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History of the document

Version	Date	Nature of revision
01	19 Feb 2008	This CCBA PDD template has been developed by TÜV SÜD in support to CCBA. TÜV SÜD refrains from responsablities related to the completeness and accurate inclusion of CCBA indicators to this form. For AR projects: If the CCBA PDD is used in combination with an AR-CDM PDD, it is recommended to briefly indicate in the CCBA PDD, which chapter of the AR-CDM PDD already contains the relevant information - avoiding in this manner the dublication of information.

I. Basic Data:

1) The title of the CCB Standards project activity:

>> Reforestation on Degraded Lands in Northwest Guangxi

2) The version number of the document:

>>
Version 1.0

3) The date of the document:

>> 09/05/2008

II. General Section:

G1 Original Conditions at Project Site (Required)

G.1.1 Describe the location of the project and basic physical parameters (e.g., soil, geology, climate).

>>Please see CDM-AR-PDD Section A.4 for the project location and Section A.5.1 for basic physical parameters.

G.1.2 Describe the types and condition of vegetation at the project site:

>> Please see CDM-AR-PDD Section A.5.1 for basic physical parameters.

G.1.3 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):

>>Please see CDM-AR-PDD Annex 3

G.1.4 Description of communities located in and around the project area, including basic socioeconomic information (using appropriate methodologies such as the livelihoods framework).

>>This has been done following "Guidelines for stakeholes' comments" and "methods for social-economic survey and monitoring" developed by social development expert, using PRA method. Please see report on social-economic survey as well as CDM-AR-PDD Section G.1

G.1.5 A description of current land use and land tenure at the project site.

>> Please see CDM-AR-PDD Section A.6 and Annex 3.

G.1.6 Description of current biodiversity in the project area and threats to that biodiversity, using appropriate methodologies (e.g., key species habitat analysis, connectivity analysis), substantiated with reference (evidence) where possible.

>> The methods developed by biodiversity experts have been used, e.g., transsect survey for wild animals and plot sampling for vegetation. Please see "report on survey of biodiversity of the reforestation on degraded lands in Northwest Guangxi" for detail. Please also see CDM-AR-PDD Section A.5.2 as well as CDM-AR-PDD Annex 3.

G.1.7 List of all IUCN Red List threatened species (which encompasses endangered and vulnerable species) and species on nationally recognized list (where applicable) found within the Project boundary.

>> No IUCN Red List threatened species and 1st class national protected species were found in project area. However there are 5 species of 2nd class national protected animals and 26 species of Guangxi provincial protected animals.

Please also see "report on survey of biodiversity of the reforestation on degraded lands in Northwest Guangxi" as well as CDM-AR-PDD Section A.5.2

G2 Baseline Projections (Required)

G.2.1 Description of the most likely land-use scenario in the absence of the Project activity. Identify whether the scenario assumes that existing laws or regulations would have required that project activities be undertaken anyway:

>> Please see CDM-AR-PDD Section C.5 and C.6

G.2.2 Provide a projection of future carbon stock changes in the absence of the project, based on the land-use scenario described above. The timeframe for this analysis can be either the project lifetime or the project accounting period, whichever is more appropriate.

>> Please see CDM-AR-PDD Section C.7 and Annex 3

G.2.2a If there is evidence that non-CO_2 greenhouse gas (GHG) emissions such as CH_4 or N_2O are more than 15% of the baseline GHG fluxes at the project site (in terms of CO_2 equivalents), they must be estimated.

>>The non-CO_2 greenhouse gas (GHG) emissions such as CH_4 or N_2O are nil, and at least less than 15% of the baseline GHG fluxes at the project site (in terms of CO_2 equivalents)

G.2.3 Description of how the "without-project" scenario would affect local communities in the project area.

>> Under the "without-project" scenario, lands would maintain the current status (barren land, with grazing or agricultural cultivation, burning and biomass collection for fuel). There would be continuous or more severe soil erosion, more intense and frequent natural disaster, resulting in more loss of agricultural production, and local communities would continuously live under poverty. Please also see CDM-AR-PDD Section G.1

G.2.4 Description of how the "without-project" land-use scenario would affect biodiversity in the project area.

>> Currently the project lands are mostly degraded underproductive lands covered by shrubs and herbaceous plants, with very simple vegetation structure. In particular, Eupatorium (*Eupatorium adenophorum*), an introduced invasive weed, now occupies parts of the project lands. Therefore there is a very low biodiversity. Under the "without-project" scenario, current status (barren land, with grazing or agricultural cultivation, burning and biomass collection for fuel) will continue, more and more lands will be occupied by invasive weeds, and soil erosion will worsen. As a result, the habitat of wildlife will deteriorate and biodiversity will be lower and lower. Please also see CDM-AR-PDD Section F.1 and Annex 3

G.2.8 Description of how the "without-project" land-use scenario would affect water and soil resources.

>> Under the "without-project" scenario, current status (barren land, with grazing or agricultural cultivation, burning and biomass collection for fuel) will continue, soil erosion will continue and become worse. As a result, both water and soil resource will be negatively affected, and more flood and drought are likely to happen. Please also see CDM-AR-PDD Section F.1 and Annex 3

G3 Project Design & Goals (Required)

G.3.1 Provide a description of the scope of the project and a summary of the major climate, community and biodiversity goals.

>> Please see CDM-AR-PDD Section A.2

G.3.2 Describe each major project activity (if more than one) and its relevance to achieving the project's goals.

>> Please see CDM-AR-PDD Section A.2

G.3.3 Provide a map identifying the project location, where the major project activities will occur, geo-referenced boundaries of the project site(s).

>> Please see CDM-AR-PDD Section A.4 and spreadsheet attached to the CDM-AR-PDD

G.3.4 Provide a timeframe for the project's duration. Describe the rationale used for determining the Project lifetime. If the accounting period for carbon credits differs from the project lifetime, explain.

>> Please see CDM-AR-PDD Section B

G.3.5 Identify likely risks to climate, community and biodiversity benefits during the project lifetime. Outline measures that the project plans to undertake to mitigate the risks.

>>Please see CDM-AR-PDD Section F.1 for environmental risk and countermeasures, CDM-AR-PDD Section G.1 for social-economic risk and countermeasures.

G.3.6 Document and defend how local stakeholders have been or will be defined.

>>Primary stakeholders and secondary stakeholes are defined as table below.

Stakeholers	**Liability and Benefit**
Villages and Farmers	The shareholding contractual arrangements will be made between the farmers / communities and the forest company with regard to establishment of the plantation, the management responsibilities, inputs and benefit sharing. The farmers and communities will share income from forest products by contributing their lands, and at the same time share a greater portion of revenue from CER transactions. In addition,farmers will be paid for labour input to ensure their short-term income. At the same time farmers can learn related techniques by participating the forest establishment and management.
Forestry Farms or Companies	Local forestry farms or companies will make a shareholding contractual arrangement with local farmers and communities. They will invest in planting activities, provide technical input and manage the plantations during the crediting period, as well as take the investment risks. In return, the farms or companies will share income from forest products as well as tCER transaction.
Forestry Bureau of the project counties	The Project Management Offices (PMOs) that have been established in forestry bureau of each county under the umbrella of the GIFDCP will be responsible for coordinating the project participants and providing technical services. This includes arranging training for the planting entities and farmers/communities involved, supervising the implementation of the proposed A/R CDM project activity, as well as measuring and monitoring of the actual GHG removals by sinks and any leakage generated by the proposed A/R CDM project activity. The relevant information and data will be documented and archived in the PMOs and project entities in both electronic and paper copy.
Forestry posts	Forestry posts have direct links with villaves and farmers, and will provide on-site technical training, supervision, quality control, etc.

Guangxi Forestry Bureau	The provincial Project Management Office (PMO) that has been established under the umbrella of the GIFDCP will be responsible for coordinating the project participants and providing technical services, including the development of the project.

G.3.7 Demonstrate transparency by: making all project documentation publicly accessible at, or near, the project site; only withholding information when the need for confidentiality is clearly justified; informing local stakeholders how they can access the project documentation; and making key project documents available in local or regional languages, where applicable.

>>The project information has been and will be made public by distributing leaflet and farmers meeting. Leaflet has been or will be translated into local language before distribution. There are no confidential information.

G4 Management Capacity (Required)

G.4.1 Document the management team's experience implementing land management projects. If relevant experience is lacking, the proponents must demonstrate how other organizations will be partnered with to support the project.

>>The forestry sectors of governments at each level have organized and implemented a number of national, regional and local forestry projects, including three World Bank financed forestry development projects, accumulating rich experience in coordinating and/or implementing of reforestation and watershed management.

Forestry farms or forestry companies involved in the proposed project have established complete and operational effective organization/management systems, have technical capacity and rich experience in tree planting and forest management, management and financial capacity, as well as forest inventory and other data collection.

G.4.2 Demonstrate that management capacity is appropriate to the scale of the project.

>> Longlin Foresty Development Company Ltd is managing 10,666.7ha of commercial timber plantation,and with 57 staff has capacity to planting 1300 ha of new forests annually.

The Jinzhongshan Forest Farm, established in 1955, manages an area of 27,027.3 ha, including 23,928.6 ha of forested land, 192.4 ha of shrub land, 804.2 ha of temporary unstocked land and 17.9 ha of nursery. There are 157 staff including 127 technical and management staff. The farm has a capacity to planting 700 ha of lands annually.

Leli Forestry Farm and Luxin Forestry Development Company in Tianlin County have 139 staff and has ability to establish 2000 ha of forests annually.

Jiujiang Forestry Farm in Linyun County has 68 technical and management staff and has ability to establish at least 700 ha of new forests annually.

G.4.3 Document key technical skills that will be required to successfully implement the project and identify members of the management team or project partners who possess the appropriate skills.

>>Key technical skills include techniques for seedlings preparation, site and soil preparation, planting, weeding, forest management, and forest fire and pest insect and disease control, etc. The project entities have been involving in related activities for many years, own related techniques and accumulated rich experiences. In addition local forestry posts, forestry bureaus, Guangxi Forestry Institute and other technical organization will also provide technical support to this project. For example, local forestry posts and technical extension posts can provide direct technical support for seedling preparation, tree planting, weeding and forest management. Forest pest insect and disease stations at both county and provincial level will provide technical support for pest insect and disease control.

G.4.5 Document the financial health of the implementing organization(s).

>>Please see attached latest audit report, balance Sheet and revenue and expense statement

G5 Land Tenure (Required)

G.5.1 Guarantee that the project will not encroach uninvited on private property, community property, or government property.

>>The project lands are offered for planting on 100% voluntary basis, and the cooperation cooperation between farmers/villages and forest farms/companies will be arranged also on voluntary basis and fixed by contracts. Therefore, the implementation of the project will not encroach uninvited on private and community property.

G.5.2 Guarantee that the project does not require the relocation of people or any relocation is 100% voluntary and fundamentally helps resolve land tenure problems in the area.

>>The project area is located in remote mountainous regions and most of lands to be planted are barren lands on which local communities do not rely for their life. Therefore, it is unlikely to occur the relocation of people.

G.5.3 Describe potential “in-migration” of people from surrounding areas, if relevant, and explain how the project will respond.

>>Planting, thinning and harvesting may need a lot of labours and local labours may not enough for these activities. Under such situation, there will be some labours from surrounding areas, but this is temporaty labor movement. There will be no permanent in-migration of people from surrounding areas.

G6 Legal Status (Required)

G.6.1. Guarantee that no laws will be broken by the project.

>>Within the project boundary, 6,562 ha of lands have been defined by local governments for forestry purposes. 1,453 ha remain as undefined in terms of legal land use. There is also grazing on 485 ha of lands, however, 475 ha of these lands are defined for forestry purposes (see A/R CDM PDD Table Annex 3-1 under Annex 3 for detailed land uses). Since the 1980s, China has successively issued and revised a series of laws and administrative regulations related to forestry. These have included, among others, 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. In the 1990s, to encourage reforestation, China initiated a policy that would bring direct benefit to those who planted trees. Villages that owned lands were permitted to contract with farmers to use village barren lands for forestry purposes. Therefore, the proposed project will not break laws. Contrary, this project can help to facilitate the enforcement of regulations and policies for stopping illegal agricultural cultivation and grazing.

G.6.2. Document that the project has, or expects to secure, approval from the appropriate authorities.

>>The project proponent is applying for the Letter of Approval from National Development and Reform Commission.

G7 Adaptive Management for Sustainability (1 Point)

G.7.1 Demonstrate how management actions and monitoring programs are designed to generate reliable feedback that is used to improve project outcomes.

>>The project activity, including management actions and monitoring programs, has been designed based on on-site survey (vegetation, soil, wildlife), site assessment and interaction with local communities and other stakeholders using Participartory Rural Assessment, as well as AR CDM modality and procedures and approved methodology and tools applied. Therefore, the proposed project has taken into consideration of feedback from various stakeholders. See CDM PDD.

G.7.2 Describe the a management plan for documenting decisions, actions and outcomes and sharing this information with others within the project team, so experience is passed on rather than being lost when individuals leave the project.

>>Specific management plan for documentation has been developed to ensure experience is passed on rather than being lost when individuals leave the project. The plan specifies responsibility of each participant and relevant organization, and the documentation and maintenance of archieves. This ensure that experience can be passed on rather than being lost when individuals leave the project. See also AR CDM PDD Section E.1.2.

G.7.3 Demonstrate how the project design is sufficiently flexible to accommodate potential changes and that the project has a defined process in place to adjust

project activities as needed.

>>The potential changes are the failure of planting or low survival rate, deforestation due to fire, pest insect and disease, or extreme climatic damage. This has been listed in the monitoring plan and will be monitored and addressed.

G.7.4. Demonstrate an early commitment to the long-term sustainability of project benefits once initial project funding expires, including e.g. a new project; securing payments for ecosystem services; promoting micro-enterprise; and establishing alliances to continue sustainable land management.

>> The end of the initial project funding does not mean the close of the project. The project lifetime is at least 20 years. The benefit of communities will maintain based on the contract signed by between stakeholders. Both the project implementation entities and communities have the responsibility for guarantee of the benefit. To ensure the long-term sustainable benefits, the project implementation entities are responsible for continuous funding for forest management and protection, including weeding, thinning, fire control, pest insect and disease control, guarding, harvesting and regeneration, etc. Furthermore，after ending of the project, local communities will continue to use their land for forestry as through the proposed project they have technical know-how.

G8 Knowledge Dissemination (1 Point)

G.8.1. Describe how they will document the relevant or applicable lessons learned.

>>Staff from provincial and county PMOs will collectd and document relevant experience and lessons. A workshop will be held under the coordination of provincial PMOs, for a purpose of reporting progress, summarizing and exchanging experiences and lessons. All experience and lessons learned will be documented and archieved.

G.8.2. Describe how they will disseminate this information in order to encourage replication of successful practices. Examples include: undertaking and disseminating research that has widereaching applications; holding training workshops for community members from other locales; promoting “farmer to farmer” knowledge-transfer activities; linking to regional databases; and working with interested academic, corporate, governmental or non-governmental organizations to replicate successful project activities.

>> The experiences and lessons learned from the project will be disseminated through

- Media: such as newspapers, TV, radio broadcasting, website;
- Workshop: giving presentation on regional, national and international workshops, as already done by the first registered AR CDM project;
- Interaction with visitors: It is expected that after the registration of the project there will be a number of people to visit the project area for a purpose of learning experience and lesson.
- Technical training courses will be provided as one of the outreach activities.

III. Climate Section

CL1 Net Positive Climate Impacts (Required)

CL.1.1 Estimate the net change in carbon stocks due to the project activities. The net change is equal to carbon stock changes with the project minus carbon stock changes without the project (G2). Alternatively, any methodology approved by the CDM Executive Board may be used. Define and defend assumptions about how project activities will alter carbon stocks over the duration of the project or the project accounting period.

>>See AR CDM PDD Section C.7, Section D.1

CL.1.2 Factor in the non-CO_2 gases CH_4 and N_2O to the net change calculations (estimated in CL.1.1.) if they are likely to account for more than 15% (in terms of CO2 equivalents) of the project's overall GHG impact.

>>See AR CDM PDD Section D.1

CL.1.3 Demonstrate that the net climate impact of the project (including changes in carbon stocks, andnon-CO_2 gases where appropriate) will give a positive result in terms of overall GHG benefits delivered.

>>>>See AR CDM PDD Section D for ex ante estimate and Section C for additionality test and basline net removals by sinks

CL.2 Offsite Climate Impacts ("Leakage") (Required)

CL.2.1 Estimate potential offsite decreases in carbon stocks (increases in emissions or decreases in sequestration) due to project activities.

>>See AR CDM PDD Section D.2

CL.2.2 Document how negative offsite impacts resulting from project activities will be mitigated and estimate the extent to which such impacts will be reduced. Estimate the extent to which the negative offsite impacts will be reduced adequately.

>> See AR CDM PDD Section A.5.6

CL.2.3 Subtract any likely project-related unmitigated negative offsite climate impacts from the climate benefits being claimed by the project. The total net effect, equal to the net increase in onsite carbon stocks (calculated in the third indicator in CL1) minus negative offsite climate impacts, must be positive

>> See AR CDM PDD Section A.9 table A-7.

CL.3 Climate Impact Monitoring (Required)

CL.3.1a Describe the initial plan for how they will select carbon pools and non-CO_2 GHGs to be monitored.

>> See AR CDM PDD Section C.3

CL.3.1b State if the corresponding measurements and the sampling strategy (including monitoring frecuency) are set in the monitoring plan.

>> See AR CDM PDD Section E

CL.3.1c Show that all potential pools are included (aboveground biomass, litter, dead wood, belowground biomass and soil carbon). Pools to monitor must include any pools expected to decrease as a result of project activities.

>> See AR CDM PDD Section E

CL.3.1d Describe if relevant non-CO_2 gases are monitored if they account for more than 15% of the project's net climate impact expressed in terms of CO_2 equivalents.

>> See AR CDM PDD Section E

CL.4 Adapting to Climate Change & Climate Variability (1 Point)

CL.4.1 Identify likely regional climate change and climate variability impacts, using available studies.

> Result showed that the mean air temperature in China increased by 0.5-0.8^{0}C in last 100 years, and it was 1.1 ^{0}C in last 50 years. However, the warming in South China is much less that North China. There was no significant change of precipitation in China in last 100 years. However the annual precipitation in Southeast China increased by 60-130mm in last 50 years. The intensity and frequency of extreme climatic events increased significant in

South China in last 50 years. Typical extreme climatic event in this region is increased number of strong rainstorm (figure below)[1].

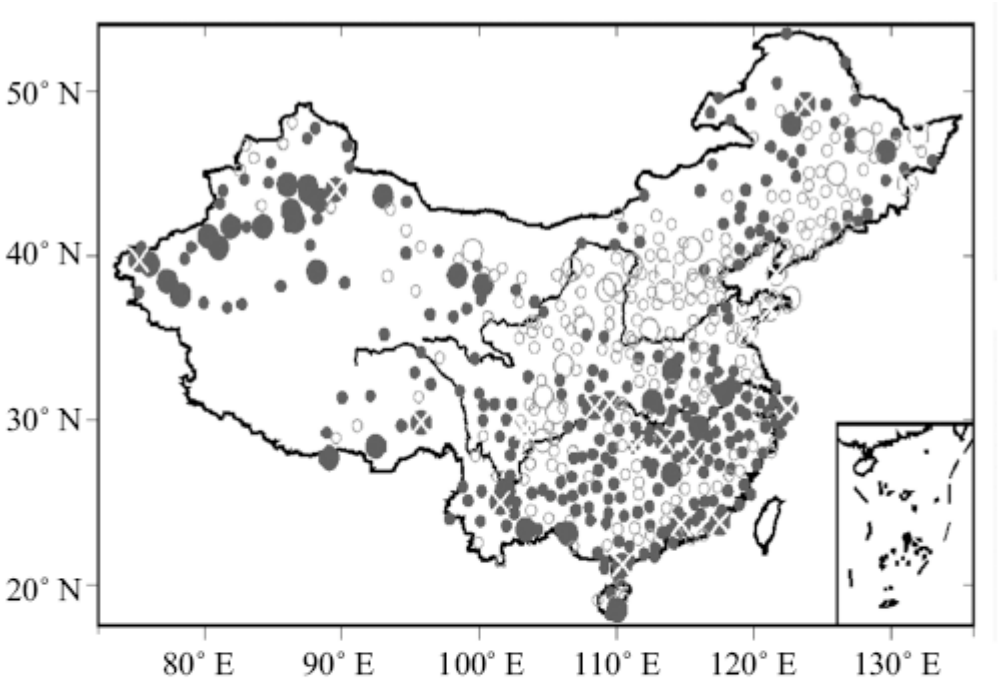

图 4　近 50 a 来中国大陆极端强降水日数的变化趋势
（实心和空心圆分别代表增加和减少趋势，其中：
⊗＞ 7.5%/10 a，●（7.5%～2.5%）/10 a，•＜2.5%/10 a；
⊗＜ −7.5%/10 a，○（−7.5% ～−2.5%）/10 a，
◦＞ −2.5%/10 a，显著变化的地区标有叉号）

Fig. 4　Change of days with extreme strong rainfall over China in the last 50 years

By the year 2050, mean air temperature in China will increase by 2.3-3.3 ^{0}C, and precipitation will increase by 5-7%. No significant change of precipitation in South China is expected but intensity and frequency of rainstorm is expected to increase significantly. By the year 2030, mean sea level in China will increase by 1-16 cm[2].

[1] Ding Y.H. et al. 2006. National Assessment Report on Climate Change (I): Historical changes and future trend. Advances in Climate Change Research, 2(1): 3-8
[2] Lin E.D. et al. 2006. National Assessment Report on Climate Change (II): Impacts and Adaptation. Advances in Climate Change Research, 2(2): 51-56

In the recent years, occurrences of extreme climatic conditions due to climate change have become more and more frequent, such as extremely snow storm and ice storm in the 2007-2008 winter and rainstorm in recent years.

CL.4.2 Demonstrate that the project has anticipated such potential impacts and that appropriate measures will be taken to minimize these negative impacts.

>> During the design of the project, the project participants understood the potential impacts of climate changes, and countermeasures have been taken to minimize such negative impacts, such as:

- Use of native species as much as possible: Native tree species that are most adaptable to local climatic, soil, water and temperature conditions will be chosen for refforestation.
- Seeds of these species will be collected from local seed orchards or parent tree gardens.
- The nursery sites will also be located in the vicinity of the planting sites where the conditions are very much the same.
- Tree species will be planted in pattern of mixed patches to enhance soil and water conservation, mitigate fire and disease risk.
- During planting operations, minimal-disturbance planting pits will be prepared. Neither slash-and-burn nor full-tillage will be practiced to avoid damaging primary vegetation.
- In the case of unavoidable natural disasters, countermeasures such as enrichment planting will be done in areas where young trees and seedlings are affected so that the loss from such damages will be minimized to the maximum extent.

CL5 Carbon Benefits Withheld from Regulatory Markets (1 Point)

CL.5.1 Demonstrate that at least 10% of the total carbon benefits generated by the project into regulated GHG markets will not be sold. Projects can sell these carbon benefits in a voluntary market or retire them.

>>TBD.

IV. Community Section

CM1 Net Positive Community Impacts (Required)

CM.1.1a Describe the appropriate methodologies used (e.g. the livelihoods framework) to estimate the net benefits to communities resulting from planned project activities.

>>Please see AR CDM PDD Section H.1

CM.1.1b Include a credible estimate of net benefits changes in community wellbeing given project activities. This estimate must be based on clearly defined and defendable assumptions about how project activities will alter social and economic wellbeing over the duration of the project.

>> Please see AR CDM PDD Section G.1

CM.1.1c Compare the "with project" scenario with the baseline scenario of social and economic wellbeing in the absence of the project. The difference (i.e., the net community benefit) must be positive.

>> Please see AR CDM PDD Section H.1

CM.1.2a Document local stakeholder participation in the project's planning. If the project occurs in an area with significant local stakeholders, the project must engage a diversity of stakeholders, including appropriate sub-groups, underrepresented groups and women living in the project vicinity.

>> Please see AR CDM PDD Section H

CM.1.2b Describe how stakeholders in the project's area of influence will have an opportunity before the project design is finalized, to raise concerns about potential negative impacts, express desired outcomes and provide input on the project design. Project developers must document stakeholder dialogues and indicate if and how the project proposal was revised based on such input.

>> Please see AR CDM PDD Section H

CM.1.3a Formalize a clear process for handling unresolved conflicts and grievances that arise during project planning and implementation.

>> Please see AR CDM PDD Section H

CM.1.3b Include a process for hearing, responding to and resolving community grievances within a reasonable time period. This grievance process must be publicized to local stakeholders.

>>The comments from stakeholders have been adopted during the project design. Further comments during implementation of the project will be collected and resolved within 30 days after being raised, and in-depth discussion on the annual workshop/meeting.

CM.1.3c Describe how the project management will attempt to resolve all reasonable grievances raised, and provide a written response to grievances within 30 days. Document Grievances and project responses.

>> The comments from stakeholders have been adopted during the project design. Further comments during implementation of the project will be collected and resolved within 30 days after being raised, and in-depth discussion on the annual workshop/meeting.

CM2 Offsite Community Impacts (Required)

CM.2.1 Identify potential negative offsite community impacts that the project is likely to cause.

>>There is no significant negative impact on offsite community. In contrast, the proposed project will bring benefit to the offsite communities such as by providing additional employment, technical know-how, etc.

CM.2.2 Describe how the project plans to mitigate these negative offsite social and economic impacts.

>> Although there is no significant negative offsite community impact, the monitoring plan including the mitigation measures to address any potential risks will be implemented.

CM.2.3 Evaluate likely unmitigated negative offsite social and economic impacts against the social andeconomic benefits of the project within the project boundaries. Justify and demonstrate that the net social and economic effect of the project is positive.

>> The project does not create any negative social and economic impacts within and beyond the project areas. On the contrary, as part of the seeds and seedlings, as well as labour forces will be mobilized from the adjacent communities of the project sites, these opportunities will bring them substantial economic benefits. Therefore, this project will create positive impacts on the social and economic aspects for both the communities within and beyond the project sites.

CM3 Community Impact Monitoring (Required)

CM.3.1 Define the initial plan for how they will select community variables to be monitored, and the frequency of monitoring. Potential variables include income, health, roads, schools, food security, education and inequality. Include in the monitoring plan, community variables at risk of being negatively impacted by Project activities.

>>A specific monitoring plan for socio-economy has been developed so as to monitor the impacts of the project on local communities and individual farmers, and to understand the problems/difficulty faced and/or any comments raised by local communities during the implementation of the project. Indicators to be monitored include income, road, energy source (fuelwood, biogas, etc.), education, training, participation of female and ethnic minority, food security, environmental improvement, implementation of social development plan, etc.

CM4 Capacity Building (1 Point)

CM.4.1 Explain how the capacity bulding is structured to accommodate the needs of communities, not only of the project.

>> The training of the communities and farmers is an important part of the project activities. The training aims to raise the capacity and opportunity of community members to actively design, implement, and monitor project activities. The local forestry agencies will organize the training for local communities to assist them in understanding and evaluating the issues of hosting the project, both on-site and off-site such as seed and seedling selection, nursery management, site preparation, planting models and Integrated Pest Management. As well, they have been taught how to participate project design through villagers meetings and group discussions. The community representatives conducted field survey with forestry technicians and discuss about tree species they prefer to plant. Technicians designed the project activities based on the communities' wishes. The training also will be provided to communities about monitoring method for the members of monitoring groups. The education and training concerning health and security for the farmers will be provided. Study tours for the farmer representatives to visit, share experience and learn from each other in the project areas will be put in practice.

CM.4.2 Explain how the capacity bulding is targeted to a wide range of groups, not just elites.

>>During the project design, comments from a wide range of groups including female and ethnic minorities have been invited. Capacity building will also target a wide range of groups.

CM.4.3 Explain how the capacity bulding is targeted to women to increase their participation.

>>Female, as main labor force in local communities, will equally participate the project including labors' employment. The capacity build will also equally target female group.

CM.4.4 Explain how the capacity bulding is aimed to increase community participation in project implementation.

>> Most of the training courses target to individual farmers involving in the project, and the content of training is specific techniques directly relevant to the project. Therefore, these capacity building activities will contribute to promoting community participation in project implementation.

CM5 Best Practices in Community Involvement (1 Point)

CM.5.1 Demonstrate that the project was developed with a strong knowledge of local customs and that, where relevant, project activities are compatible with local customs.

>> Guangxi is in itself an autonomous province-level region. Guangxi has 54 different ethnic groups totaling 18 million people, amount to 38% of Guangxi' population. The Zhuang accounts for 86% of ethnic minority people and 33% of Guangxi's population.

Many of the Yao, Miao, Yi and Gelao groups are living in the project counties. They live both in the Zhuang and the Han areas, generally at elevations above 500 - 800 meters.

According to China's law, counties with more than 1/3 of population from a given ethnic group, other than the Zhuang or Han in Guangxi, can legally be established as an autonomous county for this ethnic group. If the population of several minorities except the Zhuang is above one fourth of the population of a county, then this county can be established as an autonomous county for several minorities. There are 12 national autonomous counties in Guangxi, including Longlin County, one of the project counties.

In order to protect the rights of scattered minorities, the Chinese government also stipulates that in autonomous regions if the population of an ethnic group (except the Zhuang people for Guangxi) is up to one third of the population of a township, then this township can be established as nationality ownship for this group. There are 63 nationality townships, among which there are 60 national autonomous townships of Yao and Miao minorities.

In communities inhabited by several ethnic groups, intermarriage across groups is common, which indicates that the relationship between the local nationalities is harmonious and that living standards are relatively similar. The language gap between minority ethnic groups and the Han Chinese is present but is overall assessed as low in the project area. Most of the young minority people in Guangxi go to work outside far away from their home, which shows that minority cultures are gradually getting close to the mainstream of the society due to external development impact. However, ethnic minority groups overall remain a vulnerable group, and one half of the project area is focused on them. 50% of population in autonomous counties is ethnic minority people but poverty incidence among ethnic minority people is 80%.

Agricultural production patterns of all ethnic groups tend to be similar when they are in the same environments, but there are significant differences in the natural environments where the groups live. The Zhuang group mostly lives in karst hills with larger areas of flat land, and in lowlands and valleys suitable for paddy fields, so that they can grow rice and economic crops such as sugar cane and cassava. The Miao and Yao groups mostly undertake farming (and traditionally hunting) in upland areas and generally have little access to paddy fields. The Miao and Yao groups have rich traditional practices in forestry, for example in planting Chinese fir. The Yi lives in the cold, high mountain; upland crops and goat grazing are important activities as in their other areas of settlement in Sichuan. The small groups ethnically close to the Zhuang generally have paddy fields.

The project counties have been proposed as Lingyun, Tianlin and Longlin in Beise City, where live such many native minority groups as Zhuang, Miao, Yao, Hui, Yi and Gelao. Ethnic minorities account for 86% of 3,650,000 populations in Baise. There are 4 and 5 ethnic townships in Tianlin and Lingyun counties respectively, and Longlin County is ethnic autonomous county. Most beneficiaries of the proposed reforestation project are local ethnic communities.

There is equal opportunity for ethnic minorities to participate in the project. Ethnic minority people will therefore have equal rights compared to the Han people. Most ethnic minority households are expected to participate in the project by means of collaboration with enterprises or forest farms, and providing seasonal unskilled labor. In fact, the plantation sites themselves are expected to be often selected from ethnic minority communities with large areas of waste hill. Contracts between natural ethnic minority village collectives, which still own and manage most of the sloped land, and companies or forest farms are expected to be an important type of production arrangement.

It is the custom for most minority ethnic groups in Guangxi to worship and protect the woods in front of, and behind, the village as holy wood and geomantic forest. Most of these protected forests were destroyed during the “Great Leap Forward” and “Learn from Dazhai” campaigns in China, so that the villagers in the project counties feel an urgent need to rehabilitate and protect them. Forestry is relevant not only for poverty reduction among ethnic minorities but also for the protection or recovery of traditional social organization and for the transmission and inheritance of their cultures.

CM.5.2 Show that local stakeholders will fill all employment positions (including management) if the job requirements are met. Explain how stakeholders will be selected for positions and where relevant, must indicate how traditionally underrepresented stakeholders and women, will be given a fair chance to fill positions for which they can be trained.

>> The proposed A/R CDM project activity will create about 4.9 million person-days of temporary employment opportunities from planting, weeding, harvesting and resin collection. It will also create 48 long-term job positions for plantation maintenance and management during the crediting period (See AR CDM PDD Section G Table G-4). Most employment opportunities will be taken by the local farmers/communities involved in the

proposed A/R CDM project activity and others whose lands do not fall within the project boundary in case of insufficient labor supply from local communities.

There are 5 ethnic minority groups involved in the proposed A/R CDM project activities. According to the social assessment report done by the social assessment team, the ethnic minority groups and female will have equal rights to access the development opportunities. A Multi-Ethnic Minority Development Plan (EMDP) has been developed to address all the concerns and issues specific to these ethnic groups for the umbrella GIFDCP. This plan will be applied to the project to indicate the ways that the proposed A/R CDM project activity can be designed compatibly with ethnic minorities' cultures.

CM.5.3 Demonstrate that the project complies with international rules on worker rights.

>>At the employment, labours will sign a contract with employer based on National Labor Law.

CM.5.4 Comprehensively assess situations and occupations that pose a substantial risk to worker safety

>>Possible risks for the workers include:

- Application of chemicals and pesticides for the control of pests insect and diseases may poison people;
- Inappropriate operation during thinning and harvesting may injure workers;
- Forest fires and the suppression operations may bring risks to workers;
- Poor living environment of labours from surrounding areas.

CM.5.5 Decribe the plan in place to inform workers of risks and to explain how to minimize such risks. Where worker safety cannot be guaranteed, project proponents must show how the risks will be minimized using best work practices.

>>All these risks can be minimized by best practices. Safety operation regulations and technical guidelines will be prepared based on national and provincial technical regulations to minimize potential risks that may hurt the workers. Training courses will be organized to raise safety awareness of workers, teach workers the best practices, to inform workers of risks and ways to minimize the risks. All workers shall be trained and have safety insurance before performing specific work.

V. Biodiversity Section

B1. Net Positive Biodiversity Impacts (Required)

B.1.1 Decribe the appropriate methodologies used to estimate changes in biodiversity as a result of the project. Base this estimate on clearly defined and defendable assumptions. Compare the "with project" scenario with the baseline "without project" biodiversity scenario completed in G2. The difference (i.e., the net biodiversity benefit) must be positive.

>> Key species habitat analysis and connectivity analysis indicate that the proposed project can provide significant biodiversity benefit. See AR CDM PDD Section F.1 and Section A.5.2.

B.1.2 Describe possible adverse effects of non-native species on the area's environment, including impacts on native species and disease introduction or facilitation. If these impacts have a substantial bearing on biodiversity or other environmental outcomes, the project proponents must justify the necessity of using non-native species over native species.

>> All species are native to the area except eucalyptus, which will constitute around 6% of the total of the proposed reforestation sites. Eucalyptus was introduced into China about 100 years ago and has been widely planted in Southern China, including Guangxi region, for several decades and has shown no invasive characteristics. Eucalyptus was chosen for the project area at the request of local communities who favour its ability to generate a significant amount of CERs in the early stage of the crediting period, compared to other species that grow relatively slowly in the first several years. No GMO or invasive species will be used.

Soil degradation has been reported as a result of Eucalyptus plantation, however this is caused by unreasonable reforestation and forest management, e.g., slash and burn site preparation, overall ploughing, removal of litter for fuel, insufficient fertilization, etc. All of these practices will be applied in the proposed project.

Eucalyptus seems notorious in some places and is considered as pumper of underground water. However, FAO reports that Eucalyptus has higher water use efficiency than coniferous species, acacia sp. and many other species. China-Australia cooperation project "Eucalyptus and water" concludes that Eucalyptus consume less water than local native species of plantations.

B.1.3 Identify all IUCN Red List threatened species and species deemed threatened on nationally recognized lists that may be found within the project boundary. Project proponents must document how project activities will not be detrimental in any way to these species.

>> A baseline survey, done within the proposed reforestation sites, indicates that there are 72 wild animals and 346 plant species. No first class national protected or endangered

species or IUCN species was found, but 5 species of second class national protected animals and 26 Guangxi protected animals are present. It is apparent that there is rich biodiversity in the project region, but low biodiversity value in the proposed reforestation sites.

List of 2nd class national protected animals found in project area

No	Species	Numbers
1	*Centropus sinensis*	8-12
2	*Accipiter nisus*	2-3
3	*Spilornis cheela ricketti*	1
4	*Falco subbuteo*	3-4
5	*Falco tinnunculus*	4-6

List of Provincial protected animals found in project area

No	Species	Numbers
1	*Bufo melanostictus*	1
2	*Euphlyctis limnocharis*	5
3	*paa spinosa*	1
4	*Hylarana guentheri*	1
5	*Polypedates megacephalus*	1
6	*Microhyla pulchra*	2
7	*Elaphe radiata*	1
8	*Pycnonotus aurigaster*	29
9	*Pycnonotus jocosus*	6
10	*Pycnonotus sinensis*	2
11	*Lanius collurioides*	1
12	*Lanius schach*	7
13	*Dicrurus macrocereus*	1
14	*Cissa erythrorhyncha*	19
15	*Corvus macrorhynchus colonorus*	10
16	*Pomatorhinus ruficollis hunanensis*	19
17	*Garrulax canorus canorus*	149
18	*Garrulax sannio sannio*	24

19	*Leiothrix lutea*	16
20	*Orthotomus sutorius longicaudus*	26
21	*Phylloscopus inornatus*	1
22	*Parus major commixtus*	7
23	*Melophus lathami lathami*	4
24	*Rhizomys sinensis*	1
25	*Lepus sinensis*	3
26	*Felis bengalensis chinensis*	3

The species habtat analyses and connectivity analyses indicate that proposed project will not threaten existing protected species because:

- The project area is composed of 183 parcels of lands, i.e., 44 ha per parcel in average, distributed in 68 villages of 26 towns/townships and 2 forestry farms of 3 counties. There are a large area of similar lands surrounding the project area. The project lands are embedded in complex landscape composed of forests, shrublands, grasslands, croplands and wetlands, and the implementation of the project would not change the landscape pattern as the project lands account for only a minimum proportion of total land area.
- Most of the national and provincial protected animals found in the project area are birds that have strong migration ability. A few of amphibious and vertebrates would not be isolated.

See "report on survey of biodiversity of the reforestation on degraded lands in Northwest Guangxi" for detail.

B.1.4 Identify all species to be used by the project and show that no known invasive species will be used.

>>See AR CDM PDD Section 5.3

B.1.5 Guarantee that no genetically modified organisms will be used to generate carbon credits.

>> No genetically modified organisms will be used to generate carbon credits.

B2 Offsite Biodiversity Impacts (Required)

B.2.1 Identify potential negative offsite biodiversity impacts that the project is likely to

cause.

>>The potential negative impacts on offsite biodiversity include:

- Fire risk: Forest fire may threaten surrounding area
- Pesticide Application: Improper pesticide application would be harmful to the natural environment, by polluting the soil, water and air, as well posing a threat to wildlife.

B.2.2 Describe how the project plans to mitigate these negative offsite biodiversity impacts.

>>

- Fire risk: This can be alleviated by providing technical and awareness training to local farmers/communities to mitigate fire risk, strengthening patrolling and monitoring, as well as building a fire-break belt and having mixed reforestation arrangements.
- Pesticide Application: Under the proposed A/R CDM activity, environmentally friendly measures will be adopted such as mixed species arrangement, seed and seedling quarantine, as well as an integrated pest management (IPM) approach. In addition, biological measures to control pests and diseases will be adopted. Therefore, the use of pesticide will be limited. The Pest Management Plan has been developed for the umbrella GIFDCP and it will be used to guide the pest and disease prevention and control, as well as the pesticide application in case of an outbreak or infestation of pest/disease during the project implementation.

B.2.3 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.

>>The likely unmitigated negative offsite biodiversity impacts is considered to be nil. The net offsite biodiversity impacts are positive. See AR CDM PDD Section F.1

B3 Biodiversity Impact Monitoring (Required)

B.3.1 Describe the initial plan for how they will select biodiversity variables to be monitored. Potential variables include species abundance and diversity, landscape connectivity, forest fragmentation, habitat area and diversity, etc. Clarify the frecuency of monitoring. Include in the monitoring plan, biodiversity variables at risk of being negatively impacted by project activities.

>>A specific monitoring plan for biodiversity has been prepared and will be applied throughout the project life. Please see biodiversity monitoring plan.

B4. Native Species Use (1 Point)

B.4.1 Show that the project will only use species that are native to the region, or justify that any non-native species used by the project are superior to native species for generating concrete biodiversity benefits.

>> See Section B.1.2 above and AR CDM PDD Section A.5.3 for details.

B5 Water & Soil Resource Enhancement (1 Point)

B.5.1 Identify project activities that are likely to enhance water and soil resources.

>> See AR CDM PDD Section F.1 for details

B.5.2 Credibly demonstrate that these activities are likely to improve water and soil resource compared to the baseline, using justifiable assumptions about cause and effect, and relevant studies.

>> See AR CDM PDD Section F.1 for details, Annex 3 and Section C.