existing and planned hydropower projects on the Binglangjiang River:	DOC/005 DOC/006 DOC/007 DOC/008	No cumulative impact assessment is available for the proposed hydropower schemes. This was confirmed during the site visit via interview with the governmental agencies and the representatives of the resettled community. Such an assessment is not a regulatory requirement in China and is not commonly undertaken.																
<ol style="list-style-type: none"> 1. flow regime, 2. water quantity, 3. productivity, 4. water quality <p>species composition of different rivers in the same river basin</p>	<table border="1"> <thead> <tr> <th>Name of Hydropower Project</th><th>Class of Cascade</th><th>Installed Generation Capacity (MW)</th><th>Status</th></tr> </thead> <tbody> <tr> <td>Sanchahekou</td><td>1st</td><td>156</td><td>Under Planning</td></tr> <tr> <td>Houqiao</td><td>2nd</td><td>48</td><td>Under operation</td></tr> <tr> <td>The Project (Sujiahekou Hydropower)</td><td>3rd</td><td>315</td><td>The first set of generators</td></tr> </tbody> </table>	Name of Hydropower Project	Class of Cascade	Installed Generation Capacity (MW)	Status	Sanchahekou	1 st	156	Under Planning	Houqiao	2 nd	48	Under operation	The Project (Sujiahekou Hydropower)	3 rd	315	The first set of generators	Interview with the affected local stakeholder	
Name of Hydropower Project	Class of Cascade	Installed Generation Capacity (MW)	Status																
Sanchahekou	1 st	156	Under Planning																
Houqiao	2 nd	48	Under operation																
The Project (Sujiahekou Hydropower)	3 rd	315	The first set of generators																

WCD Assessment Report

WCD Criteria	Description	Sources	Validator's Assessment
	Station)		was under trial operation at the time of the site visit
	Songshanhekou	4 th	168 Under operation

No significant cumulative impacts of the Project on the Binglangjiang River have been identified. Based on the information obtained from the *FSR Report*, the cumulative impacts have been assessed for the proposed Cascade Hydropower System as follows:

- Impacts on the function and operation of the aquatic ecological system;
- Impacts on the function and operation of the local ecological system;
- Impacts on hydrology due to the reduction in the volume of water flow downstream; and
- Changes in water temperature.

However, all of these cumulative negative impacts are assessed as having minor impacts.

Validator's Conclusions concerning Priority 4:

The *EIA Report (2003)* provides an assessment of the environmental, social and ecological impacts caused by this Project. Potential negative environmental impacts include soil erosion, water quality, water flow reduction and ecological impacts. A minimum flow has been prescribed to satisfy the ecological requirements downstream of the dam. Based on the available information and the onsite interviews, local livelihoods are not strongly linked with the rivers as the community does not derive income from fishing or fisheries and does not utilise water from the river for its use. According to the *EIA Report*, the following measures are required:

- Reducing the visual impact of the Project through the planting of appropriate trees and vegetation to act as a screen;
- Complying with the requirements set out in the Soil and Water Conservation Plan (SWCP) to achieve environmental improvement; and
- Ensuring the continued ecological life of the river downstream of the plant by ensuring that the minimum environmental flow of 5.98m³/s is maintained at all times in accordance with the requirements of the *EIA*. In addition, monitoring the ecological life of the river and introducing appropriate fish fry on a regular basis in order to maintain the current ecological both upstream and downstream of the Project.

The above-mentioned mitigation requirements have been developed by a licensed EIA Institute and were approved by the Yunnan Provincial EPB on 19 June 2006. Forward Action Requests (**FAR1 & FAR 2**) have been raised with regard to reducing the negative impact of the Project on the aquatic ecosystem.

Based on the information available and the Project Developer's confirmation that the requirements of the EIA will be implemented, the Project is considered to be in compliance with Chinese regulations and aligned with WCD strategic requirements with respect to sustaining rivers and livelihoods.

WCD Criteria	Description	Sources	Validator's Assessment
5. Recognising Entitlements and Sharing Benefits			
<p>Are Mitigation, Resettlement and Development Action Plans (where applicable - including commensurate compensation packages) in place? Provide details:</p>			
1. Demonstrate that the construction of the plant did not lead to worsening of the living conditions of the local residents and resettled families	<p>At the time of the site visit, a plan set out in the document <i>Land Acquisition and Resettlement in FSR Planning for River Sujiahekou Hydropower Station</i> had been established according to national and local regulations and the relative standards, with the most important target of ensuring that the Project will not lead to any worsening of the living conditions of the local residents and resettled families.</p> <p>According to the <i>Resettlement Monitoring Report of Yunnan Provincial Binglangjiang River Sujiahekou Hydropower Station</i>, prepared by the Sujiahekou Hydropower Station Resettlement Monitoring Centre of Yunnan Provincial Resettlement and Development Centre in May 2009, the project-affected communities generally supported the project and none had any specific objections regarding either resettlement or the compensation arrangements that were applied.</p> <p>In addition, according to local residents that were consulted and the representative of Tengchong County Resettlement Bureau, those people that have been resettled now have improved living conditions.</p>	<p>DOC/019 DOC/020 DOC/021</p> <p>Interview with the affected local stakeholder</p>	Based on the information obtained from the document review and onsite interviews, there is no indication of the Project leading to worsening living conditions.
2. Were compensation and benefit agreements planned in consultation with affected groups?	<p>Compensation payments between the project developer and the project-affected residents is coordinated by the local government as required under Chinese law. A general <i>Lump Sum Work Agreement of Land Acquisition and Resettlement Task for Yunnan Province Tengchong County Binglangjiang River Sujiahekou Hydropower Station</i> was signed between Yunnan Baoshan Binglangjiang River Co., Ltd and Baoshan Municipal Resettlement Bureau, on 12 October 2006, in order to identify those impacted by land acquisition and the</p>	<p>DOC/024</p> <p>Interview with the affected local stakeholder</p>	The approach taken is consistent with Chinese regulations and is based on local economic conditions. This is the common and legislated approach taken throughout China and is aimed at providing fair compensation and maintaining social harmony.

WCD Assessment Report

WCD Criteria	Description	Sources	Validator's Assessment
	appropriate compensation rates to be administered. After receiving the compensation fund from the project developer, the local government has distributed the compensation to the impacted households based on relevant local compensation policies.		
3. What standards were the measures based on? (e.g. national standards or other)	Please refer to Section 1.1, Question 6 and question 10.	<p><i>National and Provincial Laws</i></p> <p>DOC/005 DOC/007 DOC/019 DOC/020 DOC/024</p> <p>Interview with the affected local stakeholder</p>	This is consistent with Chinese regulations and based on local economic conditions. As indicated above, this is the common and regulated approach taken throughout China.
4. Were the affected people satisfied with the compensation packages?	<p>The compensation standard is kept consistent and used for all stakeholders according to the applicable laws and regulations. The compensation arrangements are designed to provide adequate funding and affected households are satisfied with the compensation.</p> <p>Please refer to Section 4.2.3, Question 1</p>	<p>DOC/007 DOC/008 DOC/019 DOC/020 DOC/024 DOC/025</p> <p>Interview with the affected local stakeholder</p>	According to interviews with the site management and government departments, all of those affected by permanent or temporary physical resettlement and/or land acquisition have reached an agreement on the compensation package with the local government in association with the project owner. Based on the information obtained from available documentation and interviews with the representatives of project-affected households, the project-affected people are satisfied with their compensation packages.
5. Benefits for the affected people (individuals and communities): In what way will the affected local and indigenous population's livelihoods be improved due to the project?	<p>A summary of the positive social benefits of the Project based on both interviewed local residents and the <i>EIA Report</i> are indicated as follows:</p> <ul style="list-style-type: none"> Improved power supply to the local area; Support for local economic development; Better housing conditions for physically displaced households; Increasing local government tax revenue; Improved road conditions and local transportation infrastructure; and More work opportunities in the hydropower station for the local residents (mostly labour work or non-technical positions during the project construction stage). <p>In addition, some improvement to household incomes have come through the opportunity of the affected people</p>	<p>DOC/007 DOC/008</p> <p>Interview with the affected local stakeholder</p>	<p>The <i>EIA Report</i> was prepared by the licensed EIA institute and approved by the Yunnan Provincial EPB, and the benefits are consistent with the information obtained during interviews with the local governmental department and the impacted household..</p> <p>In addition, according to a statement by the Tengchong Resettlement Bureau, a 20-year Post-resettlement Support Plan will be prepared by the local government agencies with assistance from the project owner and an amount of RMB 600 per person in annual compensation will be released through a livelihood restoration plan.</p>

WCD Criteria	Description	Sources	Validator's Assessment
	operating their own business as a result of their relocation, thus changing their life style for the benefit of future generations		

Validator's Conclusions concerning Priority 5:

In China, compensation standards regulate the compensation amounts to be paid to households impacted by development projects. Based on the available information from the impacted households and local government representatives, after collecting the total amount required for compensation from the project owner, the local government redistributed the compensation to the impacted household based on the regulated compensation standards. A representative of the impacted residents indicated that in general, the impacted residents are satisfied with the compensation amounts and the arrangements which have been organized by the local government. As steps have been taken to provide compensation in accordance with required standards and those affected appear to be satisfied with their compensation, the project is considered to have respected the WCD strategic priorities.

6. Ensuring Compliance

6.1. Compliance measures:

1. What will be done to ensure that relevant laws, regulations, agreements (including resettlement and compensation agreements) and recommendations are followed?	<p>An Environmental Completion Acceptance Inspection (CAI) approval for environmental protection measures is to be undertaken to ensure that the required pollution prevention and control equipment is integrated into the project at the trial operations stage. As the project construction phase has not yet been completed, the CAI approval has not yet been applied for and obtained by the Site.</p> <p>The EIA requires the project developer to establish a comprehensive environmental programme to monitor water and air quality, noise emissions, soil erosion and ecological impacts, and it also stipulates detailed requirements on the content and routine for monitoring. The Site will establish an Environmental Social Management and Monitoring Plan (ESMMP) for the environmental management. It is also required by Chinese regulations that a Water and Soil Conservation CAI should be performed upon project completion, and subsequent approvals should be obtained from the appropriate local governmental bureaus</p> <p>In addition, as required by the <i>Water Law</i> (2002) and the <i>Implementation Method of Water Abstraction Permitting</i> (1993), water abstraction permits are required for all water abstraction activities, including those relating to hydropower generation. Based on an interview with the local EPB, the water abstraction permitting system has</p>	<p><i>PR China Environmental Impact Assessment Law (2003)</i></p> <p><i>Management Regulations on Construction Projects (1998)</i></p> <p>DOC/007 DOC/008</p> <p>Interview with the affected local stakeholder</p>	<p>To cover these issues, the following FARs are raised:</p> <p>Forward Action Request 3 (FAR3)</p> <p>The Project should obtain a CAI approval within three months of commencement of trial operations, extendable up to one year after commencement.</p> <p>Forward Action Request 4 (FAR4)</p> <p>The project developer should implement an ESMMP once the project commences operations and conduct regular monitoring of the implementation status of the ESMMP.</p> <p>Please Refer to Forward Action Request 1 (FAR1)</p>
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WCD Criteria	Description	Sources	Validator's Assessment
	<p>been implemented in Tengchong County Such a permit typically specifies the maximum allowable abstraction amount from the ground, river or other water body.</p> <p>At the time of the site visit, no water abstraction permitting had been obtained by the Site from the local Water Affairs Bureau. The site management stated that the Site was currently preparing a pre-application for a water abstraction permitting and that a water abstraction permit is expected to be received before the Project officially becomes operational.</p> <p>In addition, the Resettlement Office at Tengchong County level also plays an important role as far as the management of the resettlement operations are concerned. This Office is responsible for ensuring the correct management of all aspects of the resettlement and land acquisition processes and procedures, as well as for the coordination between the local government and the project developer. According to on-site management, resettlement monitoring and evaluation is conducted regularly by the Sujiahekou Hydropower Station Resettlement Monitoring Centre of the Yunnan Provincial Resettlement and Development Centre Ltd to ensure that the land acquisition and resettlement compensation was consistent with the relevant laws and regulations and associated agreements. Before the operation of the Project is started, a Resettlement Completion Acceptance Inspection (RCAI) should be obtained from the local inspection committee.</p>		
2. Are the compensation agreements legally binding – through treaties, administrative acts or other safeguards?	<p>As set out in Section 5 above, the compensation standards are regulated by the <i>Regulation on Compensation for Land Acquisition and Resettlement in Large and Medium-sized Water Conservancy and Hydropower Projects (Order of the State Council, No.471)</i>. According to this Regulation which became effective on 1 September 2006, the compensation agreement is legally binding and is safeguarded by the regulation on compensation standards.</p> <p>According to the records of compensation receipts signed by affected households and the household interviews undertaken by ERM CVS, the compensation has been paid by the Project Developer and distributed by the local government according to Chinese regulatory requirements.</p>	<p>DOC/024 DOC/025</p> <p>Interview with the affected local stakeholder</p>	Based on site interviews, compensation agreements are legally binding and have been paid to the local government. They have been provided to the affected households, as confirmed during the onsite interviews.

WCD Criteria	Description	Sources	Validator's Assessment																				
3. Is the cost of the compensation package included in the financial plan?	The cost of the compensation measures is included in the project's financial plan. According to compensation receipts signed by the affected households, compensation has been already distributed	DOC/024 DOC/025 Interview with the affected local stakeholder	According to onsite interviews with the randomly selected project affected households, it is confirmed that the compensation has already been paid and received by the project affected stakeholders. This is in compliance with Chinese regulations.																				
4. Does the project developer already operate other hydroelectric power stations? If so, have there been any conflicts between the project developer and stakeholders related to the development, operation and compensatory measures related to these projects? If so, describe the cause of the conflict and how it was resolved.	<p>Besides the Project, the project developer has three other hydropower stations planned or already operating in the Binglangjiang River Basin, as indicted in the table below.</p> <table border="1"> <thead> <tr> <th>Name of Hydropower Project</th><th>Class of Cascade</th><th>Installed Generation Capacity (MW)</th><th>Status</th></tr> </thead> <tbody> <tr> <td>Sanchahekou</td><td>1st</td><td>156</td><td>Under Planning</td></tr> <tr> <td>Houqiao</td><td>2nd</td><td>48</td><td>Under operation</td></tr> <tr> <td>The Project (Sujiagekou Hydropower Station)</td><td>3rd</td><td>315</td><td>The first set of generators was under trial operation at the time of the site visit</td></tr> <tr> <td>Songshanhekou</td><td>4th</td><td>168</td><td>Under Planning</td></tr> </tbody> </table> <p>According to onsite interviews with government and selected local stakeholders, no conflicts have been reported between stakeholders and the Site.</p>	Name of Hydropower Project	Class of Cascade	Installed Generation Capacity (MW)	Status	Sanchahekou	1 st	156	Under Planning	Houqiao	2 nd	48	Under operation	The Project (Sujiagekou Hydropower Station)	3 rd	315	The first set of generators was under trial operation at the time of the site visit	Songshanhekou	4 th	168	Under Planning	<p>Yunnan Provincial WRB: http://www.wcb.yn.gov.cn/</p> <p>Yunnan Provincial Forest Bureau http://www.ynly.gov.cn/Index.html</p> <p>Yunnan Province Baoshan Municipal EPB http://www.bsepb.gov.cn/</p> <p>Interview with the affected local stakeholder</p>	No conflict between the project owner and stakeholders was reported for the other hydropower developments in the Cascade. No adverse reports could be identified from local governmental websites (EPB, Water Resources Bureau, and Forest Bureau) after a brief internet search.
Name of Hydropower Project	Class of Cascade	Installed Generation Capacity (MW)	Status																				
Sanchahekou	1 st	156	Under Planning																				
Houqiao	2 nd	48	Under operation																				
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Songshanhekou	4 th	168	Under Planning																				

6.2. Monitoring and evaluation during crediting period:

1. Describe conditions in place for monitoring and evaluation of environmental and socio-economic	According to <i>Specifications For Engineering Acceptance Of Hydropower Station Capital Construction</i> (in effect since 1 January 2001), when a construction project is completed and checked for acceptance, the environmental and socio-economic impacts shall be checked for acceptance by the relevant authorities at the same time. Environmental CAI	Interview with the affected local stakeholder	Please refer to FAR3
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WCD Criteria	Description	Sources	Validator's Assessment
impacts of the project.	approval will be granted if there are no major issues. The local EPB is required to conduct the environmental CAI site inspections during the trial operations period.		
2. What provisions have been made to ensure that all measures not yet implemented at the time of validation will be put in place as appropriate, and monitored (for example through an independent auditing panel or auditor, or through self-auditing etc.)?	According to the <i>Regulation of Environmental Completion Inspection for Construction Project Management (2002)</i> , after the completion of the construction phase, the EPB will perform the Environmental CAI of the pollution control facilities to verify whether they were constructed and are being operated in accordance with the overall project construction plan as proposed in the EIA. An Environmental CAI Approval will be granted if there are no major issues. The plant is allowed to be put into formal operation only after obtaining the approval from the local EPB. It is also required by Chinese regulations that Water and Soil Conservation CAI and Resettlement CAI should be performed upon project completion, and subsequent approvals should be obtained from the local governmental bureaus.	Regulation of Environmental Completion Inspection for Construction Project Management (2002)	The CAI is a regulatory mechanism to ensure proper environmental and water and soil conservation controls, and resettlement measures have been installed/ performed before operational start-up. Please refer to FAR3

Validator's Conclusions concerning Priority 6:

Based on information obtained from the selected project affected households, the local governments have distributed appropriate compensation to the project affected households. Environmental issues relating to the project came under the jurisdiction of the Yunnan Provincial EPB during the construction phase, and these will be transferred to come under the jurisdiction of the Tengchong County EPB once operations commence. The project developer is required to obtain relevant CAI Approvals (i.e. Environmental CAI Approval, Water and Soil Conservation CAI and Resettlement CAI Approval) from the relevant governmental bureaus before the project starts formal operation. The project developer should also develop and implement an ESMMP detailing arrangements for environmental monitoring during the operation phase and include arrangements for monitoring and evaluating the socio-economic impacts associated with the Project. FARs 3 and 4 have been raised to ensure that these issues will be addressed as part of ongoing processes to be implemented by the Project Developer. The Project is considered to have appropriate mechanisms in place to reasonably ensure on-going compliance with Chinese regulations and respect for the WCD strategic priorities.

7. Sharing Rivers for Peace, Development and Security.

Does the project have trans-boundary impacts? - If so, give details of agreement(s) between affected countries, considering international recommendations for trans-boundary water	Not applicable. This is not a trans-boundary project.	N/A	N/A
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WCD Assessment Report



WCD Criteria	Description	Sources	Validator's Assessment
	projects and describe how this affects the project.		
Validator's Conclusions concerning Priority 7:			
This is not a trans-boundary project; therefore, this section is not applicable to the Project to this assessment.			
Validator's assessment as to how the project respects the seven strategic priorities outlined in the World Commission on Dams November 2000 Report "Dams and Development – A New Framework for Decision-Making"			
Based on the review of the Project, it is found that the strategic priorities of the WCD have generally been respected during the development of the project activity. With respect to on-going compliance, the following Forward Action Requests (FARs) have been raised below to be implemented at the appropriate times during the Project's development.			
Forward Action Request (FARs):			
FAR1: To ensure compliance with regulatory requirements, an abstraction permit should be obtained from the local Water Resources Management Bureau and a copy of it maintained onsite for record purposes. It is understood that a water abstraction permit will be applied for and is expected to be received before the Project commences full operations in early 2012. The site management should ensure that the abstraction permit is applied for to allow sufficient time for it to be processed by the various levels of government and issued before the Project is due to commence operation.			
FAR2: Due to the construction of the dam the natural flow of the river will be obstructed and the ecosystem will be negatively affected by the project. Based on a statement made by the site management in discussions with the local EPB during the site visit, ERM CVS understands that the Site plans a periodic fish release into the river upstream of the project, based on the condition of fish stocks in the river after the power plant becomes operational. In order to ensure that mitigation of this potential impact on the aquatic ecosystem takes place, the anticipated expense related to the activity of periodically releasing juvenile fish fry into the river should be included in the Project's financial plan.			
FAR3: The Project should obtain a CAI approval within three months of commencement of trial operations, extendable up to one year after commencement.			
FAR4: The project developer should implement an ESMMP once the project commences operations and conduct regular monitoring of the implementation status of the ESMMP.			

Appendix B

Remediation Form

Forward Action Requests	Reference to checklist question
FAR1: To ensure compliance with regulatory requirements, an abstraction permit should be obtained from the local Water Resources Management Bureau and a copy of it maintained onsite for record purposes. It is understood that a water abstraction permit will be applied for and is expected to be received before the Project commences full operations in early 2012. The site management should ensure that the abstraction permit is applied for to allow sufficient time for it to be processed by the various levels of government and issued before the Project is due to commence operation.	Section 4. Sustaining Rivers and Livelihoods Question 4.1. Water use ratio
FAR2: Due to the construction of the dam the natural flow of the river will be obstructed and the ecosystem will be negatively affected by the project. Based on a statement made by the site management in discussions with the local EPB during the site visit, ERM CVS understands that the Site plans a periodic fish release into the river upstream of the project, based on the condition of fish stocks in the river after the power plant becomes operational. In order to ensure that mitigation of this potential impact on the aquatic ecosystem takes place, the anticipated expense related to the activity of periodically releasing juvenile fish fry into the river should be included in the Project's financial plan.	Section 4.2.2. Environmental Flow Assessment Question 3. Describe the measures taken to maintain ecosystems, productive fisheries and other aqua-cultures downstream and upstream
FAR3: The Project should obtain a CAI approval within three months of commencement of trial operations, extendable up to one year after commencement.	Section 6.1. Compliance Measures Question 1. What will be done to ensure that relevant laws, regulations, agreements (including resettlement and compensation agreements) and recommendations are followed?
FAR4: The project developer should implement an ESMMP once the project commences operations and conduct regular monitoring of the implementation status of the ESMMP.	Section 6.1. Compliance Measures Question 1. What will be done to ensure that relevant laws, regulations, agreements (including resettlement and compensation agreements) and recommendations are followed?

Appendix C: Photo log

Photo 1 Dam of the Sujiahekou Hydropower Station



Photo 2 Reservoir of the Sujiahekou Hydropower Station



Photo 3 View of submerged area of the Sujiahekou Hydropower Station, with a safety warning sign



Photo 4 View of rehabilitation and modification of the road, which leads to the dam of the Sujiahekou Hydropower Station



Photo 5 The reinforce concrete was poured on the mountain, in order to prevent water loos and soil erosion



Photo 6 External view of Power house of the Sujiahekou Hydropower Station



Photo 7 Interior view of Power house of the Sujiahekou Hydropower Station



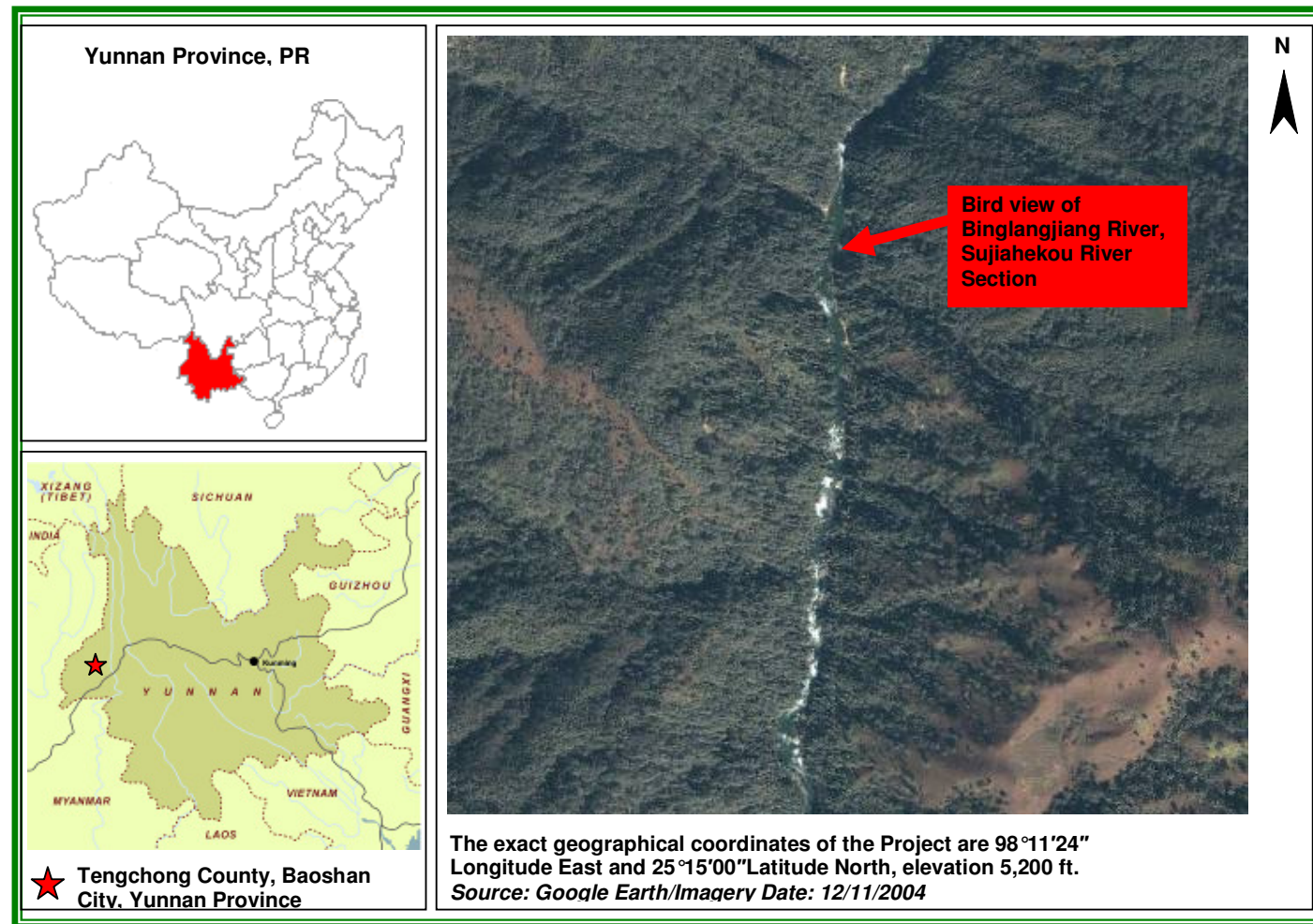
Photo 8 Typical view of Centralized Resettlement Site, which has been established by the local government as part of the contribution of the project to the local society



Validation Report



Appendix D: Site Location



Appendix E: Site Layout

