



**PROJECT DESIGN DOCUMENT FORM
FOR AFFORESTATION AND REFORESTATION PROJECT ACTIVITIES**

**CLIMATE, COMMUNITY & BIODIVERSITY STANDARDS
PROJECT DESIGN DOCUMENT FORM FOR A/R CDM PROJECT ACTIVITIES
(CCB-PDD)
(Version 01)**

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I. Basic Information:
I.1. Title of the proposed CCB Standards project activity:

>>Reforestation project in Yingjing County, Sichuan Province

I.2. Version of the document:

>>Version 01

I.3. Date of the document:

>>31/05/2012

II. General Section:
G1. Original conditions in the project area:
G1.1. Describe the location of the project and basic physical parameters (e.g., soil, geology, climate etc.):
Location (to be provided in map)

The project is located in Yingjing County, Sichuan Province, China, which is the conjunction zone of Gonglai and Daxianglin Mountain Range (**Figure G-1**). Table G-1 gives the list of townships and villages involved.

Table G-1 List of townships and villages involved.

Township	Villages	Land ID	Local name	Area (Mu)	Land use
Xinjian	Heping	XJ-HP-2011-01	Gaodaping	282	Shrub land
	Heping	XJ-HP-2011-02	Taiyanggou	134	Barren land
	Heping	XJ-HP-2011-03	Duimenshan	145	Barren land
	Heping	XJ-HP-2011-04	Daposhang	79	Shrub land
	Heping	XJ-HP-2011-05	Shuichigou	202	Shrub land
Sanhe	Jianzheng	SH-JZ-2011-01	Xiaogoutou, etc.	62	Suitable forestland
	Jianzheng	SH-JZ-2011-02	Guaiqilin	72	Suitable forestland
	Jianzheng	SH-JZ-2011-03	Oujiafangji	50	Suitable forestland
	Jianzheng	SH-JZ-2011-04	Chuntianshu	78	Suitable forestland
	Jianzheng	SH-JZ-2011-05	Laoxiongwanyu	134	Shrub land
Nibashan Farm	Shuanglin	SH-SL-2011-01	Baiyan	123	Shrub land
	Shuanglin	SH-SL-2011-02	Dapingtou	143	Suitable forestland
	Shuanglin	SH-SL-2011-03	Daqiaotou	85	Shrub land
	Doudoudi District	NBS-DD-2011-01	Jiubasuo	2063	Barren land
	Doudoudi District	NBS-DD-2011-02	Daqiaotou	240	Suitable forestland
Siping	Nibashan District	NBS-DD-2011-03	Dahegou	57	Suitable forestland
	Yanshan District	NBS-DD-2011-04	Yanshan	865	Shrub land
	Qiaoxi	SP-QX-2011-01	Youfanggou	183	Suitable forestland
	Qiaoxi	SP-QX-2011-02	Liujiaoshan	102	Barren land
	Qiaoxi	SP-QX-2011-03	Qishugou	151	Barren land



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Xinmiao	Changfu	XM-CF-2011-01	Manzhuping	1559	Suitable forestland
	Changfu	XM-CF-2011-02	Hetaowan	127	Suitable forestland
	Changfu	XM-CF-2011-03	Zongbaoshan	625	Shrub land
Qinglong	Baixiang	QL-BX-2011-01	Fangyangping	231	Suitable forestland
	Baixiang	QL-BX-2011-02	Gaoshanmiao	436	Barren land
	Baixiang	QL-BX-2011-03	Manaoke	67	Suitable forestland
Yanzhu	Shuanghong	YZ-SH-2011-01	Shenjiwan	166	Barren land
	Shuanghong	YZ-SH-2011-02	Wufangdi	223	Suitable forestland
	Fenghuang	YZ-FH-2011-01	Shiziping	253	Suitable forestland
Longcanggou	Fazhan	LCG-FZ-2011-01	Xingfangji	95	Shrub land
	Fazhan	LCG-FZ-2011-02	Tianpingzi	74	Barren land
	Fazhan	LCG-FZ-2011-03	Lanzhaping	153	Shrub land
	Gangshang	LCG-GS-2011-01	Wohan	388	Suitable forestland

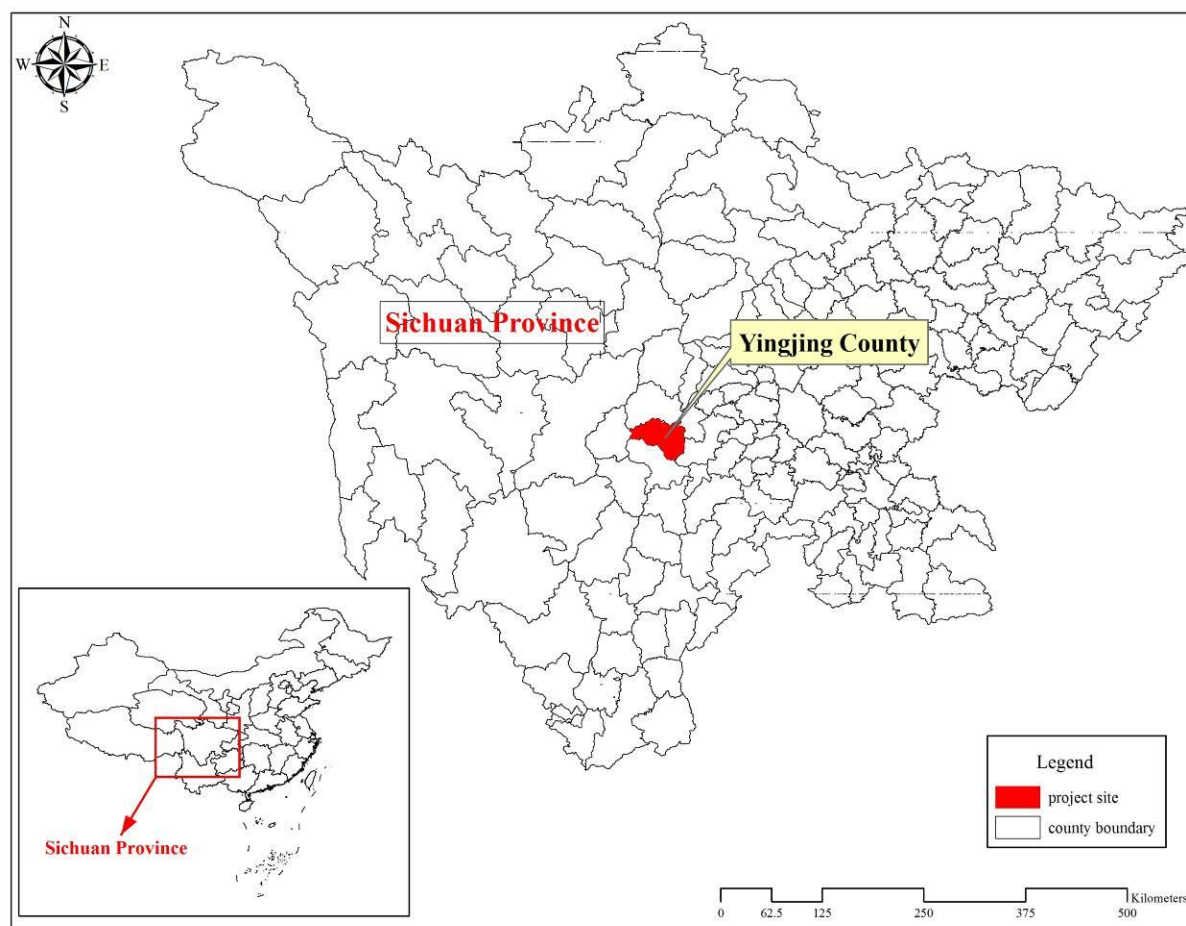


Figure G-1 Location of the Yingjing Forestation Project

Physical parameters



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The project is located in Yingjing County of Sichuan Province, which is on the west edge of Sichuan Basin, Yingjing River region of the upper reach of Qingyi River. Yingjing County is in the transition zone of Sichuan Basin and Tibetan-Plateau, with topography of high in southwest and low in north east. The elevation ranges from 700 m to 3666 m. The project area is located at the critical zone between Gonglai and Daxianglin Mountain range where the two ecosystems connects. The environmental condition of the proposed carbon sequestration forestation project is summarized as follows.

Climate

The climate of the project area belongs to mountainous sub-tropical monsoon climate. The climate has the following features: 1) Low temperature. The annual average temperature is about 15°C, which is relatively low because the area is on the shady zone which in the north slope of Daxiangling Mountain and west slope of Wawu Mountain; 2) High precipitation. Longcang Township has the highest annual precipitation of 2603.1mm; 3) High climate vertical variation.

Soil

Located in the north east slope of Daxiangling Mountain, it shows an apparent vertical spectrum of soils in Yingjing County. From the top, they are yellow earth (1800-2100m), dark brown earth (2100-2600m), podzol (2600-3100m), subalpine meadow soil (3100-3666m). On steep slope ($>35^{\circ}$), the outcrop area of the limestone gradually convert into yellow limestone soil due to topsoil loss and/or too small rock angle. The purple rock areas below 1400m are dominated by the acid purple soil. Above 1400m soils are changed from purple to yellow. However the boundary for purple sand stone and purple complex rocks is 200-300m lower.

Hydrology

There are 302 rivers running through Yingjing County. The total length is 1119.6km. Yingjing River is a branch of Dadu River which is joined by Ying River and Jing River. The two reaches run through the north east part of the county and forms an angle of 90 degrees. Second level branches include Toudaoshui, Qiaoxi River, Xiaohezi, Xiangling River, etc.

The Ying River Basin has a large area and abundant precipitation, thus the annual runoff can reach 104 m³/s which ranks the second in the branches of Qingyi River system. Annual average runoff over multiples year is 3.267 billion m³, 21.6% of the total runoff of Qingyi River System running out of Ya'an District.

G1.2. Describe the types and condition of vegetation at the project site:

Due to the vertical climatic feature, there is an apparent vertical vegetation spectrum with possible overlap. The vegetations in the project site are identified according to their appearance and leaf feature. Figure G-2 gives the distribution of different vegetation group.



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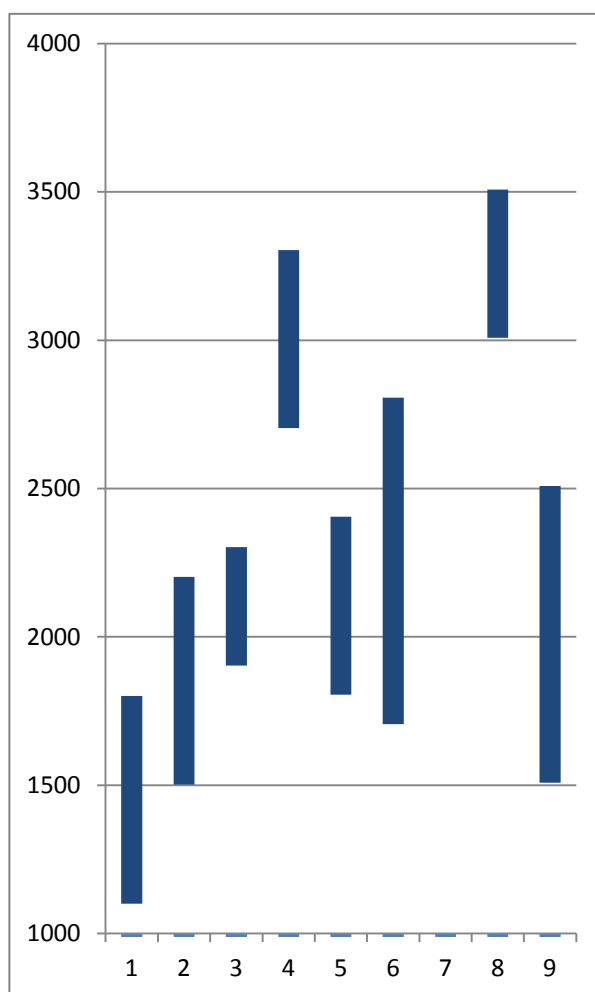


Figure G-2 Altitudinal distribution of forest over the area

1. Evergreen broad-leaved forest;
2. Evergreen deciduous/broad-leaved mingled forest
3. Deciduous broad-leaved forest
4. Cold temperate coniferous forest
5. Temperate coniferous forest
6. Temperate coniferous/broad-leaved mingled forest
7. Temperate deciduous/broad-leaved shrub
8. Meadow grass
9. Bamboo grove

Evergreen broad-leaved forest is distributed within the lower-mid mountain range of 1100 to 1800 m altitude, which belongs to mountainous temperate climate. The region is covered by *Cyclobalanopsis glauca* forest dominated by *Cyclobalanopsis oxyodon* and *Cyclobalanopsis glaucoide*, *Castanopsis* forest dominated by *Castanopsis ceratacantha* and *Castanopsis platyacantha*, *Lithocarpus* forest and *Lauraceae* forest.

Evergreen deciduous/broad-leaved mingled forest is distributed within the mid mountain range of 1500 to 2200m altitude, which belongs to mountainous temperate climate with good condition for plant growth.



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The dominant plants are the *Fagus lucida* + *Castanopsis platyacantha*, *Cornus chinensis* + *Castanopsis platyacantha* + *Camellia pitardii*, *Bothrocaryum controversum* (Hemsl.) + *Lindera limprichtii* H. Winkl + *Eupteleaceae*, *Schima sinensis* + *Castanopsis carlesii* + *Aceraceae*, *Lithocarpus cleistocarpus* + *Castanopsis platyacantha* + *Davidia involucre*, etc.

Deciduous broad-leaved forest is distributed within the mid range of 1900 to 2300m altitude. The vegetation mainly includes pure *Fagus lucida* forest in some areas, *Carpinus chinensis* (Franch.) Cheng widely spread in shady slope and semi-shady/sunny slope, and *Bothrocaryum controversum* (Hemsl.) + *Acer davidii* Franch distributed in some areas.

Cold temperate coniferous forest is distributed within the range of 2700 to 3300 m altitude. The vegetation includes *Abies recurvata* Mast, *Abies fabri* (Mast.) Crai and *Picea brachytyla* (Franch.).

Temperate coniferous forest is distributed within the range of 1800 to 2400m altitude. The dominant vegetation is *Pinus armandii* Franch.

Temperate coniferous/broad-leaved mingled forest is distributed within the range of 1700 to 2800 m altitude. The dominant vegetation is mixture of *Tsuga* + *Acer* + *Betula*.

Temperate deciduous/broad-leaved shrub in the region includes *rosa* shrub, *vibrunum* shrub and *Buddleja davidii* Fr., and *Rubus* shrub. *Rosa* shrub normally spread below the coniferous forest. *Vibrunum* shrub is found in the spacious area in upper range with slope 20°-30°. The dominant species *Buddleja davidii* Fr is found in the ditch or areas with slight slope. *Rubus* shrub is distributed in both sides of the trench.

Meadow grass is distributed in some area within the range of 3000-3500m altitude. The vegetation mainly belongs to *Deyeuxia scabrescens* (Griseb.) Munro ex Duthie. The grass coverage is 80-90%.

Bamboo grove is spread under the layer of dark coniferous forest and evergreen broad-leaved forest within the range of 1700 to 2500 m altitude. The vegetation is dominated by temperate bamboo grove including *Qiongzhusia opienensis* Hsueh et Yi, *Yushania brevipaniculata* (Hand.-Mazz.) Yi and *Chimonobambusa szechuanensis* (Rendle) Keng f.

Table G-2 Deforestation status and history of the land

Township	Villages	Land ID	Local name	Current Land use	Current vegetation	Deforestation time
Xinjian	Heping	XJ-HP-2011-01	Gaodaping	Shrub land	Rubus	5 years
	Heping	XJ-HP-2011-02	Taiyanggou	Suitable forest barren land	Rubus	6 years
	Heping	XJ-HP-2011-03	Duimenshan	Suitable forest barren land	Rubus	6 years
	Heping	XJ-HP-2011-04	Daposhang	Shrub land	Rubus	7 years
	Heping	XJ-HP-2011-05	Shuichigou	Shrub land	Rubus	7 years
Sanhe	Jianzheng	SH-JZ-2011-01	Xiaogoutou Yangjiashan	Suitable forest land	Rubus	5 years
	Jianzheng	SH-JZ-2011-02	Guaiqilin	Suitable forest land	Rubus	8 years
	Jianzheng	SH-JZ-2011-03	Oujiafangji	Suitable forest land	Rubus	5 years
	Jianzheng	SH-JZ-2011-04	Chuntianshu	Suitable forest land	Cathay Hickory	4 years



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	Jianzheng	SH-JZ-2011-05	Laoxiongwan	Shrub land	Rubus	6 years
	Shuanglin	SH-SL-2011-01	Baiyan	Shrub land	Cathay Hickory	7 years
	Shuanglin	SH-SL-2011-02	Dapingtou	Suitable forest land	Rubus	6 years
	Shuanglin	SH-SL-2011-03	Daqiaotou	Shrub land	Cathay Hickory	Since 1987
	Doudoudi District	NBS-DD-2011-01	Jiubasuo	Suitable forest barren land	Alpine undershubs	Since 1990
Nibashan Farm	Doudoudi District	NBS-DD-2011-02	Daqiaotou	Suitable forest land	Rubus	Since 1985
	Nibashan District	NBS-DD-2011-03	Dahegou	Suitable forest land	Rubus	
	Yanshan District	NBS-DD-2011-04	Yanshan	Shrub land	Rubus	5 years
	Qiaoxi	SP-QX-2011-01	Youfanggou	Suitable forest land	Shield fern	7 years
Siping	Qiaoxi	SP-QX-2011-02	Liujiashan	Suitable forest barren land	Rubus	6 years
	Qiaoxi	SP-QX-2011-03	Qishugou	Suitable forest barren land	Rubus	6 years
	Changfu	XM-CF-2011-01	Manzhuping	Suitable forest land	Rubus	6 years
Xinmiao	Changfu	XM-CF-2011-02	Hetaowan	Suitable forest land	Rubus	6 years
	Changfu	XM-CF-2011-03	Zongbaoshan	Shrub land	Cathay Hickory	Since 1998
	Baixiang	QL-BX-2011-01	Fangyangping	Suitable forest land	Rubus	8 years
Qinglong	Baixiang	QL-BX-2011-02	Gaoshanmiao	Suitable forest barren land	Rubus	5 years
	Baixiang	QL-BX-2011-03	Manaoke	Suitable forest land	Rubus	6 years
	Shuanghong	YZ-SH-2011-01	Shenjiwan	Suitable forest barren land	Rubus	5 years
Yanzhu	Baixiang	YZ-SH-2011-02	Wufangdi	Suitable forest land	Rubus	5 years
	Fenghuang	YZ-FH-2011-01	Shiziping	Suitable forest land	Rubus	5 years
	Fazhan	LCG-FZ-2011-01	Xinfangji	Shrub land	Rubus	6 years
Longcanggou	Fazhan	LCG-FZ-2011-02	Tianpingzi	Suitable forest barren land	Rubus	5 years
	Fazhan	LCG-FZ-2011-03	Lanzhaping	Shrub land	Rubus	6 years
	Gangshang	LCG-GS-2011-01	Wohan	Suitable forest land	Rubus	7 years

G1.3. Describe the boundaries of the project area and project zone:

The project boundary is delineated in the figures below. The inflexion coordinates of each sub-compartments have been determined using satellite image followed by land based checking using GPS.



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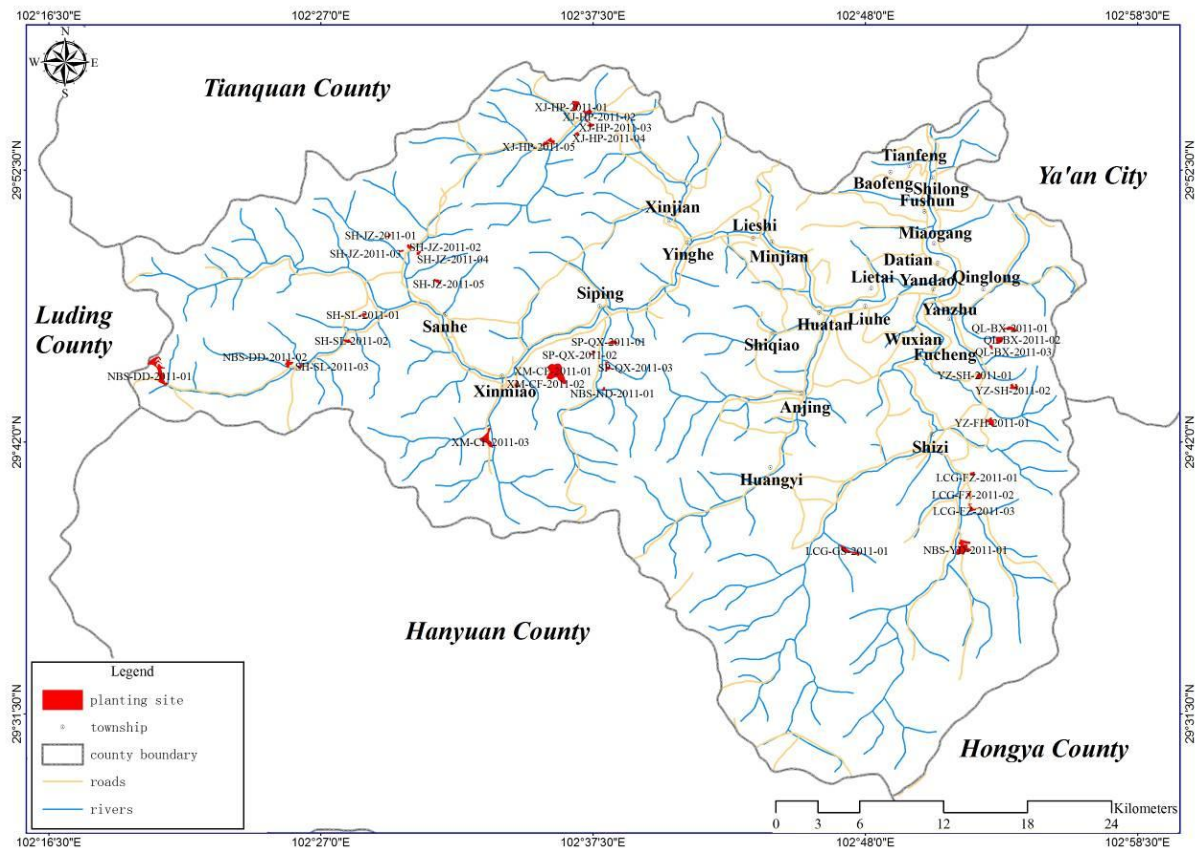


Figure G-3 Land distribution in Yingjing County

G1.4. Current carbon stocks at the project site(s), using methodologies from the Intergovernmental Panel on Climate Change's Good Practice Guidance (IPCC GPG) or other internationally approved methodologies (e.g. from the CDM Executive Board):

Applied methodology: The approved UNFCCC CDM A/R baseline methodology "Afforestation and reforestation of degraded land through tree planting, assisted natural regeneration and control of animal grazing" (AR-AM0003, version 04) is applied. The applicability of the project is checked against the standard in Table below:

Table G-3 Applicability of the methodology

Applicable criteria in AR-AM0003	Justification	Compliance
Afforestation or reforestation of degraded land, which is subject to further degradation or remains in a low carbon steady state, through assisted natural regeneration, tree planting, or control of preproject grazing and fuelwood collection activities (including on-site charcoal production).	The project involves tree planting on degraded land which is subject to further degradation.	✓
The project activity can lead to a shift of pre-project activities outside the project boundary, e.g. a displacement of grazing and fuelwood collection activities,	There are no grazing or fuel wood collection activities within the project boundary prior to the project implementation.	✓



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including charcoal production; Lands to be afforested or reforested are severely degraded and the lands are still degrading or remain in a low carbon steady state; Environmental conditions or anthropogenic pressures do not permit the encroachment of natural tree vegetation that leads to the establishment of forests according to the threshold values of the national definition of forest for CDM purposes; Lands will be afforested or reforested through promotion of natural regeneration and or direct planting or seeding Site preparation does not cause significant longer term net decreases of soil carbon stocks or increases of non-CO ₂ emissions from soil Carbon stocks in soil organic carbon, litter and dead wood can be expected to decrease more due to soil erosion and human intervention or increase less in the absence of the project activity, relative to the project scenario Flooding irrigation is not permitted Soil drainage and disturbance are insignificant, so that non CO ₂ -greenhouse gas emissions from this type of activities can be neglected The amount of nitrogen-fixing species (NFS) used in the A/R CDM project activity is not significant, so that greenhouse gas emissions from denitrification can be neglected in the estimation of actual net greenhouse gas removals by sinks The A/R CDM project activity is implemented on land where there are no other on-going or planned A/R activities	Lands to be forested are degraded and will remain degrading under the non-project scenario. All of the lands to be forested are below the threshold of Chinese forest definition. Natural tree vegetation is suppressed by anthropogenic pressures such as previous agricultural activities. The land will be reforested through direct planting. The project applies the “pit-like site preparation”, which minimizes the disturbance of carbon stock avoids soil and water loss. The lands to be forested have been abandoned for at least five years. Thus carbon stock in soil organic carbon, litter and dead wood would not increase in the absence of the project. No flooding irrigation is planned in the project design. No soil drainage is expected in the project activity. Fertilizer is only applied during the first 2-3 years of the project implementation for the tending of young stands. Thus the amount of NFS can be considered as not significant. No other on-going or planned A/R project activities exist in the project area.	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
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Table G-4 The selected carbon pools and emission sources of the approved methodology

Carbon pools	Selected?	Justification
Above ground	Yes	Major carbon pool subjected to the project activity
Below ground	Yes	Major carbon pool subjected to the project activity
Dead wood	No	Conservative approach under applicability conditions
Litter	No	Conservative approach under applicability conditions
Soil organic carbon	No	Conservative approach under applicability conditions



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Table G-5 Baseline carbon sequestration within the project area

Year	Annual carbon sequestration (tCO₂/ha/y)
2011	16.160338
2012	29.136036
2013	35.203204
2014	38.290207
2015	39.600572
2016	39.758936
2017	39.146982
2018	38.017593
2019	36.546111
2020	34.857384
2021	33.041657
2022	31.164609
2023	29.274058
2024	27.404611
2025	25.580992
2026	23.820478
2027	22.134706
2028	20.531043
2029	19.013625
2030	17.584158
2031	16.242532
2032	14.987299
2033	13.816043
2034	12.725667
2035	11.712614
2036	10.773038
2037	9.9029387
2038	9.0982577
2039	8.3549572
2040	7.6690745
Total	711.549721

The total projected baseline carbon sequestration over the 30 year crediting period is calculated to be **711.549721 tCO_{2e}**.

G1.5. Description of communities located in the project zone, including basic socio-economic and cultural information (using appropriate methodologies such as the livelihoods framework):

CCB standards have been applied in the project design to ensure the integrated benefit of climate, community and biodiversity. The community baseline information was obtained through PRA and rapid rural assessment methods which mainly include the semi-structural interview, group discussion, questionnaire, critical representative interview, on-site investigation, etc. The targeted interviewees include village cadres, seniors and representative farmers.



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Yingjing County, where the project locates, belongs to agricultural dominated economy. By end 2009, the total population is 150,400 inhabitants, among which 73.94% are rural population. Located in the mountainous area around basin, Yingjing County achieved great economic development in recent years. By 2009, the total gross production reached 2.945 billion RMB, average annual income per rural capita is 4859 RMB in which 14.5% is from forestry. **Table G-2** lists the detail socio-economical information of each village surveyed.

Table G-6 Socio-economical profiles of project area

Township	Village	Location	No. of households	Population	Major income source
Siping	Duanji	32 km west of Yingjing County, 31 km ²	383	999	Forestry, agriculture, migrant work
	Qiaoxi	36 km away from Yingjing County, south of Siping Town, 41 km ²	262	714	Forestry, breeding
Xinmiao	Changfu	43 km west of Yingjing County, 88 km ²	407	1189	Forestry, agricultural production
Sanhe	Shuanglin	58 km away from Yingjing County, north of Sanhe Town, 142 km ²	68	223	Forestry, breeding, local mining, power station employment, migrant work
	Baomin	54 km away from Yingjing County, west-south of Sanhe Town, 43 km ²	160	471	Forestry, breeding, local mining, power station employment, migrant work
Xinjian	Heping	24 km away from Yingjing County, 191.68 km ²	82	351	Forestry, breeding
Qinglong	Baixiang	4 km north east of Yingjing County, 51.26 km ²	691	1985	Agriculture, forestry, migrant work
Yanzhu	Shuanghong	3 km south of Yingjing County, 42 km ²	472	1316	Work in ferroalloy production factory, selling Ci bamboo, selling wood products
	Fenghuang		166	434	
Longcanggfou	Fazhan	17km south from Yingjing County, 412 km ²	524	1651	Migrant work, selling wood products
	Gangshang		85	333	

G1.6. Description of current land use and customary and legal property rights including community property in the project zone, identifying any ongoing or unresolved conflicts or disputes and identifying and describing any disputes over land tenure that were resolved during the last ten years:

The lands to be reforested were mostly deforested for at least five years. Most of the lands to be forested are barren lands with no specific land use, such as fire wood collection, grazing or sporadically grazing, etc. Except for the Nibashan and Doudoudi Farm which are state owned forest land, all other lands are collectively owned whose use rights are allocated to individual. The ownerships of the forest land are found to be clear with no conflict in the past ten years. **Table G-7** gives the ownerships of all the project land to be forested.



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Table G-7 Ownerships of the project land

Township	Villages	Land ID	Local name	Property right	Use right	Area (ha)
Xinjian	Heping	XJ-HP-2011-01	Gaodaping	Collective	Individual	18.8
		XJ-HP-2011-02	Taiyanggou	Collective	Individual	8.9
		XJ-HP-2011-03	Duimenshan	Collective	Individual	9.6
		XJ-HP-2011-04	Daposhang	Collective	Individual	5.2
		XJ-HP-2011-05	Shuichigou	Collective	Individual	13.4
Sanhe	Jianzheng	SH-JZ-2011-01	Xiaogoutou	Collective	Individual	4.1
		SH-JZ-2011-02	Guaiqilin	Collective	Individual	4.8
		SH-JZ-2011-03	Oujiafangji	Collective	Individual	3.3
		SH-JZ-2011-04	Chuntianshu	Collective	Individual	5.2
		SH-JZ-2011-05	Laoxiongwanyi	Collective	Individual	8.9
	Shuanglin	SH-SL-2011-01	Baiyan	Collective	Zhongtian Company	8.2
		SH-SL-2011-02	Dapingtou	Collective	Zhongtian Company	9.5
		SH-SL-2011-03	Daqiaotou	Collective	Zhongtian Company	5.6
	Doudoudi District	NBS-DD-2011-01	Jiubasuo	State owned	Individual	137.5
		NBS-DD-2011-02	Daqiaotou	State owned	Individual	16
Nibashan Farm	Nibashan District	NBS-ND-2011-01	Dahegou	State owned	Individual	3.8
	Yanshan District	NBS-YD-2011-01	Yanshan	State owned	Individual	57.7
Siping	Qiaoxi	SP-QX-2011-01	Youfanggou	Collective	Individual	12.2
		SP-QX-2011-02	Liujiashan	Collective	Individual	6.8
		SP-QX-2011-03	Qishugou	Collective	Individual	10.1
Xinmiao	Changfu	XM-CF-2011-01	Manzhuping	Collective	Sanmu Company	103.9
		XM-CF-2011-02	Hetaowan	Collective	Sanmu Company	8.4
		XM-CF-2011-03	Zongbaoshan	Collective	Sanmu Company	41.6
Qinglong	Baixiang	QL-BX-2011-01	Fangyangping	Collective	Individual	15.4
		QL-BX-2011-02	Gaoshanmiao	Collective	Individual	29.1
		QL-BX-2011-03	Manaoke	Collective	Individual	4.4
Yanzhu	Shuanghong	YZ-SH-2011-01	Shenjiwan	Collective	Individual	11.1
		YZ-SH-2011-02	Wufangdi	Collective	Individual	14.8
	Fenghuang	YZ-FH-2011-01	Shiziping	Collective	Individual	16.8
Longcanggou	Fazhan	LCG-FZ-2011-01	Xinfangji	Collective	Individual	6.3
		LCG-FZ-2011-02	Tianpingzi	Collective	Individual	4.9
		LCG-FZ-2011-03	Lanzhaping	Collective	Individual	10.2
	Gangshang	LCG-GS-2011-01	Wohan	Collective	Individual	25.8

G1.7. Description of current biodiversity within the project zone and threats to that biodiversity, using appropriate methodologies:



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Biodiversity of the project is investigated by Prof. Yang Zhisong from Xihua Normal University, Sichuan Province. Line transect method and PRA were applied to obtain the necessary information for animal and vegetation biodiversity. Typical sampling method was applied for the selection of line transects. Table G-8 displays the key animals observed in the project site. Besides, 11 species of reptiles in 2 families and 10 species of fish in 6 genus and 4 families were observed. A detailed animal list in the project could be found in the biodiversity report by Mr. Yang Zhisong.

Table G-8 Key mammals and birds observed in the project site

Mammals	
First class national protected mammals	Giant panda (<i>Ailuropoda melanoleuca</i>) Forest musk deer (<i>Moschus berezovskii</i>) Takin (<i>Budorcas taxicolor</i>) Rhesus monkey (<i>Macaca mulatta</i>) Tibetan macaque (<i>M.thibetana</i>) Black bear (<i>Ursus thibetanus</i>) Red panda (<i>Ailurus fulgens</i>) Indian marten (<i>Martes flavigula</i>) Otter (<i>Lutra lutra</i>)
Second class national protected mammals	Spotted linsang (<i>Priondon pardicolor</i>) Zibet (<i>Viverra zibetha</i>) Little civet (<i>Viverricula indica</i>) Golden cat (<i>Felis femmincki</i>) Goral (<i>Naemahedus goral</i>) Serow (<i>Naemohedus sumatraensis</i>)
Birds	
First class national protected birds	Black stork (<i>Ciconia nigra</i>) Scaly-sided merganser (<i>Mergus squamatus</i>) White-tailed sea eagle (<i>Haliaeetus albicilla</i>) Black-necked crane (<i>Grus nigricollis</i>) Mandarin duck (<i>Aix galericulata</i>) Black-eared kite (<i>Milvus lineatus</i>) Northern goshawk (<i>Accipiter gentilis</i>) Eurasian sparrowhawk (<i>Accipiter nisus</i>) Besra (<i>Accipiter virgatus</i>) Chinese sparrowhawk (<i>Accipiter soloensis</i>) Crested goshawk (<i>Accipiter trivirgatus</i>) Black baza (<i>Aviceda leuphotes</i>) Common buzzard (<i>Buteo buteo</i>) Hen harrier (<i>Circus cyaneus</i>)
Second class national protected birds	Cinereous vulture (<i>Aegypius monachus</i>) Common kestrel (<i>Falco tinnunculus</i>) Lesser kestrel (<i>Falco naumanni</i>) Blood pheasant (<i>Ithaginis cruentus</i>) Silver pheasant (<i>Lophura nycthemera</i>) Temminck's tragopan (<i>Tragopan temminckii</i>) Lady amherst's pheasant (<i>Chrysolophus amherstiae</i>) Wedge-tailed green pigeon (<i>Treron sphenura</i>) Collared scops owl (<i>Otus bakkamoena</i>) Collared owlet (<i>Glaucidium brodiei</i>) Asian barred owlet (<i>Glaucidium cuculoides</i>) Brown hawk owl (<i>Ninox scutulata</i>) Tawny owl (<i>Strix aluco</i>)

An altitude distribution of the vegetations in the project site is explained in section G1.2. Below gives a list of the rare and endangered species.



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Table G-9 Rare and endangered species

Local name	Latin name	Extent of endangerment	Protection level
Masters Larch	<i>Larix mastersiana</i> Rehd. et Wils	Vulnerable	II
Greybark Sargent Spruce	<i>Picea brachytyla</i> var. <i>complanata</i>		II
Katsuratree	<i>Cercidiphyllum japonicum</i>	Rare	II
Fargaea Torreya	<i>Torreya fargesii</i> Franch		II
Dovetree	<i>Davidia involucrata</i>	Rare	I
Vilmorin Dovetree	<i>Davidia involucrata</i> var. <i>vilmoriniana</i>		I
Tetracentron	<i>Tetracentron sinense</i>	Rare	II
Red cedar	<i>Toona ciliata</i> Roem.	Vulnerable	II
Emei michelia	<i>Michelia wilsonii</i> Finet et Gagnep.	Vulnerable	II
Oil cinnamon	<i>Cinnamomum longepaniculatum</i> (Gamble) N. Chao		II
Machilus	<i>Machilus pingii</i> Cheng ex Yang		II
China Yew	<i>Taxus chinensis</i>		I
Zhennan	<i>Phoebe zhennan</i>	Vulnerable	II
Maire Yew	<i>Taxus chinensis</i> var. <i>mairei</i>		I
Houpo (Cultivated species)	<i>Magnolia officinalis</i>	Vulnerable	II
Concave-leaf houpo (Cultivated species)	<i>Magnolia officinalis</i> subsp. <i>biloba</i>		II
Dawn redwood (Cultivated species)	<i>Metasequoia glyptostroboides</i>	Rare	I

Remark: I and II refer to national protection Class I and Class II.

G1.8. An evaluation of whether the project zone includes any High Conservation Values (HCVs) and a description of the qualifying attributes:

1. Globally, regionally or nationally significant concentrations of biodiversity values;
 - a. protected areas
 - b. threatened species¹⁴
 - c. endemic species¹⁵
 - d. areas that support significant concentrations of a species during any time in their lifecycle (e.g. migrations, feeding grounds, breeding areas).

The project site is located in the critical zone of ecological corridor for panda habitats. Thus the project includes HCV 1.

2. Globally, regionally or nationally significant large landscape-level areas where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance;

It is one of the panda habitats which only distribute in Sichuan and south part of Shaanxi Province. However the project zone only has a small proportion of the total population of the species. Thus HCV 2 is not included.

3. Threatened or rare ecosystems;

No threatened or rare ecosystems are identified. Thus HCV 3 is not included.

4. Areas that provide critical ecosystem services (e.g., hydrological services, erosion control, fire control);

No critical ecosystem services are identified. Thus HCV 4 is not included.



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5. Areas that are fundamental for meeting the basic needs of local communities (e.g., for essential food, fuel, fodder, medicines or building materials without readily available alternatives); and

No such fundamentals are identified. Thus HCV 5 is not included.

6. Areas that are critical for the traditional cultural identity of communities (e.g., areas of cultural, ecological, economic or religious significance identified in collaboration with the communities).

No critical areas identified. Thus HCV 6 is not included.

G2. Baseline projections

>>

G2.1 Describe the most likely land-use scenario in the absence of the project using an appropriate methodology. Document that project benefits would not have occurred in the absence of the project and that the benefits claimed are truly “additional”:
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In justification of the land use scenario and additionality of the project, the latest version of the UNFCCC “Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project” (EB36 Annex 19) is applied. According to the tool, the step-wise procedure is followed:

Step 0: Preliminary screening based on the starting date of the A/R project activity

Initially the project site was identified as a biodiversity spot. CI applied the proposal of the Yijing project for the EU-China Biodiversity Programme (ECBP) in March 2009 but did not succeed.

On 31st May 2009, a project initiation meeting was held in the Forestry Bureau of Yingjing County among representatives of the project developers, in which the carbon incentive in the proceeding of the project was seriously considered.

In Jan 2010, ERPA was signed between CI, who acts as a representative of the project owner, and FedEx, who is a potential buyer of the carbon credits to be generated from the project.

From Feb 2010 to Aug 2010, a series of discussion was held between CI and some local research institutes regarding the project design, land eligibility, methodologies, etc.

In Sept 2010, an initial field visit was paid to the site.

In Dec 2010, carbon storage baseline study was conducted.

In 2011, the project started with the planting activity in the land selected.

From the above milestones of the project, it can be inferred that carbon incentive was seriously considered in the decision of the project implementation before the project start.

Outcome of step 0: passed.

Step 1: Identification of alternative land use scenarios to the proposed A/R project activity

Sub-step 1a: Identify credible alternative land use scenario to the proposed project activity

According to the CDM additionality tool, the alternative land use scenario of the proposed reforestation project includes:



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- 1) Continuation of pre-project use i.e. lands remain barren
- 2) Agricultural use of the land
- 3) Reforestation of the land within the project boundary performed without being registered as the CCB project activity.
- 4) Forestation of some part of the land within the project boundary at a rate resulting from extrapolation of the observed forestation activities in the geographical area with similar socio-economic and ecological conditions.

In identification of the alternative land use scenario, field survey, data from the local forestry bureau and information obtained through PRA has been applied. Therefore, the identified scenarios are deemed realistic and credible.

Outcome of Sub-step 1a: credible alternative land use scenarios that would have occurred on the land within the project boundary have been identified.

Sub-step 1b: Consistency of credible land use scenarios with enforced mandatory applicable laws and regulations

National, local and sectoral land-use policies or regulations since 1980s:

China has successively issued and revised a series of laws and administrative regulations related to forestry, such as the Regulations for Implementing the Forest Law, the Regulations for Grain for Green, the Regulations for the Protection of Wild Plants and Animals, the Regulation for Nature Reserve, the Regulation for Forest Fire Control, and the Regulation for Forest Diseases and Pests Control, etc.

To facilitate the restoration of forest resources, Chinese government has launched several programs over the past years, such as the Grain for Green Program (started in 2001) that subsidizes farmers to convert degraded cropland to forests, the Natural Forest Conservation Program (launched in 1998), the Nature Reserve Development and Wild Conservation Program (started in 2000), etc.

Although these programs had set overall development goals for forestry development and were started before the adoption by the COP of the CDM M&P (/decision 17/CP.7, 11 November 2001), none of the programs mandate the forestation on barren lands. Thus Scenario 1 remains possible baseline scenario.

With the enforcement of the Grain for Green Program promulgated by Sichuan Forestry Bureau and some demonstration program such as “Fifty-hundred-thousand demonstration program”, the local farmers are less and less dependent on agricultural and grazing activities. According to the data provided the township and village level government, the proportion of agriculture in economy is decreasing in recent years. It was also found through PRA that the selected lands are mostly state and collectively owned with no further plan for agriculture use. Thus the second scenario “agricultural use of land” is not feasible.

Scenario 3 faces the investment and technical barrier which will be discussed in the next section. However it does not violate any existing enforced mandatory applicable laws and regulations.

Scenario 4 is part of the project activity in the proposed project without being developed as an FCCB project. Therefore it will be discussed along with Scenario 3.



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Outcome of sub-step 1b: list of plausible alternative land use scenarios which are in compliance with mandatory legislation and regulations:

Scenario 1: Continuation of pre-project use i.e. lands remain barren

Scenario 3: Reforestation of the land within the project boundary performed without being registered as the CCB project activity

Scenario 4: Forestation of some part of the land within the project boundary at a rate resulting from extrapolation of the observed forestation activities in the geographical area with similar socio-economic and ecological conditions

Step 2: Barrier analysis

Sub-step 2a: Identification of barriers that would prevent the implementation of at least one alternative land use scenario

- ✓ Investment barrier
Projects with similar scales are all implemented with external non-commercial finance or governmental grants.
Debt funding not available for the land use scenarios. Commercial loan from banks for the purpose of reforestation is very unlikely due to the high risk and the economical unattractiveness in the context of remote lands.
Lack of access to credit: No credit mechanisms are in place for farmers to make long term investment in plantation forestry. Due to the low income level of the region, local farmers are not able to afford the high plantation establishment investment in the early stage.
- ✓ Technological barriers
Local farmers lack access to good quality saplings or seedlings as well as the necessary tending and forest management technique. They also lack skills needed to produce high quality seedlings and successful tree planting, and lack the skills needed to prevent planted trees from being subject to fire, pest and disease attack.
- ✓ Barriers due to social conditions
Furthermore, the lack of organizational instruments also prevents them from overcoming technological barriers.

Outcome of step 2a: list of barriers that may prevent one or more land use scenarios identified in Step 1b.

Sub-step 2b: Elimination of land use scenarios that are prevented by the identified barriers.

Scenario 1 does not require extra investment or labour force. Thus it is not prevented by any of the identified barriers.

Scenario 3 faces the investment and technical barriers and barriers due to social conditions.

Investment barriers:

- ✓ Through interview with the representatives of Nibashan Forest Farm, it was found that the major barrier which limits the large scale forestation is the financial difficulties. The forest farm is financially independent enterprise without any governmental subsidy. The existing forest resources that allow to be harvested annually and the harvest amount licensed by government are quite limited.



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The revenue from timber harvest can only afford to the regeneration of forests and the basic maintenance of the farm. Furthermore, forestation on the remote degraded lands within the project boundary requires additional transportation costs.

- ✓ According to the questionnaire filled by the local farmers, the income of most of the households can just cover the basic living expenses. Since debt funding is not possible for land use, there is no feasibility for the initial investment of forestation.

Technical barriers:

- ✓ Lack of access to planting materials
- ✓ Lack of silvicultural and forest management technology
- ✓ Lack of skilled or properly trained labour force

Barriers due to social conditions:

- ✓ As confirmed through interview, no sectoral associations or organizations related to forestry have been established.

Thus Scenario 3 is eliminated.

Scenario 4 is part of Scenario 3, thus lands belonging to both Nibashan Farm and communities face the barriers described above. Therefore, Scenario 4 is eliminated.

Outcome of Sub-step 2b: Scenario 1, Continuation of pre-project use i.e. lands remain barren, remains the possible baseline scenario.

Step 3: Investment analysis (skipped)

Step 4: Common practice analysis

G2.2 Calculate the estimated carbon stock changes associated with the “without project” reference scenario described above, using an appropriate methodology:

As described above, the baseline scenario is the continuation of existing land use i.e. lands remain barren. Based on the applied methodology AR-AM0003, the baseline carbon stock change is estimated as follows:

- For those strata without growing trees and/or shrubs, the sum of carbon stock changes is set as zero in all carbon pools. Sampling survey is preferred to confirm that the setting would not result in the underestimation of baseline net GHG removal by sinks;
- For those strata with growing trees or shrubs, the sum of carbon stock changes is set zero in the soil organic carbon, dead wood and litter carbon pools, and a net positive change is estimated in the living biomass carbon pools based on the projection of number, growth rate of trees/shrubs, allometric equations, IPCC good practice guidance, and local or national or IPCC default parameters (details in Section II.4).



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Table G-10 Estimated baseline net GHG removals by sinks

Year	Estimation of baseline net GHG removals by sinks (tonnes of CO ₂)
2011	1887.79
2012	3445.32
2013	4226.10
2014	5716.12
2015	6330.59
2016	6724.39
2017	6960.27
2018	7075.95
2019	7097.49
2020	7044.45
2021	6932.29
2022	6773.68
2023	6579.18
2024	6357.64
2025	6116.56
2026	5862.21
2027	5599.84
2028	5333.81
2029	5067.69
2030	4804.36
2031	4546.13
2032	4294.79
2033	4051.70
2034	3817.86
2035	3593.96
2036	3380.43
2037	3177.52
2038	2985.26
2039	2803.58
2040	2632.30
Total	151124.7

G2.3 Describe how the “without project” reference scenario would affect communities in the project zone, including the impact of likely changes in water, soil and other locally important ecosystem:

Agriculture, migrant work and selling from wood products from collective and state owned forests are the main income sources of the communities. The communities have no habit to make use of the selected land for any land use. Thus continuing the “non-use” of the current land will have no effect on the livelihood of the local communities.

G2.4 Describe how the “without project” reference scenario would affect biodiversity in the project zone (e.g., habitat availability, landscape connectivity and threatened species):

The project land is located in an ecological corridor zone of two isolated panda habitats. Without the proposed project, the two habitats will continue to be isolated which limit the inter-connection of the panda population. Furthermore, without proper forest and land management, the land will further degrade and have negative impacts on the local ecosystem.

G3. Project design and goals:



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G3.1 Provide a summary of the project's major climate, community and biodiversity objectives

The proposed A/R project activity implemented at the Yingjing River basin, which is a branch of the upper reaches of Qingyi River, Sichuan Province. In total 34 land areas which involves 10 villages of 8 towns/townships in Yingjing County is included in the project. The project area is also one of the key areas of the biodiversity conservation. To contribute to the local sustainable development, the proposed A/R CDM project activity, *Reforestation project in Yingjing County, Sichuan Province*, aims to:

- Sequester carbon dioxide and mitigating climate change;
- Enhance biodiversity conservation by increasing the connectivity of forests which is critical for panda population;
- Improve soil and water conservation in the Yingjing River basin;
- Generate income and job opportunities for local communities;

G3.2 Describe each project activity with expected climate, community and biodiversity impacts and its relevance to achieving the project's objectives.

To achieve the objectives described above, 643.13 ha of mingle forest will be established by direct planting on degraded lands in Yingjing County, Sichuan Province. The main objective species include:

Pinus armandii franch.

Picea asperata Mast

Cryptomeria fortunei Hooibrenk ex Otto et Dietr.

Betula spp.

Cortex Phellodendri Chinensis

A small proportion of other local species will be inter-planted. Table G-11 gives an overview of the plantation patterns:

Table G-11 plantation types

Plantation pattern	Main species	Land ID	Type	Mingle pattern	Mingle type	Mingled species
YJ-01	<i>Cryptomeria fortunei</i> <i>Hooibrenk ex Otto et Dietr.</i>	I – 1 I – 2	Shelter forest	block	Needle-broad leaved mixed	<i>Betula spp</i>
YJ-02	<i>Picea asperata Mast</i>	I – 3	Shelter forest	block	Needle-broad leaved mixed	<i>Pinus armandii franch</i> , <i>Betula spp</i>
YJ-03	<i>Betula spp</i>	I – 1 I – 2	Shelter forest	block	Needle-broad leaved mixed	<i>Cryptomeria fortunei Hooibrenk ex Otto et Dietr.</i>
YJ-04	<i>Cortex Phellodendri Chinensis</i>	I – 1 I – 2	Shelter forest	block	Needle-broad leaved mixed	<i>Cryptomeria fortunei Hooibrenk ex Otto et Dietr.</i>
YJ-05	<i>Pinus armandii franch</i>	I – 2 I – 3	Shelter forest	block	Needle mixed	<i>Picea asperata Mast</i>



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The forestation activities intend to contribute to climate change mitigation through sequestration of atmospheric CO₂ during biomass growth. The local communities will benefit from the project in enhancing job opportunities, improved environment and landscape restoration. Also the project will result in a restoration of an ecological corridor for panda habitats.

G3.3 Provide a map identifying the project location, where the major project activities will occur, go-referenced boundaries of the project site(s)

The project boundaries and geographical locations are indicated in figures below.

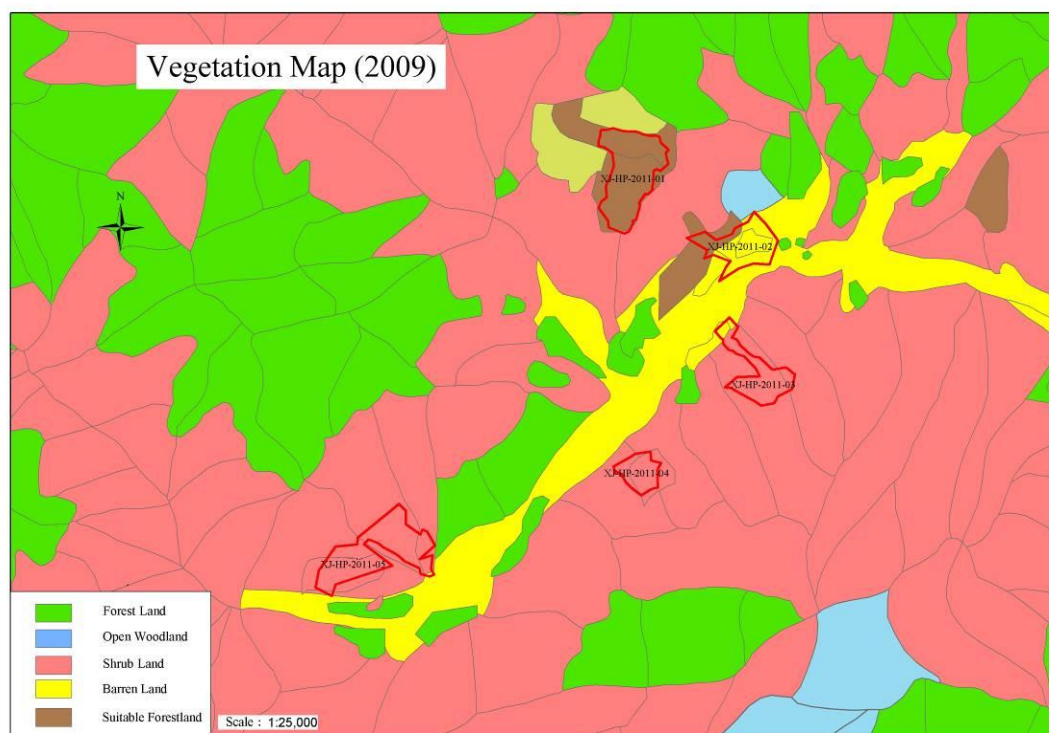


Figure G-4 Project boundary in Xinjian Township



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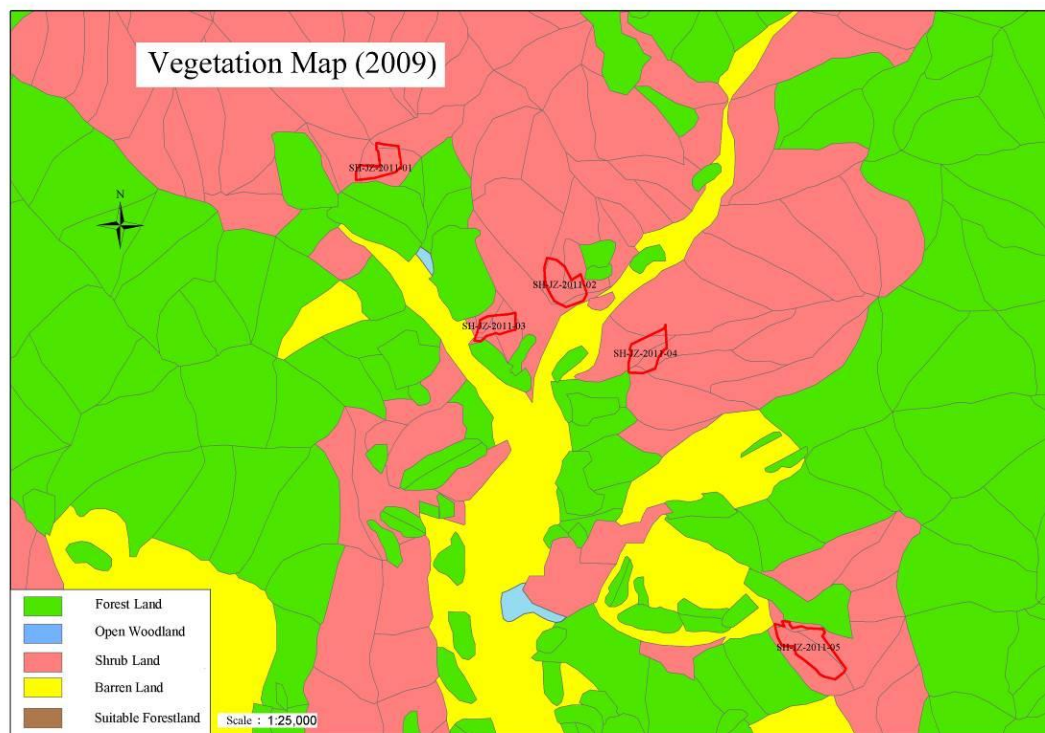


Figure G-5 Project boundary in Sanhe Township

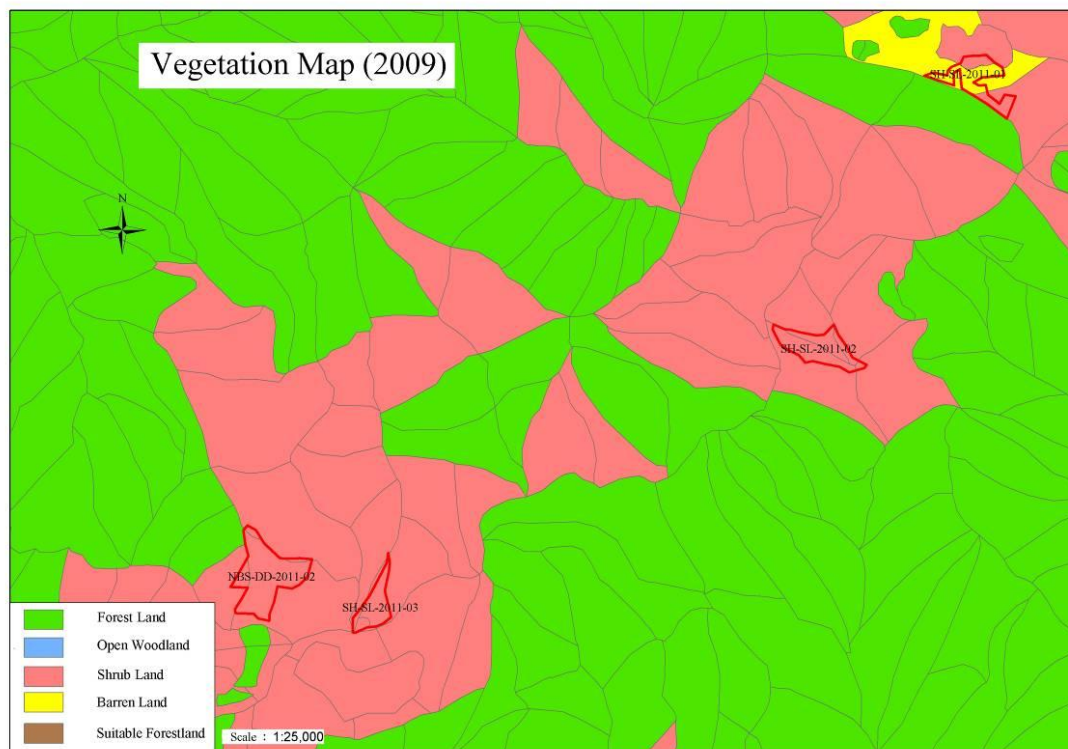


Figure G-6 Project boundary in Sanhe Township and Nibashan Farm



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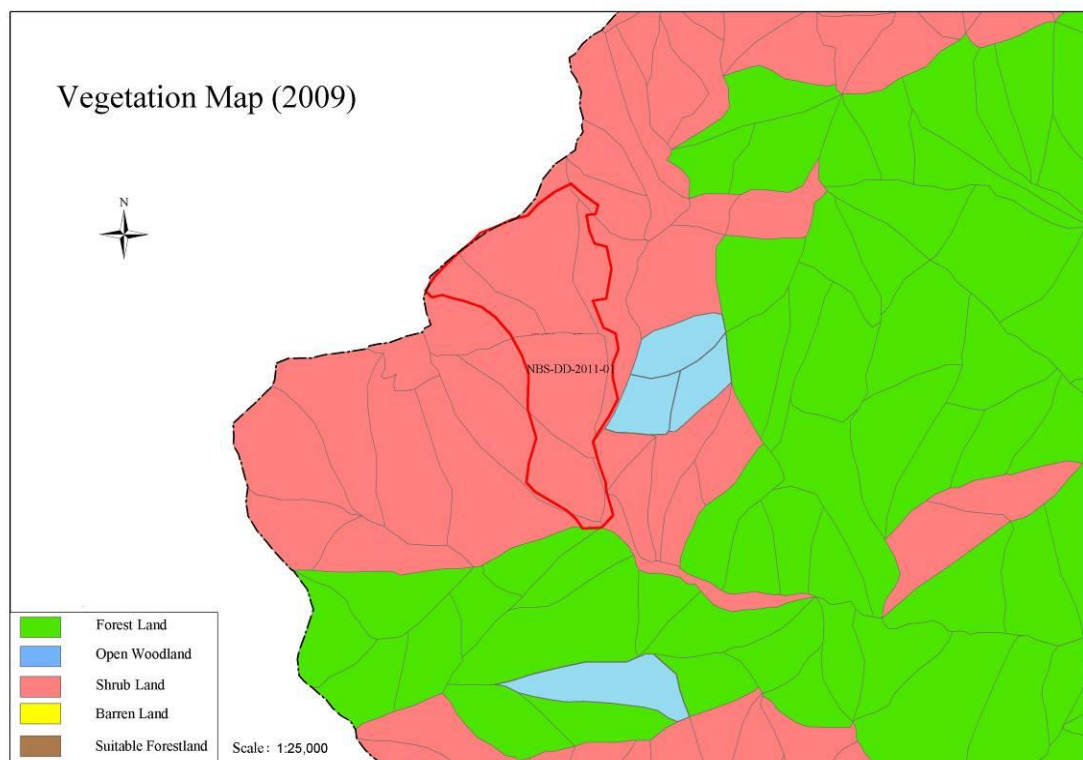


Figure G-7 Project boundary in Nibashan Farm



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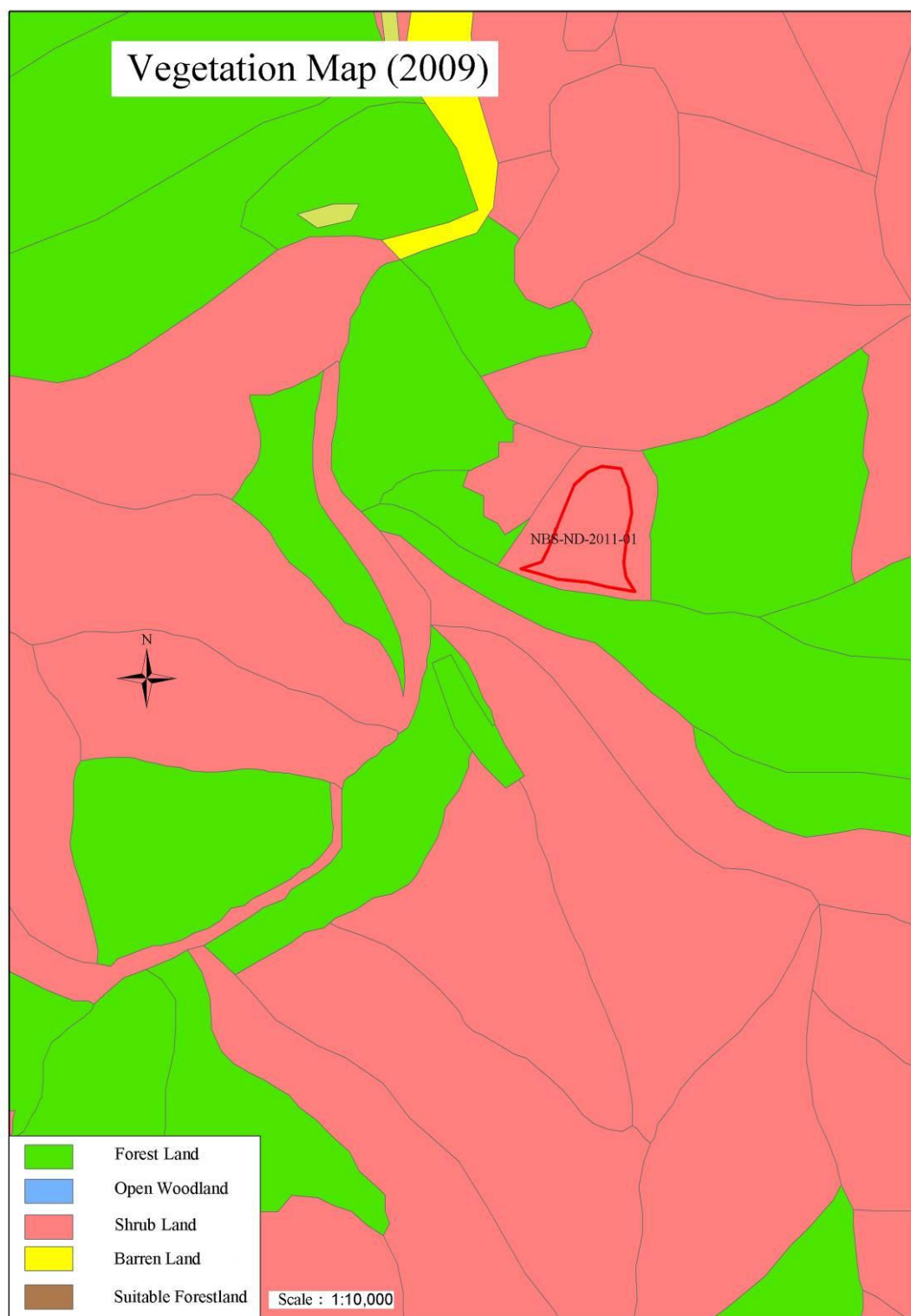


Figure G-8 Project boundary in Nibashan Farm



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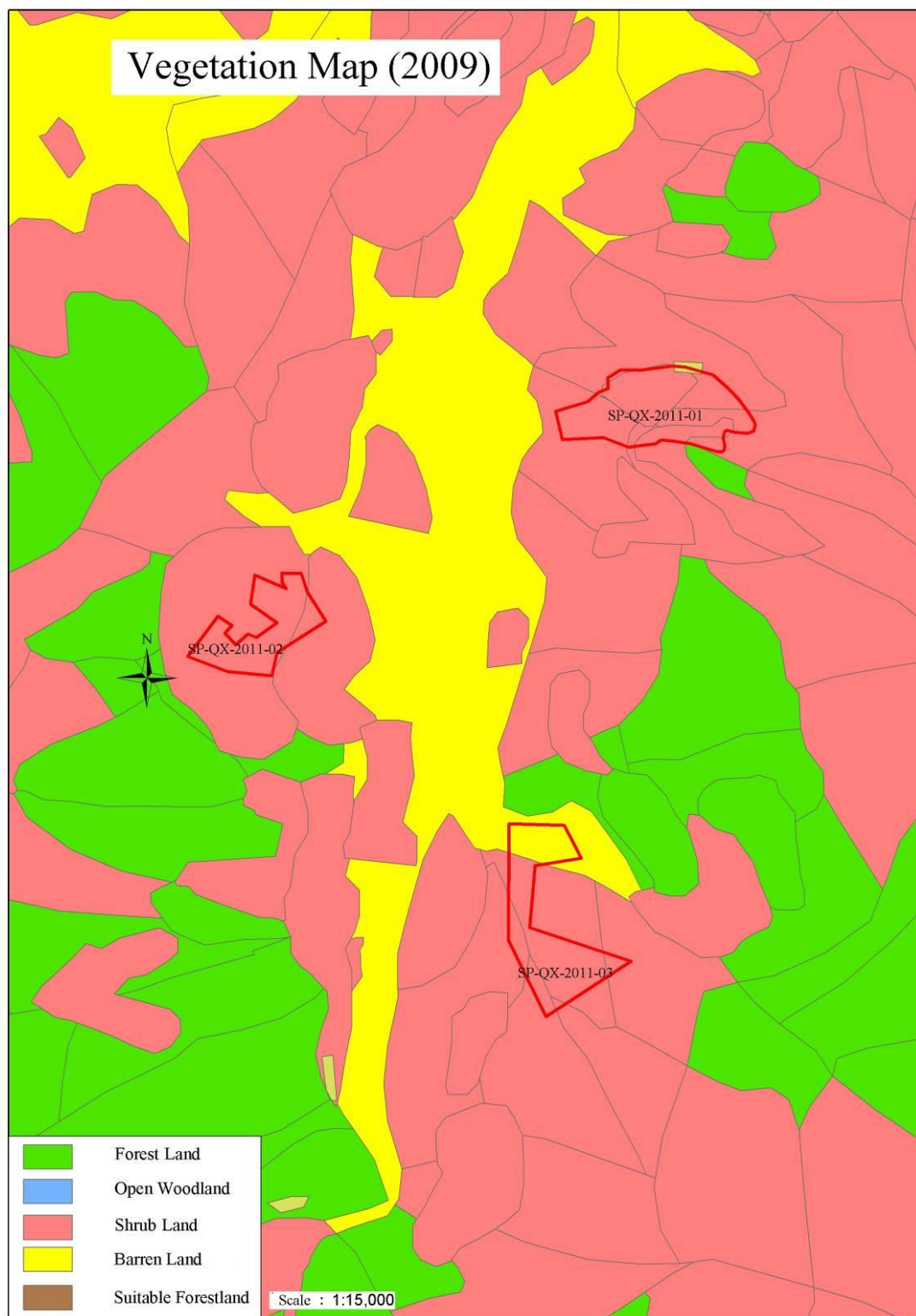


Figure G-9 Project boundary in Siping Township



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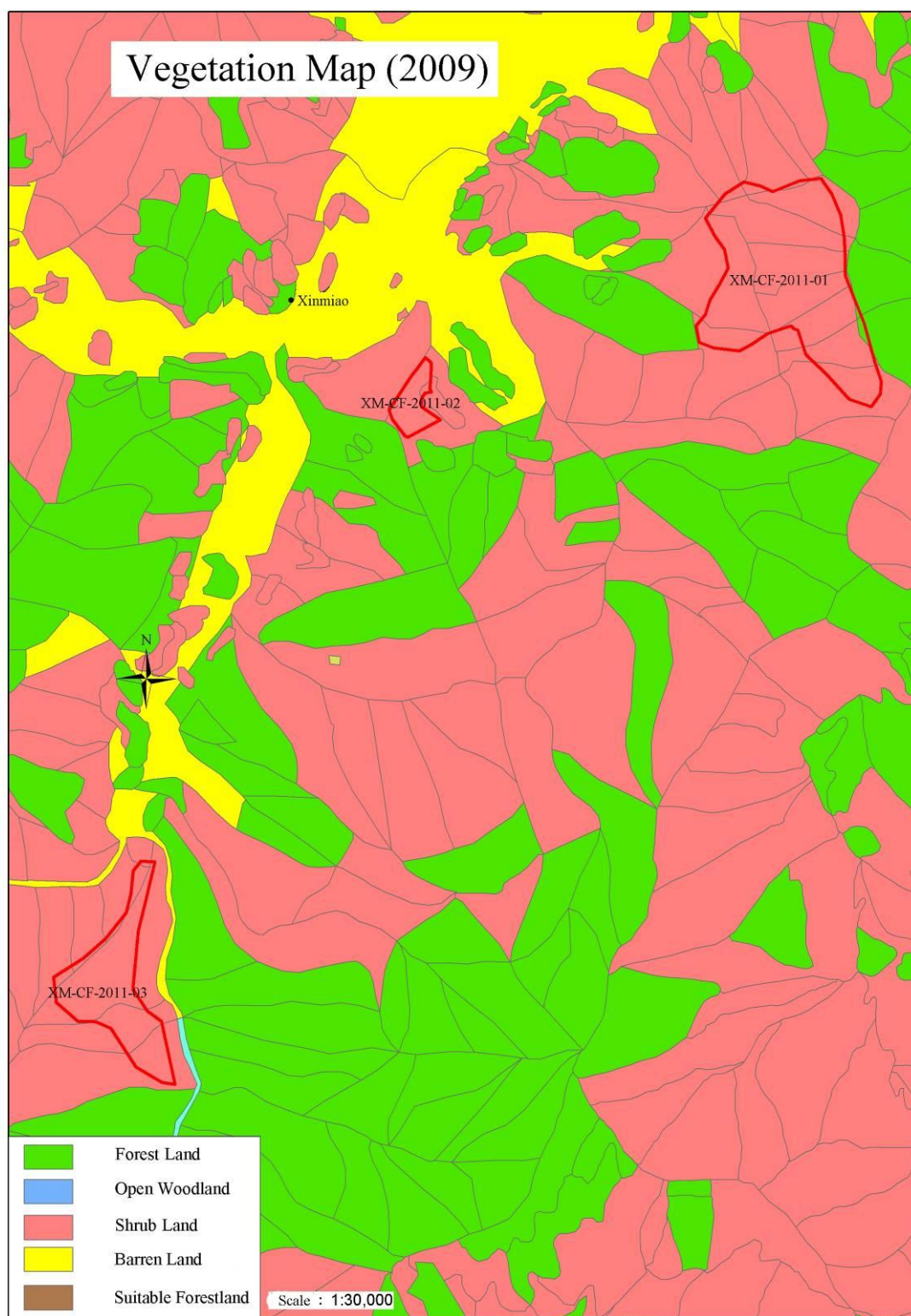


Figure G-10 Project boundary in Xinmiao Township



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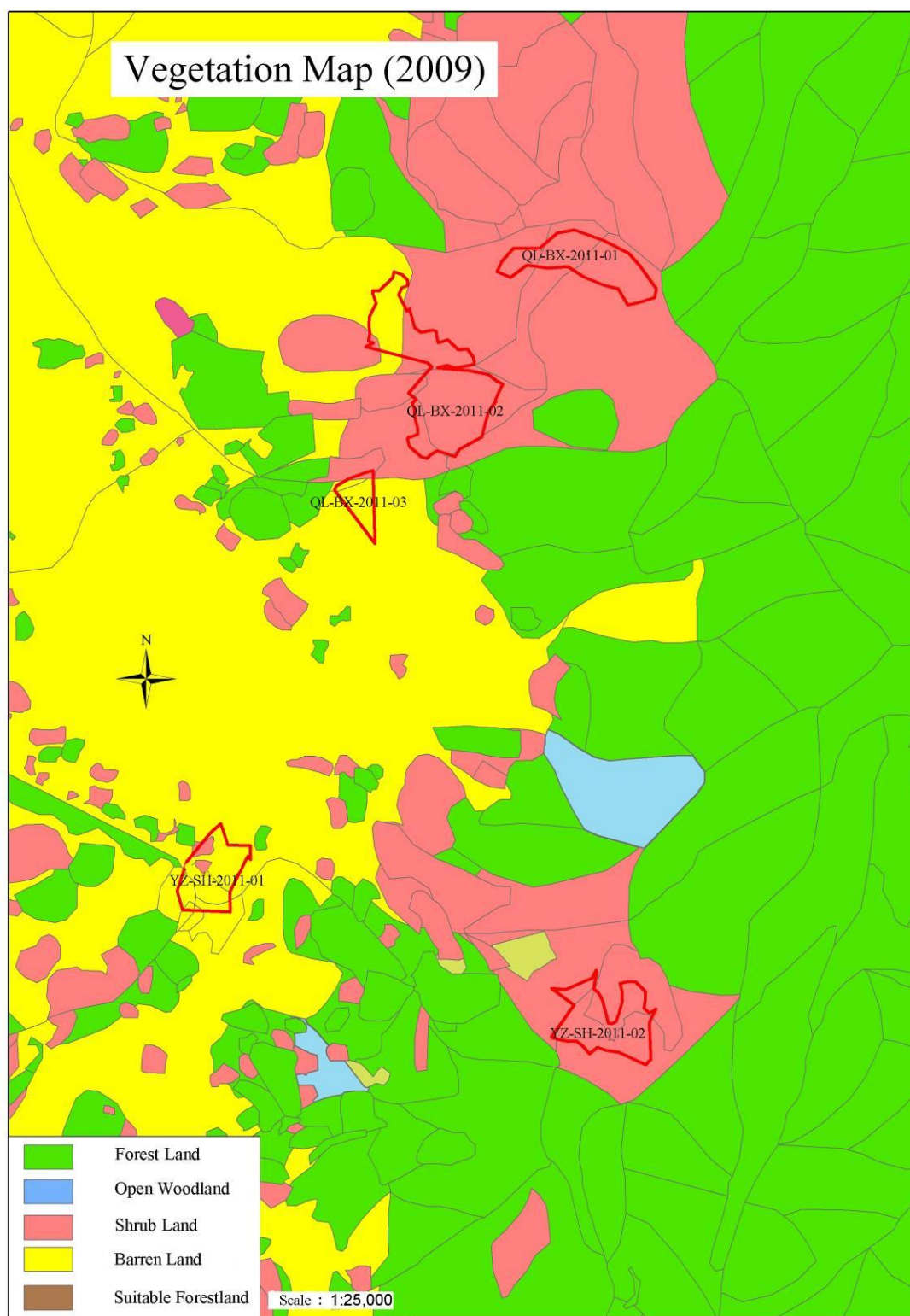


Figure G-11 Project boundary in Qinglong and Yanzhu Township



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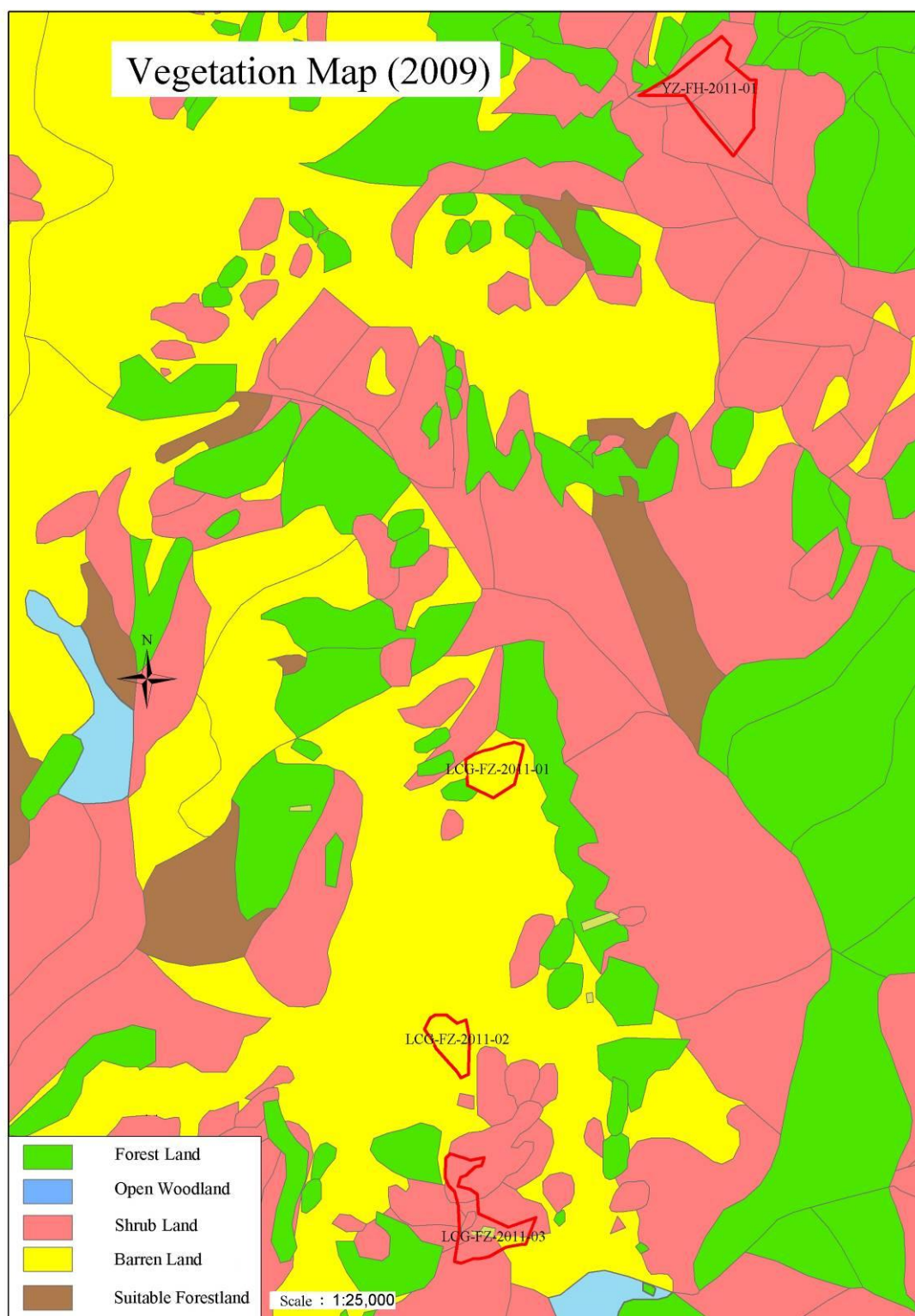


Figure G-12 Project boundary in Yanzhu and Longcanggou Township

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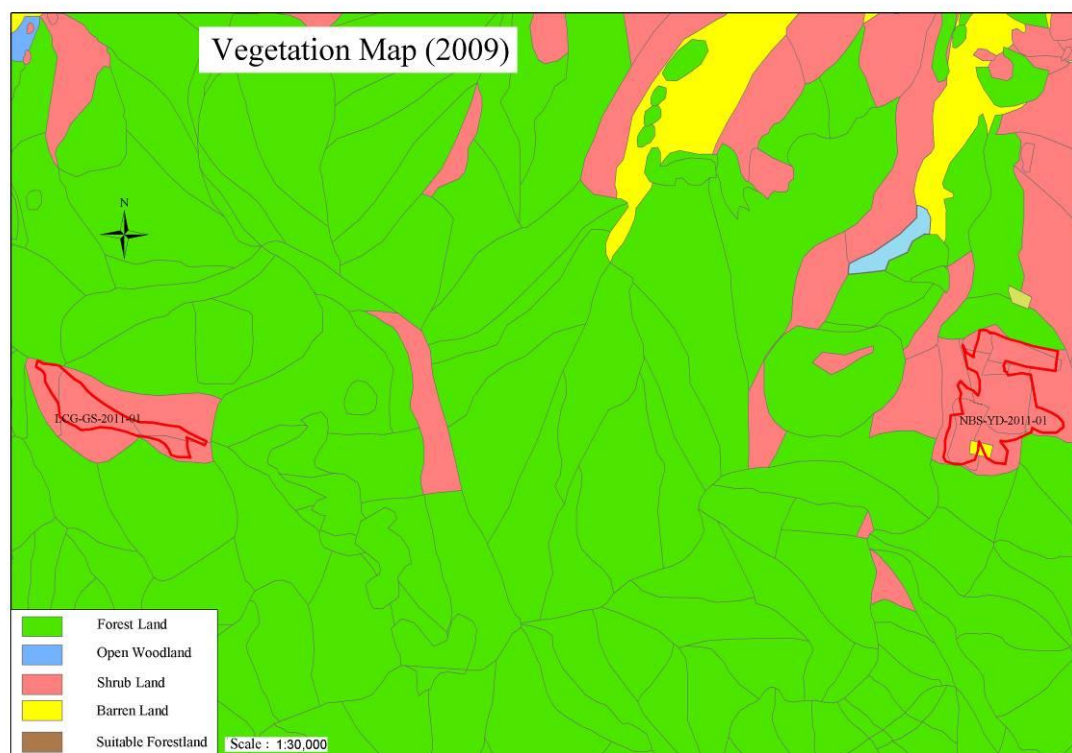


Figure G-13 Project boundary in Longcanggou Township and Nibanshan Farm

G3.4 Define the project life time and GHG accounting period and explain and justify any differences between them. Define an implementation schedule, indicating key dates and milestones in the project's development.

The project life time is 2011-2040, which coincides well with the GHG accounting period.

Table G-12 lists the key dates and milestones of the project implementation schedule

Date	Event
2009	Project site identified for ecological corridor restoration
2009-3	Application for CEPF project rejected
2009-5-31	Project initiation meeting launched
2010-2~3	Reconsideration of the project in application for CCB certification
2010-11-1	Grant agreement signed with FedEx for Yingjing FCCB project
2010-10	Meeting on initial selection of project site and methodology choice
2010-11	Discussion and preparation for the baseline survey
2010-12	Field carbon baseline survey
2011-4	Complementary socio-economic baseline survey
2012-5	PDD complemented

G3.5 Identify likely risks to climate, community and biodiversity benefits during the project life time and outline measures adopted to mitigate these risks.



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Risk analysis and countermeasures:

- **Fire and pest risk:** This can be alleviated through technical and awareness training to local farmers/communities, strengthening patrolling and monitoring, as well as building the firebreak belt. Furthermore, a mixed species arrangements will be adopted to reduce fire and pest risks.
- **Site preparation:** The site preparation will disturb the vegetation and soil in the planting sites. The main technical measures to be employed in mitigating the impacts are to plant the trees with low density (2500 trees per hectare), limited hole site preparation (40*40*30 cm), retaining the existing vegetation as much as possible. As a result, the surface area disturbed by site preparation is estimated to account for 1.2% of the total land surface. The hole will be dug along the landform contour in triangle form to reduce the soil loss. Therefore the site and soil preparation will have minor negative impacts on original soil and vegetation.
- **Fertilization:** In the proposed A/R CDM project activity, no artificial fertilizers (not only N fertilizers) will be applied. Farmyard manure will be applied within the small planting hole rather than overall dispersing, so that the potential risk of the fertilization application can be reduced to minimum.
- **Pesticide:** improper pesticide application would be harmful to natural environment, including polluting soil, water and air conditions, as well as the habitat of the wildlife. However under the proposed A/R CDM activity, the environmental friendly measures will be adapted such as mixed species arrangement, seed and seedling quarantine. Especially the biological measures to control pests and diseases will be adopted. Therefore, the pesticide application will be limited.

None of these risks and/or negative impacts is considered to be significant.

G3.6 Demonstrate that the project design includes specific measures to ensure the maintenance or enhancement of the high conservation value attributes identified in G1 consistent with the precautionary principle

1. Globally, regionally or nationally significant concentrations of biodiversity values;
 - a. protected areas
 - b. threatened species¹⁴
 - c. endemic species¹⁵
 - d. areas that support significant concentrations of a species during any time in their lifecycle (e.g. migrations, feeding grounds, breeding areas).

The project site is located in the critical zone of ecological corridor for panda habitats. Lowest threat to biodiversity is assured through least soil disturbed site preparation. Also mangle plantation mode will be applied. The project aims to connect two isolated panda habitats which intend to improve the population distribution and abundance. Therefore, it poses no threat.

2. Globally, regionally or nationally significant large landscape-level areas where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance;
N/A

3. Threatened or rare ecosystems;
N/A

4. Areas that provide critical ecosystem services (e.g., hydrological services, erosion control, fire control);
N/A



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5. Areas that are fundamental for meeting the basic needs of local communities (e.g., for essential food, fuel, fodder, medicines or building materials without readily available alternatives); and
N/A

6. Areas that are critical for the traditional cultural identity of communities (e.g., areas of cultural, ecological, economic or religious significance identified in collaboration with the communities).
N/A

G3.7 Describe the measures that will be taken to maintain and enhance the climate, community and biodiversity benefits beyond the project lifetime.

Continuous maintenance and periodic tending will continue even after the project crediting period. Risks will be minimized through standard methods. Management structure will be maintained regardless of the personnel change of the project developers.

G3.8 Document and defend how communities and other stakeholders potentially affected by the project activities have been identified and have been involved in the project design through effective consultation.

To maximize the socio-economic benefit, the afforestation/reforestation design was prepared with a participatory approach. PRA methods were adopted in interviewing and consulting with farmer households in the project areas to understand the local farmers/communities' preferences, wishes and concerns, so that the proposed A/R CDM project activity would better respond to their desires for livelihood development. The local farmers will participate in the project activity such as site preparation, planting, weeding, thinning, harvesting, etc. and earning direct benefits during the crediting period. It is expected that 10 villages of 7 towns/townships will benefit from the proposed project.

G 3.9 Describe what specific steps have been taken, and communications methods used, to publicize the CCBA public comment period to communities and other stakeholders and to facilitate their submission of comments to CCBA.

The English version of the PDD will be published on CCBA for global stakeholder consultation. The executive summary of the PDD will be translated into Chinese and distributed to the local stakeholders. Feedbacks from the stakeholders will be seriously considered during the project implementation and will be reflected in the validation report of DOE.

G 3.10 Formalize a clear process for handling unresolved conflicts and grievances that arise during project planning and implementation.

In the project planning phase, stakeholders were fully involved in the land selection, planting pattern selection, etc, through villagers meeting and PRA methods. During the project implementation, the local communities will be contracted for plantation as well as tendering and guarding of the project site over the project crediting period. In case of any conflicts and grievances, they can either appeal through village representatives or directly to the local forestry bureau.



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G 3.11 Demonstrate that financial mechanisms adopted, including projected revenues from emissions reductions and other sources, are likely to provide an adequate flow of funds for project implementation and to achieve the anticipated climate, community and biodiversity benefits.

As stated before, the project encountered financial barrier under common mechanisms such as bank loan. Therefore, under the consideration of potential carbon revenue as well as the community and biodiversity benefits, board members agreed to raise the funding personally. The cost for the CCB development and carbon trading are covered by philanthropic funding from CI.

G4. Management capacity and best practices:

G 4.1 Identify a single project proponent which is responsible for the project's design and implementation. If multiple organizations and individuals are involved, roles and responsibilities of each of the organizations or individuals must also be described.

The single project proponent of the state-owned forest part is Nibashan Farm. Village representatives act as the leader on behalf of all the farmers involved in the project within the certain village.

G 4.2 Document key technical skills that will be required to implement the project successfully. Document the management team's expertise. If relevant experience is lacking, how other organizations will be partnered or any recruitment strategy to fill the gaps shall be demonstrated.

Environmental-friendly techniques will be employed through direct planting on degraded lands in the proposed A/R CDM project activity. The following technical standards will be strictly followed:

- State Technical Standards for Afforestation/Reforestation: GB/T 15776-1995;
- State Technical Standards for Establishing Environmental Service Forests: GB/T 18337.1- 2001, GB/T 18337.2-2001, GB/T 18337.3-2001;
- State Technical Standards for Designing of Afforestation/Reforestation: LY/T 1607-2003
- State Technical Standards for Watershed Management: GB/T 16453.1-16453.6-1996
- State Technical Standards for Forest Management: GB/T 15781-1995
- State Quality Standard for Seed of Trees: GB 7908-1999
- Standards for Seedling Qualification: GB 6000-1999
- Technical Standard for Seedling Breeding: GB/T 6001-1985
- Technical Standard for Container Seedling Breeding: LY1000-1991.

The local forestry agencies, i.e., Sichuan Provincial Forestry Department, Forestry Bureaus at county level, China Office of the Conservation International and the Chinese Academy of Forestry will provide technical consultation and guidance, including training courses, and conduct quality control to the preparation and implementation of the proposed A/R project activity. Project participants will also seek advice from other local, national, and international forestry experts. The most up-to-date technologies and silvicultural models will be adopted.

Species arrangements

Tree species will be planted in mixed block arrangements (mixed at landscape level, same species within each subcompartment) to minimize risks (fire, pest insects and disease) and maximize environmental and social benefits. Please see table G-11 for species and model to be planted in each County.

Genetic Sources and Nursery Practices



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All seedlings used in the proposed A/R project activity will be bred in local nurseries using seed collected from local seed orchard or parent trees. All seedlings used shall be certified, quarantined and tagged, i.e., each batch of seedlings should have quality certificate, quarantine certificate and tag indicating the production area and quality grade. The seedlings are qualified according to standard GB 6000-1999. Only the quality grade I and II can be used. Table G-13 lists the standard for seedling grading for tree species used in the proposed A/R CDM project activity.

Table G-13 Standard for seedling grading for tree species used in the proposed A/R CDM project activity.

Seedlings of grade I and II						
Tree species	Age	Diameter at base	Height	Root		Other
				Length of main root	Minimum number of lateral roots with length over 5cm	
<i>Pinus armandii franch</i>	1-0	≥0.25cm	≥15cm	≥17cm	6	GB6000,DB51/T 705-2007
<i>Abies mill</i>	2-2	≥0.45cm	≥16cm	≥20cm	5	GB6000,DB51/T 705-2007
<i>Picea asperata Mast</i>	2-2	≥0.30cm	≥16cm	≥20cm	7	GB6000,DB51/T 705-2007
<i>Cryptomeria fortunei Hooibrenk ex Otto et Dietr.</i>	1-0	≥0.25cm	≥16cm	≥10cm	8	GB6000,DB51/T 705-2007
<i>Cortex Phellodendri Chinensis</i>	1-0	≥0.60cm	≥60cm	≥30	10	GB6000,DB51/T 705-2007
<i>Betula spp.</i>	1 ⁽²⁾ -0	≥0.55cm	≥50cm			GB6000,DB51/T 705-2007

Site and Soil Preparation

To prevent soil erosion and protect existing carbon stocks, site burning and overall tillage will not be employed during the site and soil preparation. The site and soil preparation will be conducted in compliant with the rules set by “Guidelines for inventory and design of forest carbon projects in Sichuan Province (tentative)” (Sept 2009) and “Rules for environmental protection in forestation management” (DB51/T380-2003).

Time for site preparation: one month prior to the forestation activity

Method: overall site preparation on areas with slope higher than 25° is forbidden. Hole distribution will be along the contour line in order to preserve the natural water and soil.

Size: 40×40×30 cm

Shape: The holes will be arranged in triangle form on slope.

Forest Establishment

Trees will be planted within 3 years starting in autumn 2011 (see Table G-14 for the planting plan of each species and site). The planting is preferably conducted in the cloudy days or after rainy days. No machinery will be used in the planting. The initial density of all tree species is 2500 trees/ha which corresponds to the distance of 2×2 meters.

Table G-14 Species arrangement and time to be planted for each land parcel

Township	Village	Land ID	Area (ha)	Species arrangement	Time to be planted
Xinjian	Heping	XJ-HP-2011-01	18.8	<i>Cryptomeria fortunei Hooibrenk ex Otto et Dietr.</i> + <i>Betula spp.</i>	2011
	Heping	XJ-HP-	8.9	<i>Cryptomeria fortunei Hooibrenk ex Otto et Dietr.</i> +	2011



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		2011-02		<i>Betula</i> spp.	
	Heping	XJ-HP-2011-03	9.6	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Heping	XJ-HP-2011-04	5.2	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Heping	XJ-HP-2011-05	13.4	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Jianzheng	SH-JZ-2011-01	4.1	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Jianzheng	SH-JZ-2011-02	4.8	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Cortex phellodendri</i> Chinensis	2011
	Jianzheng	SH-JZ-2011-03	3.3	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Jianzheng	SH-JZ-2011-04	5.2	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Jianzheng	SH-JZ-2011-05	8.9	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Shuanglin	SH-SL-2011-01	8.2	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Cortex phellodendri</i> Chinensis	2011
	Shuanglin	SH-SL-2011-02	9.5	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Cortex phellodendri</i> Chinensis	2011
	Shuanglin	SH-SL-2011-03	5.6	<i>Betula</i> spp.+ <i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr.	2012
	Doudoudi District	NBS-DD-2011-01	137.5	<i>Pinus armandii</i> franch+ <i>Picea asperata</i> Mast	2013
	Doudoudi District	NBS-DD-2011-02	16	<i>Picea asperata</i> Mast+ <i>Betula</i> spp.	2012
	Nibashan District	NBS-DD-2011-03	3.8	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Yanshan District	NBS-DD-2011-04	57.7	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Qiaoxi	SP-QX-2011-01	12.2	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Qiaoxi	SP-QX-2011-02	6.8	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Cortex phellodendri</i> Chinensis	2011
	Qiaoxi	SP-QX-2011-03	10.1	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Cortex phellodendri</i> Chinensis	2011
	Changfu	XM-CF-2011-01	103.9	<i>Betula</i> spp. + <i>Cortex phellodendri</i> Chinensis	2011
	Changfu	XM-CF-2011-02	8.4	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Cortex phellodendri</i> Chinensis	2011
	Changfu	XM-CF-2011-03	41.6	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2012
	Baixiang	QL-BX-2011-01	15.4	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Cortex phellodendri</i> Chinensis	2011
	Baixiang	QL-BX-2011-02	29.1	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Baixiang	QL-BX-2011-03	4.4	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Cortex phellodendri</i> Chinensis	2011
	Shuanghong	YZ-SH-2011-01	11.1	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Baixiang	YZ-SH-2011-02	14.8	<i>Cortex phellodendri</i> Chinensis + <i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr	2011
	Fenghuang	YZ-FH-2011-01	16.8	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Fazhan	LCG-FZ-2011-01	6.3	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. + <i>Betula</i> spp.	2011
	Fazhan	LCG-FZ-	18.8	<i>Cryptomeria fortunei</i> Hooibrenk ex Otto et Dietr. +	2011



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	2011-02		<i>Cortex phellodendri Chinensis</i>	
Fazhan	LCG-FZ-2011-03	8.9	<i>Cryptomeria fortunei Hooibrenk ex Otto et Dietr. + Cortex phellodendri Chinensis</i>	2011
Gangshang	LCG-GS-2011-01	9.6	<i>Cryptomeria fortunei Hooibrenk ex Otto et Dietr. + Cortex phellodendri Chinensis</i>	2011

To ensure high survival rates and good growth in the early stages, weeding and scarification will be implemented manually twice in the first year and once a year in the next 2-3 years after planting. Weeding and scarification shall not be conducted in raining season. Re-plantation shall be conducted in case of under-performed survival rate.

The land parcels will be enclosed after planting to prevent planted young trees from being disturbed by human activities or illegal grazing, until the stand canopy closure.

G 4.3 Include a plan to provide orientation and training for the project's employees and communities to increase local participation, including minority and underrepresented groups.

In order to maintain and improve the forestation, multi-level trainings will be provided to local communities and technicians from the forest station. Furthermore, effective technical consultancy will be carried out in case of problems occurred during project implementation. Experts in the field of forestry, carbon sequestration, biodiversity, climate change will be invited for problem shooting and on site guidance.

G 4.4 Show that people from the communities will be given an equal opportunity to fill all employment positions if job requirements are met.

Farmers from the local communities will be directly involved in the project implementation activities, including planting, tending, guarding, etc. Any job vacancies will be published and qualified people from the communities will have equal opportunities in the employment positions

G 4.5 Submit a list of all relevant laws and regulations covering worker's rights in the host country. Describe how the project will inform workers about their rights. Provide assurance that project meets or exceeds all laws.

The most recently updated "China Labor Law"¹, which promulgated in 2007-6-29, will be fully fulfilled to protect the worker's rights.

It is indicated in the plantation contract that all the relevant laws and regulations will be met

G 4.6 Comprehensively assess and minimize situations and occupations that pose a substantial risk to worker safety.

G 4.7 Document the financial health of the implementing organizations to demonstration that financial resources budgeted will be adequate to implement the project.

¹ http://www.gov.cn/ziliao/flfg/2007-06/29/content_669394.htm



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1. Management letter
2. Recent financial reports (within last 3 months)

G5. Legal status and property rights:

III. Climate Section:

CL1. Net positive climate impacts:

CL1.1 Estimate the net change in the carbon stock due to the project activities using the methods of calculation, formulae and default values of the IPCC 2006 GL for AFOLU or using a more robust and detailed methodology.

The actual net greenhouse gas removals by sinks represent the sum of the changes in carbon stocks in the carbon pools within the project boundary, minus the increase in non-CO₂ GHG emissions measured in CO₂ equivalents by sources that are increased as a result of the implementation of the proposed project activity, while avoiding double counting, within the project boundary, attributable to the project activity.

Loss of pre-project tree and non-tree vegetation:

It is conservatively assumed that all pre-project tree and non tree vegetation will be died out. Therefore, the carbon stock loss of pre-project tree and non-tree vegetation equals to the carbon stock at the start of the proposed project activity, table CL-1.

Table CL-1 Carbon loss of pre-project tree and non-tree vegetation:

Strata	Area (Mu)	Number of sample sites	Area of sample site (m ²)	Carbon storage (ton C)	Carbon storage per area (t C/hm ²)
Scattered trees	1307	15	400	335.6	4.06
Small shrub	5571	30	4	1600.5	3.53
Large shrub	4809	26	25	957.7	3.54

Estimates of carbon stock changes in living biomass of planted trees:

Stock change method presented in Section II.5 and II.7.1 of the approved methodology applied is used. The only difference within each project stratum is tree species. Since tree species are planted in a way of block mixture, stand within each single block can be treated as pure plantation. Therefore we define the stand models within each project stratum based on tree species, i.e., the subscript k in formula (20) of the approved methodology applied represents tree species in our calculation.

Local growth curves are used to estimate the average merchantable volume of each species (V_{ikt}), assuming that the curves can apply to all strata (Table CL-2).

Table CL-2 Local growth curves for species planted in the proposed project activity:

<i>Cryptomeria fortune</i> Hooibrenk ex Otto et Dietr	$V=NT_{(A)} \cdot 0.31225810398000 \cdot (1-e^{-0.0473470306465 \cdot A})^{3.289912305617}$
<i>Picea asperata</i> Mast	$V=NT_{(A)} \cdot 0.3305059644600 \cdot (1-e^{-0.029683022346463 \cdot A})^{3.094640905157}$



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<i>Betula spp</i>	$V = NT_{(A)} \cdot 0.30583851880298 \cdot (1 - e^{-0.08987338464923 \cdot A})^{1.5875471045008}$
<i>Cortex phellodendri Chinensis</i>	$V = NT_{(A)} \cdot 0.30583851880298 \cdot (1 - e^{-0.08987338464923 \cdot A})^{1.5875471045008}$
<i>Pinus armandii franch</i>	$V = NT_{(A)} \cdot 0.30322451116610 \cdot (1 - e^{-0.09092308039843 \cdot A})^{3.8412119649600}$

Note: For equations in Table CL-2.

V – stem volume at time t for the project scenario, m/ha

$NT_{(A)}$ – Number of trees at age A , trees/ha

A – stand age, year

These curves were derived from local forestry inventories data that have been carried out every five years since the 1990s, or publications. There will be no fuel wood gathering of living trees. Thinning and harvesting will also be accounted based on forest management plan for each project stratum. *Betula spp.* and *Picea asperata Mast* will be cut at the 15th year after plantation with rate of 33.3%. The rest will be cut at 10th year after plantation with the same rate.

The average merchantable volume is then converted into carbon stock via wood density (WD) and Biomass Expansion Factors (BEF) and root-shoot ratio (R) (Table CL-3) based on equation (10)-(11) presented in the approved methodology applied, using LULUCF Sequestration Input Tools developed by the World Bank BioCarbon Fund (www.biocarfund.org). The carbon stock and carbon stock changes of the planted trees for each project stratum are presented in Table CL-5 and Table CL-6, respectively. Please see attached spreadsheet for the detail calculation.

Table CL-3 Wood density, BEF and Root-shoot ratio for species used in the proposed project activity

Tree species	Wood density (tonnes d.m.m ⁻³)	BEF	Root-shoot ratio
<i>Cryptomeria fortune Hooibrenk ex Otto et Dietr</i>	0.294 (16, 0.003)	1.544 (10, 0.064)	0.270 (11, 0.029)
<i>Picea asperata Mast</i>	0.342 (15, 0.012)	2.05 (49, 0.14)	0.201 (49, 0.005)
<i>Betula spp</i>	0.541 (62, 0.018)	1.37 (15, 0.04)	0.231 (21, 0.018)
<i>Cortex phellodendri Chinensis</i>	0.443 (189, 0.013)	1.589 (39, 0.054)	0.289 (43, 0.011)
<i>Pinus armandii franch</i>	0.490 (13, 0.039)	2.029 (19, 0.076)	0.171 (24, 0.006)

Note: Data in parentheses represent number of samples and standard error respectively. Parameters for *Cortex phellodendri Chinensis* are those for broadleaf species.

Table CL-4 Estimated amount of net anthropogenic GHG removals by sinks in the first crediting period:

Year	Estimation of baseline net GHG removals by sinks	Estimation of actual net GHG removals by sinks (tones of CO ₂ e)	Estimation of leakage (tones of CO ₂ e)	Estimation of net anthropogenic GHG removals by sinks (tones of CO ₂ e)
2011	9.01	1887.79	0	1878.78
2012	8.50	3445.321	0	3436.82
2013	7.98	4226.105	0	4218.12
2014	7.47	5716.121	0	5708.65
2015	6.98	6330.588	0	6323.61
2016	6.50	6724.391	0	6717.89
2017	6.04	6960.268	0	6954.23
2018	5.60	7075.952	0	7070.35
2019	5.19	7097.495	0	7092.31
2020	4.80	7044.449	0	7039.65
2021	4.43	6932.292	0	6927.86
2022	4.09	6773.685	0	6769.60
2023	3.77	6579.178	0	6575.41
2024	3.47	6357.644	0	6354.17
2025	3.19	6116.558	0	6113.36
2026	2.94	5862.205	0	5859.27
2027	2.70	5599.838	0	5597.14



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2028	2.48	5333.808	0	5331.33
2029	2.28	5067.685	0	5065.41
2030	2.09	4804.359	0	4802.27
2031	1.92	4546.127	0	4544.21
2032	1.76	4294.786	0	4293.03
2033	1.61	4051.696	0	4050.08
2034	1.48	3817.856	0	3816.38
2035	1.36	3593.957	0	3592.60
2036	1.24	3380.434	0	3379.19
2037	1.14	3177.516	0	3176.38
2038	1.04	2985.259	0	2984.22
2039	0.95	2803.584	0	2802.63
2040	0.87	2632.304	0	2631.43
Total (tones of CO ₂ e)	112.88	151219.25	0	151106.37

CL1.2 Estimate the net change in the emissions of non-CO₂ GHG emissions such as CH₄ and N₂O in the *with* and *without* project scenarios if those gases are likely to account for more than 5% increase or decrease (in terms of CO₂-equivalent) of the project's overall GHG emissions reductions or removals over each monitoring period.

The site preparation will result in a least disturbed soil structure. Thus the CH₄ and N₂O emission from soil disturbance will be limited to a least extent and presumed negligible in comparison with the GHG emission reduction over the 30 years crediting period.

CL1.3 Estimate any other GHG emissions resulting from project activities, including biomass burning, fossil fuel consumption, use of synthetic fertilizer, decomposition of N-fixing species, etc.

There will be no biomass burning and no machinery to be used either for site preparation, planting, or for forest management. Therefore, emissions due to biomass burning and fossil fuel burning from machinery using are not taken into account. Fertilizer will not be used, thus it is not accounted.

CL1.4 Demonstrate that the net climate impact of the project is positive

Please refer to section CL 1.1.

CL1.5 Specify how double counting of GHG emissions reductions or removals will be avoided, particularly for offsets sold on the voluntary market and generated in a country with an emissions cap.

Once the credits have been sold, the certification will be published on line. In case of double counting, the pre-sold credits will automatically expire. The project locates in China, a non-Annex I country per Kyoto Protocol, thus offsets will not be generated in a country with an emission cap.

CL2. Offsite climate impacts ("leakage"):

CL2.1 Determine the type of leakages that are expected and estimate potential offsite increase in GHGs due to project activities.



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According to the applied methodology AR-AM0003/Version 4, two sources of leakage shall be included:

- Carbon stock decrease caused by displacement of pre-project grazing and fuel wood collection activities
- Carbon stock decrease caused by the increased use of wood posts for fencing

According to the socio-economic investigation report, the energy supply of the community is mostly composed of electricity and coal combustion. Few fuel wood collection activities are necessary. Also no grazing habit exists in the area. Thus leakage from displacement of pre-project grazing and fuel wood collection is zero.

No wood post is necessary for the project activity.

Therefore, leakage is zero for the proposed project.

CL3. Climate impact monitoring:

CL3.1 Develop an initial plan for selecting carbon pools and non-CO₂ GHGs to be monitored, and determine the frequency of monitoring.

Describe the carbon pools and non-CO₂ GHGs selected for monitoring

As there will be no slash and burn site preparation, overall ploughing and flood irrigation as well as no machinery tools to be used within the project boundary, hence no significant GHG emissions by sources as results of the proposed project activity.

Table CL-5 Selection of carbon pools

Carbon pool	Selected?	Justification
Above ground	Yes	Major carbon subject to the project activity
Below ground	Yes	Major carbon subject to the project activity
Dead wood	No	Conservatively omitted by the applied methodology
Litter	No	Conservatively omitted by the applied methodology
Soil organic carbon	No	Conservatively omitted by the applied methodology

Table CL-6 GHG emissions by sources other than those resulting from changes in carbon pools

Source	Gas	Included/excluded?	Justification
Combustion of fossil fuels used for vehicles	CO ₂	Included	Potential significant emission source due to transportation
	CH ₄	Excluded	Potential emission is negligibly small as per methodology
	N ₂ O	Excluded	Potential emission is negligibly small as per methodology

Ex post stratification

The ex-ante project stratification presented in baseline survey will be used as a basis for monitoring. However, since there is usually diversion of planned forest establishment and management practice as well as unexpected disturbance, this ex ante stratification shall be sub-divided or grouped based on the following factors:

- Unexpected disturbances occurring during the crediting period (e.g. due to fire, pests or disease outbreaks), affecting differently different parts of an originally homogeneous stratum or stand;



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- Forest establishment and management (clearing, planting, thinning, harvesting, coppicing, re-planting) may be implemented at different intensities, dates and spatial locations than originally planned in the PDD;
- Two different strata may be similar enough to allow their merging into one stratum.

If one of the above occurs, ex-post stratification may be required. The possible need for ex-post stratification shall be evaluated at each monitoring event and changes in the strata should be reported to the DOE for verification.

Sampling size and plot allocation

Permanent sampling will be established after the first periodic monitoring. The sampling size will be based on the ex post stratification and the formulae provided in the UNFCCC tool “Calculation of the number of sample plots for measurements within A/R CDM project activities”. The coordinates of sample plots will be determined by the “random tool” of the software ArcGIS. The size of the plot is set as 400m² (20 × 20m).

Monitoring frequency

The monitoring of the project implementation will take place every year after the project registration in order to ensure the continuity of the benefits. Periodic verification and quantitative monitoring of the project will take place every five years.

Measurement and estimating carbon stock changes over time

The growth of individual trees on plots will be measured at each monitoring event. Pre-existing trees will not be measured and accounted for as a conservative manner. Non-tree vegetation such as herbaceous plants, grasses, and shrubs will not be measured and accounted as per methodology applied. The carbon stock changes in living biomass of trees on each plot are then estimated through Biomass Expansion Factors (BEF) method.

Step-wise procedures (BEF method) of the approved baseline and monitoring methodology AR-AM0003 will be followed to monitor the verifiable carbon stock changes in the above-ground and below-ground living biomass within the project boundary.

The volume of the commercial component of trees is calculated based on locally derived equations as follows:

- *Cryptomeria fortune Hooibrenk ex Otto et Dietr:* $V=0.000057173591 \times D^{1.8813305} \times H^{0.99568845}$
- *Picea asperata Mast:* $V=0.000057173591 \times D^{1.8813305} \times H^{0.99568845}$
- *Betula spp.:* $V=0.000048941911 \times D^{2.01727708} \times H^{0.8850889}$
- *Cortex phellodendri Chinensis:* $V=0.000050479055 \times D^{1.9085054} \times H^{0.99076507}$
- *Pinus armandii franch:* $V=0.000059973839 \times D^{1.8334312} \times H^{1.0295315}$

Where

V: Commercial volume of tree, m³ • tree⁻¹

D: Diameter at breast height, cm

H: Tree height, m

The commercial volume is the summed for all trees within a plot and expresses as volume per unit area (m³ • ha⁻¹).



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CL3.2 Commit to developing a full monitoring plan within six months of the project start date or within twelve months of validation against the Standards and to disseminate this plan and the results of monitoring, ensuring that they are made publicly available on the internet and are communicated to the communities and other stakeholders.

Monitoring plan will be published on internet within six months of the project start date. Also Chinese version of the plan will be disseminated to the project manager and local stakeholder, in which the roles and responsibilities of each party will be described in detail.

IV. Community Section:

CM1. Net positive community impacts:

CM1.1 Use appropriate methodology to estimate the impacts on communities as defined in G1, resulting from the project activities. The impacts shall include potential impacts of changes in natural resources and ecosystem services identified as important by the communities, over the duration of the project.

CM 1.1.1 Describe the appropriate methodologies used (e.g. the livelihoods framework) to estimate the net benefits to communities resulting from planned project activities.

To maximize the socio-economic benefit, the afforestation/reforestation design was prepared with a participatory approach. PRA methods were adopted in interviewing and consulting with farmer households in the project areas to understand the local farmers/communities' preferences, wishes and concerns, so that the proposed project activity would better respond to their desires for livelihood development.

PRA is applied to obtain necessary information from various groups. Each group was lead by an expert. Specific PRA method includes:

Semi-Structure Interview with key persons, farmer households, villages, town/township governments, local forest posts and forestry bureau and nature reserves.

Hold Seminar of farmers' representatives.

CM 1.1.2 Include a credible estimate of net benefits changes in community wellbeing given project activities.

Income generation The total income is estimated at US\$1,850,000 within the 30 years period, including about US\$500,000 from employment, US\$600,000 from sales of wood and non-wood products and US\$750,000 from sales of CERs.

Employment The proposed project activity will create over 100,000 person-days of temporary employment opportunities from planting, weeding and tending, thinning, harvesting, etc. Most employment opportunities will be taken by the local farmers/communities involved in the proposed project activity and beyond (whose lands do not fall within the project boundary).

Strengthening social cohesion As indicated earlier, individual farmer households/communities are too weak to successfully manipulate the chain from investment, production to market especially for the timber and non-wood forest products which will take a much longer period than food and livestock



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production. In addition, the lack of organizational project activity will entail close interaction between individuals, communities, companies and government, with intensified communication among them and supporting networks for social and productive services.

Technical training and demonstration Interview with local communities indicated that local farmers/communities are usually short of access to quality seed sources and lack skills for producing high quality seedlings and for successful tree planting, as well as for preventing planted trees from being subject to fire, pest and disease attack. This is one of the important barriers of local communities in planting trees on their lands. In the proposed project activity, the local forestry agencies as well as companies/farms will organize the training for local communities on seed and seedling selection, nursery management, site preparation, planting models and integrated pest management.

CM2. Offsite community impacts:
--

>>

CM3. Community impact monitoring:
--

>>

CM4. Capacity building:

>>

CM5. Best practice in community involvement:

>>

V. Biodiversity Section:

B1. Net positive biodiversity impacts:

B1.1 Use appropriate methodologies ⁴⁷ to estimate changes in biodiversity as a result of the project in the project zone and in the project lifetime. This estimate must be based on clearly defined and defensible assumptions. The ‘with project’ scenario should then be compared with the baseline ‘without project’ biodiversity scenario completed in G2. The difference (i.e., the net biodiversity benefit) must be positive.
--

This project locates between Qionglai and Daxiangling Mountain, the transition zone from Sichuan Basin to the Qinghai-Tibet Plateau, the key areas for biodiversity conservation in south-west of China, where the giant panda as a flagship species and umbrella species is the symbol of biodiversity. All the project lands distribute in the corridor of different population, vegetation restoration is valuable for exchanging among them. Field survey in the secondary plantation shows that with the formation of plantations the diversity of vegetation communities will restore gradually.

And we can find some trace of giant panda in the secondary plantation near the project site. The migration flagship and umbrella species will help to enhance wildlife vitality through fostering genetic exchange, to enhance the connectivity between forest areas so that the ecosystem integrity and health can be improved, and the conservation of threatened species and biodiversity enhanced.



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Through a systematic field investigation based on setting comparison plot in project land, nearby virgin forest, and secondary plantation with the same climate and geographical character, critical species habitat analysis and corridor analysis shows, through establishing 786 ha of multiple use forests in the eroded lands in the adjacent areas of nature reserves located in the upper reaches of the main tributaries of the Yangtze River, this reforestation project will be able to raise forest cover effectively and to establish the biological corridor in the adjacent areas of the nature reserve.

The following methodologies will be used in the biodiversity monitoring:

1. Plant

Random sample and criterion fixed sample will be used to survey the species, population, coverage density or abundance, and frequency to appraise the biodiversity of plant in and around this project region, and the following evaluation index will be used:

Species Saturation

Species saturation, number of species in one unit area of plant community, is index of species richness. Therefore, index of species richness of forest community is equal to number of species S.

Species Abundance, coverage and height

Estimate the species abundance, average coverage and average height of the overall forest community using data from sample field survey of plant community.

When calculating the average species coverage and height, the confidence interval must be calculated as well, with the formula of:

S=

$$S = \sqrt{\frac{\sum_{i=1}^n X_i^2 - \frac{\left(\sum_{i=1}^n X_i\right)^2}{n}}{n-1}}$$

calculate the standard deviation S of the quantitative parameters (species abundance, coverage and height) of each specie. To the normal population N (μ , δ^2) of these parameters, use sample S to replace the unknown population standard deviation δ and to build the 95% confidence interval of population mean μ , which is:

$$\bar{X} \pm t_{0.05}(\text{双侧}) \frac{S}{\sqrt{n}}$$

The degree of freedom for t is n-1, $\bar{X}$ is average of the quantitative parameters of all species in the sample, n is sum of the quantitative parameters of all species in the sample.

Species diversity of plant communities

Indicate the species diversity of forest community using index including importance value, species diversity index and evenness index.

Species importance value

Species importance value is the sum of relative abundance, relative prominence and relative frequency, which reflects the dominance of specie in community.

The commonly used formula is: $IV(\%) = (Dr + Pr + Fr) / 3$

relative abundance $Dr = D$ (number of certain specie) / ΣD (total number of all species) $\times 100\%$, relative prominence $Pr = P$ (cross-sectional area of certain specie) / ΣP (total cross-sectional areas of all species) $\times 100\%$, relative frequency $Fr = F$ (frequency of certain specie) / ΣF (total frequency of all species) $\times 100\%$.

Species diversity index

Shannon—Wiener index would be used as forest species diversity index, the formula of which is:



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$$H' = -\sum P_i / P \ln (P_i / P)$$

H' is the species diversity index, P_i is the importance value of specie i , P is the importance values of all species of the community.

Species evenness index

Species evenness index of forest community is represented by Pielou's evenness index, with formula of:

$$E = H' / H_{\max}$$

Within which, $H_{\max} = \ln S$. H' is species diversity index. E is Pielou's evenness index i . $H_{\max}$ is the maximum of species diversity of the community, which would be reached when numbers of each species in the community are equal. S is the community richness index.

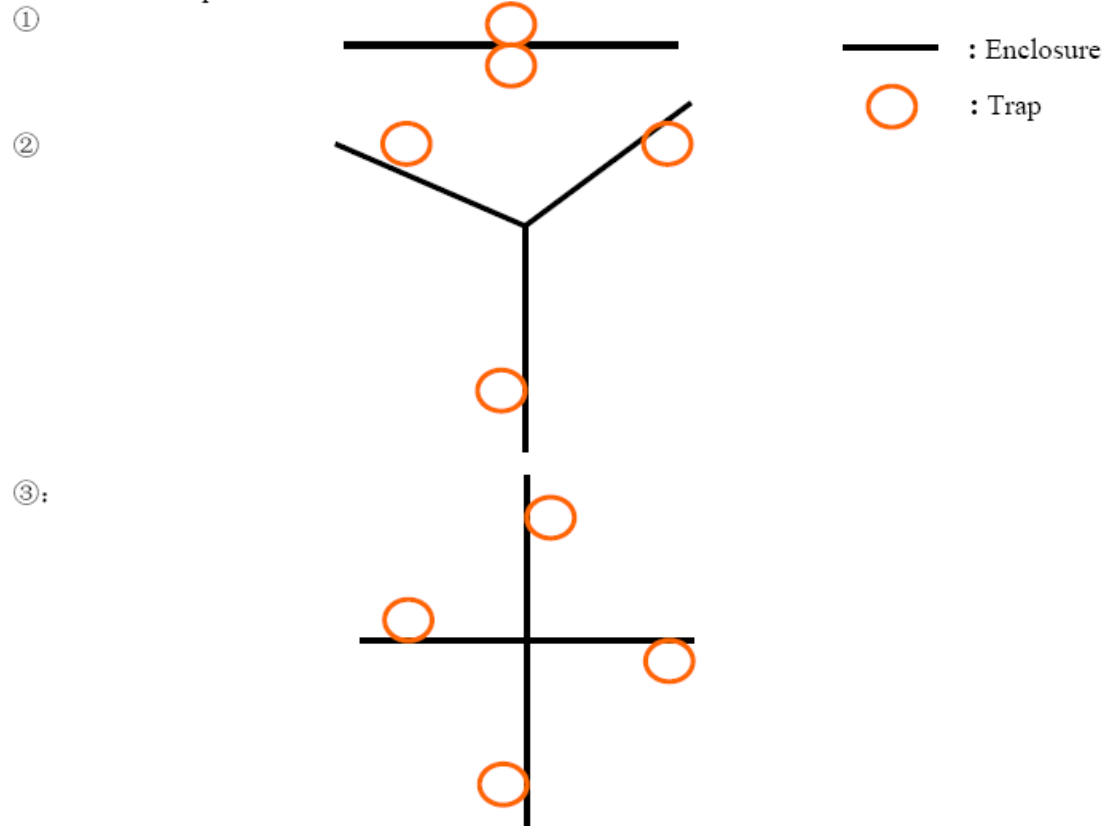
2. Amphibian and Reptiles

Enclosure and trap will be used to catch and survey the species and population of amphibian and reptiles. The survey content includes habitat types, weather, species, amount, sex, body length, and weight.



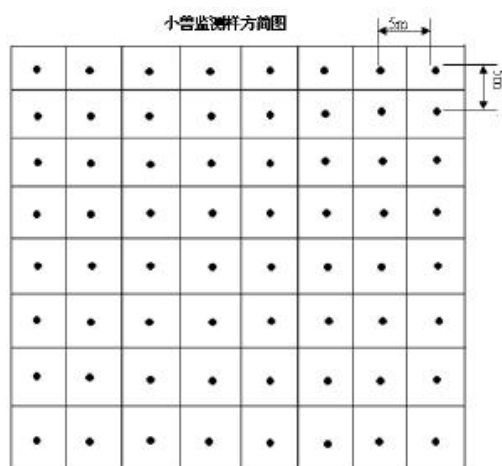
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Enclosure - Trap mode:



3. Small mammals

Species and the populations and distributions trends of small mammal will be monitored to reflect the change of environment and ecosystem function by the population dynamic of small mammals. The mouse trap sample will be used to survey the species, amount, sex, body length and weight.



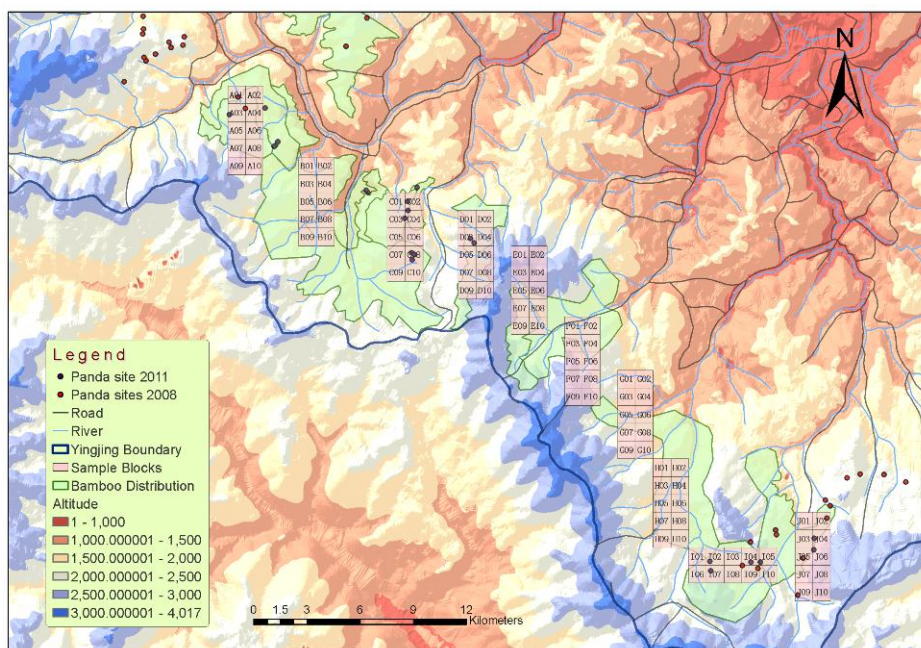
4. Large mammals and birds

The large mammals and birds monitoring will conduct two methods:

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One is, two “diagonal” monitoring sample line in each project land will be carried out to observe and survey the species and amount of mammals appeared in the project area. All kinds of trace will be recorded to describe the distribution of mammals, from which we can analysis the effect of the planting and management activities.

At the same time, we use infrared camera trap to monitor the mammals and birds, especial the panda population, please see the map as below:



B1.2. Demonstrate that no High Conservation Values identified in **G1.8.1-3** will be negatively affected by the project.

>>

Biodiversities NCVs will not be negatively affected.

1. Globally, regionally or nationally significant concentrations of biodiversity values;
 - a. protected areas
 - b. threatened species¹⁴
 - c. endemic species¹⁵
 - d. areas that support significant concentrations of a species during any time in their lifecycle (e.g. migrations, feeding grounds, breeding areas).

Part of the project site is located in the protected ecological corridor zone for panda connection. The implementation of the project will enrich the degraded land which resulted in a more favorable habit for panda population. The project poses no threat to the panda habitats where plantation activities take place.

2. Globally, regionally or nationally significant large landscape-level areas where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance;
3. Threatened or rare ecosystems;



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No threatened or rare ecosystems are identified.

B1.3. Identify all species to be used by the project and show that no known invasive species will be introduced into any area affected by the project and that the population of any invasive species will not increase as a result of the project.

>>

Species used in the proposed project

Platycladus orientalis

Betula luminifera

Populus Szechuanica Betula albo-sinensis

Magnolia officinalis Larix gmelinii Quercus acutissima

Pinus massoniana

Cupressus chengiana Cunninghamia lanceolata Pinus tabulaeformis

Picea asperata

All species used in this project are native species, and the seeds used in breeding were collected in nearby the virgin forest. In order to reduce project cost and improve the survival rate, all seeds were nursery in the project site or nearby farmland by local community. No invasive species will be increased as a result of the project.

B1.4 Describe possible adverse effects of non-native species used by the project on the region's environment, including impacts on native species and disease introduction or facilitation. Project proponents must justify any use of non-native species over native species.

>>

No non-native species will be used in the proposed project.

B1.5 Guarantee that no GMOs will be used to generate GHG emissions reductions or removals.

>>

No GMOs will be used in the proposed project.

B2. Offsite biodiversity impacts:

B2.1 Identify potential negative offsite biodiversity impacts that the project is likely to cause.

>>

No significant negative offsite biodiversity impacts have been identified.

B2.2 Document how the project plans to mitigate these negative offsite biodiversity impacts.

>>

No significant negative offsite biodiversity impacts have been identified.

B2.3 Evaluate likely unmitigated negative offsite biodiversity impacts against the biodiversity benefits of the project within the project boundaries. Justify and demonstrate that the net effect of the project on biodiversity is positive.

>>



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No significant negative impacts have been identified due to the environmental-friendly techniques adopted in the proposed project activity, e.g., avoidance of slash and burn and overall tillage, choice of native tree species and their mixed spatial arrangement, etc.

B3. Biodiversity impact monitoring:

B3.1 Develop an initial plan for selecting biodiversity variables to be monitored and the frequency of monitoring and reporting to ensure that monitoring variables are directly linked to the project's biodiversity objectives and to anticipated impacts (positive and negative).

>>

It is planned that biodiversity monitoring will be carried out based on a five-year cycle to cover plants, amphibians, small and large mammals, birds and insects.

Various biodiversity indicators for different biotic communities will be used for analysis as follow.

Floristics and plants community quantity:

Data variable	Data unit	Surveyed (s) calculated (c) estimated (e) or default (d)	Recording frequency	Number of sample plots at which the data will be monitored	Comment
Arbor:			5years	1 sample plots in each project land	sample plot size: 20m×20m
species	<i>dimensionless</i>	s		100% of each sample plots	
number of each species	<i>number</i>	s		100% of each sample plots	
total canopy	%	s		100% of each sample plots	
canopy of each species	%	s		100% of each sample plots	
high of each tree	<i>m</i>	s		100% of each sample plots	
DBH of each tree	<i>cm</i>	s		100% of each sample plots	
Frutex:			5years	3 small sample plats in each arbor plots	sample plot size: 5m×5m
species	<i>dimensionless</i>	s			
number of each species	<i>number</i>	s			
total canopy	%	s			
canopy of each species	%	s			
Herbage:			5years	One sample plot in each frutex plot	sample plot size: 1m×1m
species	<i>dimensionless</i>	s			
total canopy	%	s			

Amphibians, small and large mammals, and birds: B4. Native Species Use (1 Point)

Data variable	Data unit	Surveyed (s) calculated (c) estimated (e) or default (d)	Recording frequency	Number of sample plots at which the data will be monitored	Comment
Amphibians: (Drift Fences and Pitfall			5years	1 sample plot in each project land	At the same location with the



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Traps)					plants monitoring
species	<i>dimensionless</i>	s			
number of each species	<i>number</i>	s			
Small mammals: (rodent hole stat.)			5years	1 sample plot in each project land	1/4 hectare
hole munber	<i>number</i>	s			
number of small mammals	<i>number</i>	c			
Bird:			5years	1 fixed observation plot in each project land	observe with telescope at fixed plot
species	<i>dimensionless</i>	s			
number of each species	<i>number</i>	s			
large mammals			5years	1 fixed monitoring sample line in each project land	search trace and individual of large mammals
trace type	<i>dimensionless</i>	s			
trace number	<i>number</i>	s			
mammal specie	<i>dimensionless</i>	e			
location	<i>coordinate</i>	s			

And we set the potential planting monitoring sites and also include the Amphibians, small mammals monitoring sites, please see as below:

Samples NO.	Village	Samll Name	x	y
YJ-01	Heping	Duimenshan	270479	3310489
YJ-02	Heping	Taiyanggou	270327	3311420
YJ-03	Heping	Gaodaping	269647	3311931
YJ-04	Heping	Daposhang	269676	3309912
YJ-05	Heping	Shuichigou	267882	3309299
YJ-06	Nibanshangongqu	Dahegou	270932	3291704
YJ-07	Yanshangongqu	Yanshan	293120	3279517
YJ-08	Nibanshangongqu	Nibashan	268994	3282905
YJ-09	Doudoudigongqu	Jiubasuo	243239	3293793
YJ-10	Doudoudigongqu	Daqiaogou	251424	3293895
YJ-11	Qiaoxi	Qishugou	271300	3293155
YJ-12	Qiaoxi	Liujiashan	270280	3294190
YJ-13	Qiaoxi	Youfanggou	271585	3295009
YJ-14	Changfu	Hetaowan	265566	3292110
YJ-15	Changfu	Manzhuping	268033	3293076
YJ-16	Changfu	Zhongbaoshan	263599	3288323
YJ-17	Baixiang	Malaoke	295087	3294217
YJ-18	Baixiang	Fangyangping	296304	3295555
YJ-19	Baixiang	Gaoshanmiao	295635	3294674
YJ-20	Fenghuang	Shiziping	294872	3288946
YJ-21	Shuanghong	Shenjiwan	294314	3292173
YJ-22	Shuanghong	Wufangdi	296446	3291315
YJ-23	Fazhan	Tianpingzi	293507	3283727



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YJ-24	Fazhan	Lanzaping	293739	3282633
YJ-25	Fazhan	Xinfangji	293763	3285177
YJ-26	Gangshang	Wodang	286074	3279776
YJ-27	Jianzheng	Laoxiongwanyi	260769	3299612
YJ-28	Jianzheng	Oujiafangji	258608	3301823
YJ-29	Jianzheng	Xiaogoutouyangjiashan	257808	3302871
YJ-30	Jianzheng	Chuntianli	259655	3301620
YJ-31	Shuangling	Dapingtou	255100	3295454
YJ-32	Shuangling	Baiyan	256108	3297293
YJ-33	Jiangzheng	Quaiqilin	259090	3302075
YJ-34	Shuangling	Daqiaotou	252101	3293714
YJ-35	Baixiang	Gaoshanmiao	295443	3295038
YJ-36	Doudoudigongqu	Jiubasuo	243498	3293688

Consider the large mammals and birds, we set monitoring sites and lines for two “diagonal” monitoring and infrared camera trap, the potential sites please see as below:

Sample No.	x	y
A09	256500	3293500
A07	256500	3294500
A04	256500	3295500
A01	256500	3296500
A10	257500	3293500
A08	257500	3294500
A05	257500	3295500
A02	257500	3296500
A06	258500	3295500
A03	258500	3296500
B09	261500	3286500
B06	261500	3287500
B03	261500	3288500
B10	262500	3286500
B07	262500	3287500
B04	262500	3288500
B01	262500	3289500
B08	263500	3287500
B05	263500	3288500
B02	263500	3289500
C09	268500	3284500
C07	268500	3285500
C05	268500	3286500
C03	268500	3287500
C01	268500	3288500
C10	269500	3284500
C08	269500	3285500



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C06	269500	3286500
C04	269500	3287500
C02	269500	3288500
D05	274500	3282500
D10	275500	3281500
D06	275500	3282500
D01	275500	3283500
D07	276500	3282500
D02	276500	3283500
D08	277500	3282500
D03	277500	3283500
E08	278500	3276500
E05	278500	3277500
D09	278500	3282500
D04	278500	3283500
E09	279500	3276500
E06	279500	3277500
E03	279500	3278500
E01	279500	3279500
E10	280500	3276500
E07	280500	3277500
E04	280500	3278500
E02	280500	3279500
F09	281500	3273500
G10	282500	3267500
G08	282500	3268500
G06	282500	3269500
G04	282500	3270500
G02	282500	3271500
G01	282500	3272500
F10	282500	3273500
F07	282500	3274500
F05	282500	3275500
F03	282500	3276500
F01	282500	3277500
G09	283500	3268500
G07	283500	3269500
G05	283500	3270500
G03	283500	3271500
F08	283500	3274500
F06	283500	3275500
F04	283500	3276500
F02	283500	3277500



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H09	292500	3270500
H07	292500	3271500
H05	292500	3272500
H03	292500	3273500
H01	292500	3274500
H10	293500	3270500
H08	293500	3271500
H06	293500	3272500
H04	293500	3273500
H02	293500	3274500



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**Annex 1
CONTACT INFORMATION ON PARTICIPANTS IN THE PROPOSED A/R CDM PROJECT
ACTIVITY**

Organization:	Paocaowan Forestry Farm
Street/P.O.Box:	No. 24, East 3 rd section, Yingxing Road
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State/Region:	Sichuan
Postfix/ZIP:	625200
Country:	P.R.China
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FAX:	+86-0835-7621936
E-Mail:	
Website URL:	
Represented by:	
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Salutation:	Mr.
Last Name:	Zhou
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Direct FAX:	
Direct tel:	
Personal e-Mail:	



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Organization:	Nibashan Forestry Farm
Street/P.O.Box:	No. 153, West section, Jinghe Road, Yandao Town
Building:	
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State/Region:	Sichuan
Postfix/ZIP:	625200
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E-Mail:	
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Salutation:	Mr.
Last Name:	Liu
Middle Name:	
First Name:	Fugui
Department:	
Mobile phone:	+86-13881647766
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Direct tel:	
Personal e-Mail:	



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Annex 2

INFORMATION REGARDING PUBLIC FUNDING

No funding will be used from Official Development Assistance.

Annex 3

BASELINE INFORMATION

To provide transparent information for the project boundary, baseline stratification, determination of baseline scenario and the ex ante estimation of baseline net removals by sinks and leakage. Baseline survey was conducted from December, 2010 to March, 2011. The survey includes:

- _ Delineation of project boundary;
- _ Baseline stratification;
- _ Pre-project carbon stock in living biomass of scarcely forest land;
- _ Pre-project carbon stock in living biomass of small shrub;
- _ Pre-project carbon stock in living biomass of large shrub;
- _ Pre-project growing trees;
- _ Grazing activity within and outside the project boundary.

For the purposed of baseline survey, operation procedure has been developed based on Good Practice Guidance for Land Use, Land-Use Change and Forestry published by IPCC and methodological manual for measuring terrestrial carbon pool by Winrock International. The methods and results are summarized below.

1. Delineation of the project boundary

The plots were selected based on the principles as below:

1. The plots should be in the core area of the giant panda habitat in Daxiangling Mountain;
2. Non-forest land, including the barren land, shrub land and suitable forest land;
3. Afforestation/reforestation and forest management should be implemented within the plots;
4. It should help develop the biodiversity conservation and social economy of the communities around the plots;
5. It should play an exemplary role with good accessibility.



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The project boundary has been delineated based on satellite image in combination with field check and interviewing. Furthermore, on-site check using GPS and interviewing with local farmers and staff from the forestry farm were conducted to ensure the land eligibility and confirm the project boundary.

2. Baseline stratification and sampling schemes

The baseline carbon pools selected in this project include the aboveground part of the spotted trees and shrubs. The selection of the carbon pools is as below:

Table Annex 3-1 Selection of carbon pools

Carbon pool	Selected (answer with Yes or No)
Above ground	Yes
Below ground	No
Dead wood	No
Litter	No
Soil organic carbon	No

Based on field surveys on vegetation and the data (including the land use map, satellite map and other GIS data), the pre-project vegetations are grouped into three vegetation types. Therefore, 3 baseline strata were identified based on pre-existing vegetation (Table Annex 3-2). Also, to ensure statistically independence for each stratum, minimum 15 plots are set for each stratum based on Random points in Arcview.

Table Annex 3-2 Baseline strata

Baseline strata ID	Number of the parcels	Area (ha)	Number of the plots	Area of the plots (m ²)
Spotted trees	9	87.13	15	400
Small shrub	8	371.4	30	4
Large shrub	17	320.6	26	25

3. Pre-project spotted trees

Based on survey on 15 temporary circular plots, the pre-project living trees are summarized in table annex 3-3. The tree species includes *Picrasma quassioides* (D.Don) Benn., *Cornus controversa* Hemsl., *Betula* spp. and *Cunninghamia lanceolata*, etc.. The area of this stratum is 87.13 ha and the baseline carbon stock is 355.64 t. And the estimated baseline carbon stock changes in the crediting period (30 years) is 620.5 t due to continuous growth equation of the living trees referred to Table CL-2.



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Table Annex 3-3 Carbon stock in living biomass of pre-project living trees

Baseline strata ID	Area(ha)	Carbon stock (t C/ha)
XJ-01-2	8.9	51.71
XJ-01-3	9.7	49.23
XJ-01-4	5.3	20.83
XJ-01-5	13.5	69.46
SH-01-9	5.2	18.86
SP-01-20	12.2	37.74
QL-01-46	4.5	22.42
YZ-01-47	11.1	7.99
YZ-01-53	16.9	77.40

4. Pre-project living biomass of non-forest vegetation, including small and large shrub

Based on survey on 30 temporary circular plots, the pre-project small shrubs are summarized in table annex 3-4. The area of this stratum is 235.4 ha and the total carbon stock is 729.83 t.

Table Annex 3-4 Carbon stock in living biomass of pre-project small shrub

Baseline strata ID	Area(ha)	Carbon stock (t C/ha)
XJ-02-1	18.8	48.2
SH-02-10	8.9	49.6
NBS-02-14	137.5	225.6
NBS-02-15	16.0	57.6
QL-02-44	29.1	144.53
YZ-02-49	14.9	108
LCG-02-57	10.2	96.3

Based on survey on 26 temporary circular plots, the pre-project small shrubs are summarized in table annex 3-4. The area of this stratum is 320.6 ha and the total carbon stock is 957.7 t.



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Table Annex 3-4 Carbon stock in living biomass of pre-project large shrub

Baseline strata ID	Area(ha)	Carbon stock (t C/ha)
SH-03-6	4.1	12.2
SH-03-7	4.8	14.3
SH-03-8	3.3	9.9
SH-03-11	8.2	24.5
SH-03-12	9.5	28.4
SH-03-13	5.7	17.0
NBS-03-16	3.8	11.4
NBS-03-19	57.7	172.4
SP-03-22	6.8	20.3
SP-03-24	10.1	30.2
XM-03-25	103.9	310.4
XM-03-26	8.5	25.4
XM-03-27	41.7	124.6
QL-03-43	15.4	46.0
LCG-03-54	6.3	18.8
LCG-03-56	4.9	14.6
LCG-03-59	25.9	77.4

5. Natural regeneration on project lands

No natural regenerated sapling or young trees have been found during the sampling survey.

Project participants may add further annexes as appropriate

History of the document

Version	Date	Nature of revision
05	EB 55, Annex 22 30 July 2010	Restructuring to reflect changes applied in the design of approved A/R CDM baseline and monitoring methodologies. Due to the overall modification of the document, no highlights of the changes are provided.
04	EB 35, Annex 20 19 October 2007	- Restructuring of section A; - Section “Monitoring of forest establishment and management” replaces sections: “Monitoring of the project boundary”, and “Monitoring of forest management”; - Introduced a new section allowing for explicit description of SOPs and quality control/quality assurance (QA/QC) procedures if required by the



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		selected approved methodology; • Change in design of the section “Monitoring of the baseline net GHG removals by sinks” allowing for more efficient presentation of data.
03	EB 26, Annex 19 29 September 2006	Revisions in different sections to reflect equivalent forms used by the Meth Panel and facilitating the transparent selection of an approved methodology for the proposed A/R CDM project activity.
02	EB 23, Annex 15a 24 February 2006	Inclusion of a section on the assessment of the eligibility of land and the Sampling design and stratification during monitoring.
01	EB15, Annex 6 03 September 2004	Initial adoption.
Decision Class: Regulatory Document Type: Form Business Function: Methodology		