Comments received by the CCBA during the validation audit.

CCB Standards Second Edition

Project: **Multiple-purposes Reforestation on Degraded Lands in Longyang, Yunnan, P.R. China**

Comment 1
Date:
Sent by: John Fellowes, Consultant to the China Programme of Kadoorie Farm & Botanic Garden

Multiple-purposes Reforestation on Degraded Lands in Longyang, Yunnan, PR China
UNFCCC/CCNUCC

Public consultation: Comments on CCB eligibility by Dr John Fellowes, consultant to the China Programme of Kadoorie Farm & Botanic Garden (Hong Kong)

The following brief comments are intended to assist in the auditing of the above project with respect to biodiversity. They are not intended to constitute a comprehensive biodiversity audit. (Section numbering with reference to CCBA 2005. *Climate Community and Biodiversity Project Design Standards (First Edition).* CCBA, Washington DC. www.climate-standards.org)

B1. Net positive biodiversity impacts

The following points relate to whether the project will generate net positive biodiversity impacts according to the objectives (e.g. by restoring forests at the fringe of Gaoligongshan Nature Reserve, alleviating human pressure on the reserve, and suppressing the expansion of the invasive weed *Eupatorium*):

- The reforestation effort involves three *Pinus* species, of which two (*P. yunnanensis* and *P. kesiya*) are closely related. Given the great diversity of natural ecosystem types in the area, and the high diversity of plants within these, this selection seems disappointing from a biodiversity point of view. In response to the Nature Reserve's recommendation of "mixed forest" (H2), it seems misleading to say that "mixed species arrangements will be used." The selection also exposes the forests to high risk from extreme weather events and pest outbreaks (e.g. *Tomicus* beetles which affect *P. yunnanensis* and *P. armandii*).
- There is no evidence of a substantial pre-project biodiversity survey. If no such survey took place, the statement (B.1.3) "There is no presence of any endangered species on the annexes to the IUCN Red Books, nor the presence of any rare and endangered species listed for key national/local protection" is meaningless.
- Since an objective is "restoring" forest at the fringe of Gaoligongshan, it should be shown that the proposed pine forests are a natural vegetation type of this vicinity. Are any of Longyang's many species of conservation concern, listed in A.5.2, likely to benefit from expansion of pine plantations? My guess is very few.
- Since another objective is to halt the expansion of *Eupatorium* into the reserve, further details would be valuable on the current distribution of this invasive plant, whether it is indeed expanding into the reserve, and whether the project area is a route for this expansion.
- The possibility of leakage through displacement of grazing seems a major risk to the benefits – in carbon and biodiversity terms – of the project. I was unable to fully follow the quantification and resolution of this risk (D2). If the project participants can graze the animals elsewhere without adverse impacts, why aren't they already doing so?

B2. Offsite biodiversity impacts

- Runoff of nutrients from fertilizers can have negative impacts on freshwater. (A.5.4.) Applying fertilizer too close to the surface leads to much nutrient run-off and pollution of water bodies. Zeng et al. (2008, *Pedosphere* 18(1): 45-53) suggest applying at least 20 cm deep based on experiments in Guangdong.

B3. Biodiversity impact monitoring

- It is not possible to evaluate the monitoring based on the information given in the reports. A scheme covering plants, mammals, birds and insects has great potential but the methodology is key, especially given the limited resources. It should take into account restricted and declining species and assemblages which are dependent upon the nature reserve and other high-integrity habitats.

B5. Water & soil resource enhancement

- A brief review of relevant literature would be helpful here. It is likely to show that native mixed broadleaf forest would bring better benefits than pine plantation to water and soil. Hydrology is likely better served by pine forest than by degraded grassland, but soil conservation is strongly affected by ground cover.