

Sanjiang Plain Wetlands Protection Project

Balancing Wetland Conservation and Development in the Sanjiang Plains: A review of current status and options



Final Report

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Sanjiv de Silva and Sonali Senaratna Sellamuttu

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1. INTRODUCTION

The Sanjiang Plain Wetlands Protection Project (SPWPP) supported by the Asian Development Bank (ADB), focuses on integrating conservation and development needs in the Sanjiang Plain, Heilongjiang Province of the People's Republic of China. The project comprises 5 main components: watershed management, wetland nature reserve management, alternative livelihoods, education and capacity building and project management. In addition the Poverty and Environment Action Research Program (PEARP) sub-project contributes to the learning on poverty-environment relationships by collecting and generating new knowledge on effective approaches to environmental management and poverty reduction, through the development and pilot-testing of innovative sustainable livelihood options for the poor households. SPWPP was initiated in 2006 and will be completed by 2012. The PEARP was implemented between 2005 and 2007.

2. OBJECTIVES

The main objective of IWMI's work with respect to the SPWPP is to contribute to learning under the five project components and the (PEARP) sub-project by using the Project's initiatives, experiences and results to date to explore how integration of wetland conservation, food production and development activities can be managed in a sustainable manner in wetland systems. Central to this objective are also the identification of key challenges and the drivers that shape them, so that project interventions and experiences can be understood in terms of how these challenges and their drivers may be better managed.

3. BACKGROUND

IWMI was contracted by the ADB originally to contribute through research to its Sustainable Wetland Planning and Management in Jiangsu Yancheng Wetlands Project. Following delays in the project's implementation, IWMI's focus was shifted to the ADB-funded SPWPP that seeks to support the management of six recently established Nature Reserves in the Sanjiang Plains.

In view of the fact that balancing wetland conservation and ensuring sustained economic development was an important consideration for the project, IWMI's role was originally to contribute to learning on poverty-environment relationships in the Sanjiang Plains context. This was explored through particular attention to the activities of and data arising from the PEARP the Poverty and Environment Action Research Program (PEARP) implemented during 2005 – 2007 by the Centre for Integrated Agricultural Development/College of Humanities and Development at China Agricultural University, Beijing where alternate livelihood activities were developed at a pilot scale with several communities affected by the creation of the Nature Reserves and the conversion of farmland to wetlands through the Farmland to Wetlands Programme initiated by the Government of China, and supported by the Sanjiang Plain Wetlands Protection Project. In May/June 2009, IWMI followed up the original evaluation of this pilot project by the Centre for Integrated Agricultural Development with fieldwork in some selected local communities that participated in the PEARP. The data arising from the focus group discussions and literature reviews was analysed and reported to the ADB in IWMI's Mid-Term Mission Report.

For this Final Report, IWMI, with agreement from ADB, broadened its study scope to all components of the project to widen the project's learning potential as a case study on wetlands management. As such, the various project components have been useful to explore the links between the wetland and a diverse group of factors that impinge on its very existence. These include the wetland's relationship to the hydrology in the basin and catchments, wetland and other sectoral national and local policy frameworks, institutional frameworks for wetland management and co-ordination with other sectors, and the links with local communities that have used its resources. An assessment of these relationships (subject to the limitations specified below) and how these have been handled provide the foundation for conclusions and recommendations for consideration by the ADB and the project management as the project moves into its final years.

4. METHODOLOGY

The methodology for preparing the Final report included first, reviewing all documentation for ADB's Sanjiang Plain Wetlands Protection Project; second, participating as an observer at the project's Mid-Term Review in Harbin, China in May/June 2009 and carrying out a brief field visit to Daijeh Nature Reserve (where focus group discussions were conducted in 3 villages in the experimental zone of the NR) and Zhen Baodao NR (to view the land conversion from agriculture to natural wetlands undertaken in this NR) and finally by conducting interviews with project team members in March 2010 (Annex 1).

This Final Report evaluates how the ADB's SPWPP is balancing wetland conservation with development initiatives in the Sanjiang wetlands. Given that the project is ongoing, this evaluation cannot be viewed as final, but we hope it will provide ADB and PMO a basis for developing the final M&E evaluation for SPWPP. It would also be a useful document to measure how project deliverables are currently contributing to the broader outcomes of conservation and development that are associated with the Sanjiang wetlands and how some project activities and deliverables may require to be revised or modified in order to achieve more significant outcomes or impact in the longer term.

For this evaluation, IWMI adopted a conceptual framework in the form of a matrix which it had developed for undertaking similar case studies of other wetlands projects to better recognize the associations between conservation and development issues (Senaratna-Sellamuttu et al. 2008, Senaratna-Sellamuttu et al. 2009).

The objective of the matrix (Annex 2) is to provide a framework to first assess the project outputs in terms of contracted deliverables, and secondly to evaluate the degree to which these outputs contribute to the broader goals the project seeks to achieve. This involves not only a quantitative assessment (e.g. number of trees planted), but also includes a qualitative evaluation (e.g. who benefits from the planting of trees) which helps link quantitative outcomes to the overall project objectives and longer-term goals.

Another important aspect of this evaluation is the opportunity it presents for learning. This includes identification of lessons and good practices by asking what worked, what did not, and why. Understanding the tradeoffs that are often involved, especially in projects that seek to balance conservation with development impacts, is another area of interest: What have these tradeoffs been and how they have been handled?

The structure of the matrix seeks to reflect the above objectives. Moving from left to right in the matrix, for each component of the project, the performance indicators set by the project are recorded in one column of the matrix. The next column reports on progress with respect to each project component (i.e., activities undertaken) as of April 2010. This exercise was useful in providing a basis for eliciting the relationships between the wetland and the various ecological, social, political, economic and institutional processes within which wetland management was being attempted.

Thereafter the conservation and poverty reduction outputs based on progress to-date were noted. Using the final validated version of the matrix for the project, a simple subjective scoring exercise was undertaken to give each output a score on a scale from -5 to +5 from both the conservation and poverty reduction points of view. For this purpose each output was compared with its corresponding Performance Indicator(s) fixed by the project and assessed as to what degree these have been achieved at present or the degree to which it is likely to be achieved during the project's life-time. The fact that the project is ongoing was factored into this assessment. The rationale for the score given to each output was then included in the next column of the matrix to better explain why a particular score was assigned. For objectives that had several outputs, an average score was given thereafter, so that each objective had one overall output score.

The gradation of the scores was guided by the guidelines set out in Table 1. While some outputs scored lower than others, it must be noted that no negative scores were recorded as a result of none of the outcomes having an overall negative impact on either conservation or poverty reduction during the project lifetime at least. This is partly due to the highly varying level of information available for assessing specific project outputs. However there were some outcomes that were given a zero score for showing no improvement to the conservation or poverty reduction status. While the scoring was a subjective exercise, to ensure that there was consistency, a set of simple guidelines were developed.

Table 1. Scoring guidelines for Conservation and Poverty Outputs

Score	Output Based on Project Objectives
+5	<ol style="list-style-type: none"> 1. Performance Indicator achieved, or where there is more than one intervention contributing to an objective, the outcome would have made a significant contribution to achieving the objective. 2. Significant improvement in one or more of the situational attributes during the project lifetime reflecting a positive conservation or poverty reduction outcome or both. 3. Adequate data to verify achievement of objective.
+4	<ol style="list-style-type: none"> 1. Performance Indicator not fully achieved but significant progress made towards it, or project objective appears to have been achieved although there is a lack of data to verify this; or project objective appears to have been achieved, but issues with the quality of the output have arisen during the project's lifetime. 2. Improvement in one or more of the situational attributes during the project lifetime reflecting an improvement in the conservation or poverty reduction outcome or both. 3. Nearing the end of a process leading to the outcome based on the project

Score	Output Based on Project Objectives
	<p>objective.</p> <p>4. A majority of data required to verify outcome is available.</p>
+3	<p>1. Performance Indicator not fully achieved but some progress made towards it.</p> <p>2. Some improvement in one or more of the situational attributes during the project lifetime reflecting an improvement in the conservation or poverty reduction outcome or both .</p> <p>3. In the middle of a process where further steps are required to achieve the final outcome based on the project objectives.</p> <p>4. Some data to verify outcome is available. .</p>
+2	<p>1. Performance Indicator not achieved but some limited progress made towards it.</p> <p>2. Limited improvement in one or more of the situational attributes during the project lifetime reflecting an improvement in the conservation or poverty reduction outcome or both .</p> <p>3. Early in a process where further steps are required to achieve the final outcome based on the project objectives.</p> <p>4. Little data available to verify outcome.</p>
+1	<p>1. Performance Indicator not achieved but some limited progress made towards it.</p> <p>2. Little improvement to the conservation or poverty alleviation status in one or more of the situational attributes that has occurred during the project lifetime.</p> <p>3. Early in a process where further steps are required to achieve the final outcome based on the project objectives.</p> <p>4. No data is available to verify outcome.</p>
0	<p>1. No improvement to the conservation or poverty reduction status in one or more of the situational attributes that has occurred during the project lifetime.</p> <p>2. Complete lack of information on the outcome.</p>

The next step was to assess the project outputs in terms of the longer term outcomes to which the project seeks to contribute. This involved asking what changes each output makes to the overall ecosystem and poverty status at the project sites and associated areas. For example, an output of better soil management practices on a project site is likely to have several ecological, economic and social implications in the longer term and over a wider geographic area

In the context of our matrix, an output is defined as any change in any of the situational attributes (e.g. change in income, formation of an institution, enhancement of capacity) during the course of the project lifetime. Outcomes are understood as the degree to which project outputs have contributed to the longer term conservation and poverty reduction goals for the project (e.g. degree to which development of a management plan contributes to achieving sustainable wetland use). Thus, a distinction is made between each project's achievements (its outputs) during the project timeframe with respect to its stated objectives

and the extent to which these achievements contribute to meeting longer term conservation and poverty reduction outcomes that are highly unlikely to be achievable within the lifespan of the project. . Assessing the outcomes in this fashion would help the SPWP project get a better understanding of where it was contributing or could be contributing to the bigger picture in terms of conservation and poverty reduction issues in the wetland.

Conservation of the wetland is viewed primarily as the recovery and/or maintenance of the ecological integrity of the ecosystem. This is expected to lead to the recovery, maintenance, or enhancement of biodiversity and ecosystem services. We adopt a widely used definition for poverty reduction because it captures the fact that poverty comprises of different dimensions and states that “Poverty is a multidimensional phenomenon, encompassing inability to satisfy basic needs, lack of control over resources, lack of education and skills, poor health, malnutrition, lack of shelter, poor access to water and sanitation, vulnerability to shocks, violence and crime, lack of political freedom and voice” (World Bank 2001). A change in the poverty status of communities living in or around the wetland as a result of a project activity would thus arise from a change in any of the dimensions or states described in the definition.

The completed matrix along with the dialogues with the various project consultants and the PMO provided the basis for compiling the Report. The Report deals with each project component and its sub-components separately by using the following standard headings:

- Progress and Key Achievements
- Issues and Challenges
- Recommendations

This is followed by a section devoted to distilling the current status of conservation and poverty reduction, and the trade-offs that underpin it.

5. RESULTS

5.1 FINDINGS OF THE SCORING EXERCISE

Overall, while the outputs fall within the quadrant where both the conservation and poverty reduction scores are positive, it is interesting to note that there is some variation in terms of how successful each output has been. Moreover, by depicting both a conservation and poverty reduction score for each output, it is clear that there are different scenarios that can present itself, for example, both the conservation and poverty scores being equal, or the conservation score being higher than the poverty reduction score, or vice versa. These can be understood as the different types of trade-offs that may exist in achieving a particular output..

In terms of the average scores for each component, as expected for Components 1, 2 and 4, the conservation outputs rate high than the poverty reduction outputs, whereas for component 3, the poverty reduction outputs rate higher than the conservation outputs. Overall, the average scores for each component are relatively low except for conservation score under component 1 (a score of 4.6). This can be attributed to the project’s ability in meeting several of the performance indicators set out in the project log frame, but also reflects the magnitude to which these outputs contribute to moving towards the project’s overall conservation objectives. These outcomes are namely the establishment of a high-level inter-agency co-

ordination group at provincial level and the resulting recognition of environmental flows in the 11th Five Year Plan for water allocation in the Province, and the multi-stakeholder forums established for each NR and the action taken to have a chemical factory relocated by the forum for Anbanghe NR.

The average scores provide an indication where the emphasis needs to be placed in the final years (2010 – 2012) of the Sanjiang Plain Wetlands Protection Project, in terms of how best to balance the conservation and development needs of the wetland.

5.2 COMPONENT 1: WATERSHED MANAGEMENT

SUB-COMPONENT 1A – FOREST IMPROVEMENT

Progress and Key Achievements

- The statistics on replanting state that 71.1% of the target farm area has been planted, and that the survival ratio of the young tree is above 90%, and that 63.8% of the 27,880 ha of existing forestry plantations have received treatment (sub-component 1.1 of Annex 2).
- The replanting appears to have been supplemented by capacity building of the staff involved as well as alternate livelihood development for affected farmers as discussed in more detail under sub-component 3A below (also see sub-component 3.1.4 of Annex 2).
- Both the conservation and poverty reduction results suggest a successful model for application in other areas with similar issues. The relatively small number (49) of affected people should however be noted. It will be interesting how the challenge of finding alternate livelihoods will be met where the number of affected people is larger.

Issues and Challenges

- Although this reforestation should have multiple positive conservation impacts such as better slope coverage, reduced erosion and pesticide pollution and better downstream water availability (sub-component 1.1 of Annex 2), there does not appear to be a programme to monitor the actual impacts.

Recommendations

- A programme to monitor the ecological changes resulting from the reforestation may help present the results of this sub-component and make the methodology even more compelling.

SUB-COMPONENT 1B – LOCAL (NR) LEVEL WATER RESOURCE MANAGEMENT

Progress and Key Achievements

- Creation of the stakeholder working groups for each NR (sub-component 1.2.1 of Annex 2).

- The relocation of the chemical factory from its original location upstream of Anbanghe NR as a result of action taken through the working group clearly illustrates the strong potential to resolve local threats through a process of integrated decision making (sub-component 1.2.1 of Annex 2). It also demonstrates that while the groups are not vested with decision making authority, their recommendations are acted on.
- Enhanced understanding of water use and water requirements in each NR which provides the basis for policy dialogue (especially on environmental flows) and a baseline for monitoring change and their impacts (sub-component 1.2.2 of Annex 2).

Issues and Challenges

- How well they will function mainly depends on the leaders of the NRs and the local county governments.

Recommendations

- The authors of this report support the recommendation that the working groups should be organized, coordinated and partially funded by provincial government in order that their effectiveness is not affected by financial and other constraints at local level.

SUB-COMPONENT 1C – WATERSHED LEVEL WATER ALLOCATION PLANNING

Progress and Key Achievements

- The establishment of the Water Resources Coordination Leading Group (WRCLG) is a critical development given the potential synergy to be achieved once sectoral decision making is linked to each other (sub-component 1.3.1 of Annex 2).
- Recognition of the need for environmental flows in the Heilongjiang Province's 11th Five Year Plan prepared by the Heilongjiang Water Conservancy Planning Institute – the first time this need had been expressly recognized in the Fiver Year Plans. A direct result of dialogue in the WRCLG (sub-component 1.3.3 of Annex 2).

Issues and Challenges

- The Water Resources Coordination Leading Group: The authors of this report believe that it is important to maintain the activity of the WRCLG to build inter-personal relationships and to keep environmental flows and other concerns related to water on the policy agenda. Therefore, whilst recognizing the difficulty of obtaining a time slot from key decision makers, the fact that the WRCLG has not met since 2008 (almost two years) is a matter of concern (sub-component 1.3.1 of Annex 2).
- Another aspect to bear in mind is that the PMO does not have the authority to call meetings of the WRCLG which means dependence on the county government for this function (sub-component 1.3.1 of Annex 2).
- Moving from recognition of environmental flows to realising better flows on the ground: While gaining this recognition is a significant achievement, how it will be implemented is unclear and represents a major challenge especially given the absence of unused water and the dominance of allocations by the domestic and agricultural

sectors. The issue therefore is how additional environmental flows can be made available, especially in a policy and economic climate that maintains the high rate of return on grain production. The values of wetlands in contrast are still poorly understood overall, despite them coming into sharper focus in the view of both government and the public at large as concerns over climate- change induced water scarcity grows.

- One option being considered by PMO and the consultants is the re-use of agricultural water. While this is conceptually attractive, mitigating water pollution resulting from the high agricultural chemical loads presents a sizeable challenge since the quality of these flows are significantly below the minimum standards (Class 3 for wetlands) stipulated by the national criteria (Pers. com, Mr. Cheng, Director PMO).
- Another consideration will need to be the ability to match the timing of flows (whether from river runoff or from agricultural runoff) with the needs of specific wetland species and their habitats as this represents a key link for the project's species recovery component.
- A third consideration is how much infrastructure will be necessary if agriculture water is to be stored (for treatment and to regulate flow timings), and how the funds required to do this will be raised.

Recommendations

- The Water Resources Coordination Leading Group: The maintenance of dialogue between the project and other sectoral agencies remains critical, and the PMO should seek the support of the county government to hold a Group meeting at least once a year if not every six months. Even if no specific water matter is available for discussion, the project and PMO could use these meetings to strengthen the members' understanding of the wetland and its relationships to water through presentations by both the project consultants (e.g. both wildlife consultants) and NR Bureau Directors. In doing so, illustrating the multiple values of water for wetlands (e.g. tourism, climate change mitigation, groundwater recharge) should be the priority objective.
- Based on a review of the project log frame and dialogues with PMO and project consultants, it does not appear that an economic valuation of the wetland and the six NRs in particular will be carried out. Yet this appears to be an important need if the multiple values of the wetland are to be understood, quantified and utilised in policy dialogue. This appears to be especially relevant given the fact that the values of other sectoral uses especially agriculture are very clear.
- Moving from recognition of environmental flows to realising better flows on the ground: A single clear solution does not appear to exist, although the options available may differ between NRs depending on their individual situations. NRs able to attract greater revenue from tourism for example may have greater leverage.
- In the medium to longer term, improving water use efficiency in the agricultural may be a key requirement if more high quality water is to be freed for environmental flows. Furthering dialogue on the role of agriculture in supporting wetland

conservation through investments in water use efficiency may be another agenda item for the WRCLG.

- Discussions with Director, PMO indicated that it is keen to begin field trials to identify more ecologically sustainable methods of grain production. This warrants support since such a pilot activity can help evaluate the economic and practical feasibility of up scaling and the potential for mitigating water pollution.
- A strategy adopted by several other wetland conservation projects studied by the authors (Senaratna-Sellamuttu et al. 2008) has been to identify a key high-level policy maker to act as a champion of the project's objectives. For this to be possible however, the individual needs to have some willingness to cooperate either as a result of personal interest or political expediency. A strategic review of key policy makers and how the needs of the NRs and wetland as a whole can be linked to their personal and political interest may shed light on new avenues of influence.

Overall, the progress made is commendable given the intensely powerful policy and cultural backdrop at both national and provincial levels dominated by food production and the conversion of wilderness into production land. The establishment of and operation of the multi-stakeholder co-ordination platforms at provincial and county/NR levels suggests a greater willingness to engage in cross-sectoral dialogue and to recognize the environment as a water user. Whether this attitudinal change arose from the multi-stakeholder platforms or in fact preceded and enabled their creation is not clear. It can however be surmised that the existence of these coordination mechanisms have an opportunity to take advantage of and further consolidate these shifts in perspectives.

This project period can thus be viewed as a period for building the momentum necessary for truly institutionalising wetlands and other environmental considerations into planning in the province. As such, the project appears to have made progress in three key areas that need to converge for achieving change – generating scientific knowledge, building institutional structures that emphasize integrated planning and decision making, and changes in attitudes especially of key policy makers and agencies that create the willingness to recognize the value of water users outside their own spheres of interest and influence.

Facilitating these results, in the opinion of the Director PMO, is the increasing water scarcity experienced in Heilongjiang Province which is being attributed to climate change. Climate change is also thought to be driving the thinning of the layer of frozen soil which means more percolation of surface water.¹ It has been suggested that the emerging context of reducing water availability in the province and real concerns over impacts of climate change has provided a more conducive political climate for viewing wetlands as repositories of water. Since 2000, wetlands have assumed more importance as carbon sinks, and the Sanjiang Plains is seen as a key wetland.² It has also helped that the Chinese Government has more public funds at its disposal and basic problems such as food security appear to be resolved for the time being. Consequently, more government finances are available for conservation. In

¹ Discussion with Mr. Shaoxia Cheng, Director, Forestry Department, Heilongjiang Province.

² Ibid.

addition, China is keen to reflect international trends towards ecosystem conservation especially in the context of climate change.³

5.3. COMPONENT 2: WETLAND NATURE RESERVE MANAGEMENT

Severe decline in wetland area and several globally critically endangered species. At the same time, the wetland is heavily dependent on the broader policy environment especially in relation to water, but also the sustained incentives to expand farmland.

SUB-COMPONENT 2A – NR MANAGEMENT AND PLANNING

Progress and Key Achievements

- Permanent monitoring stations were established in each NRs with the exception of Dajiahe where monitoring stations are to be established in 2010 (sub-component 2.1.1 of Annex 2). The intelligence gathered on species population numbers, behaviour and locations are critical sets of information for management planning both at species and NR scales. Consequently, monitoring stations are enabling NRs to answer some key questions about the status of specific species in need of population recovery. With the red-crowned crane for instance, although good numbers are recorded, it is not clear whether they are breeding. The monitoring will be directed to answering these and similar questions.
- Monitoring also enables results to be validated. In Xingkaihu NR, the stalk programme has been very successful. More nests have led to more stalks and this success has in turn encouraged the Bureau invest more in this activity (sub-component 2.1.1 of Annex 2).
- Monitoring also facilitates better knowledge of the distribution and concentration of species. In Xingkaihu NR, the monitoring staff were able to identify one area with exceptional waterfowl population. Priority conservation areas can be identified in this manner (sub-component 2.1.1 of Annex 2).

Issues and Challenges

- No draft NR Management Plans have been developed and thus progress in developing these key planning documents appears to be slow. It appears from the dialogues had with the various consultants that this may be due to insufficient appreciation of the importance of having a structured management plan based on solid scientific data (sub-component 2.1.4 of Annex 2).
- Although each NR has assigned a position to continue the monitoring programmes, how the NRs will sustain the monitoring activities post-project remains uncertain when overall, there is very little money for equipment and salaries (sub-component 2.1.1 of Annex 2). The main expense will be the vehicle and operating expenses of the vehicle in addition to salaries that cover monitoring and data entry and analysis. This in turn will impact on the ultimate success of the species recovery programmes and of NR management planning in the long term if the condition of species and their

³ Ibid.

habitats cannot be updated on a continuous basis. Some NRs such as Anbanghe may have the option of diverting some tourism revenues, but this may not be the case for NRs further away from urban centres.

- Monitoring protocols need to be formalised and clear internal procedures must be established for the data generated to inform day-to-day management and longer term management planning. Currently it is also not clear whether the protocols cover the need to ensure that not only are data generated, but that resulting information is channelled into the management decision making processes (sub-component 2.1.2 of Annex 2). Institutional mechanisms are thus needed to feed data from each NR into a broader planning canvas covering the Sanjiang wetlands.
- A view expressed during discussions with project consultants was that NR Bureaus need to believe there is a reason for going through the management planning process (sub-component 2.1.4 of Annex 2). The Provincial Forestry Department needs also to be convinced that the MPs are required and that there is a need to fund them. This lack of support has been responsible for the slow progress in MP development, and is viewed as a considerable challenge (by several of the project consultants).
- An overall challenge appears to be the lack of autonomy of the NR Bureaus to make management decisions since the Bureaus do not have the authority to implement management decision without the approval of the Wildlife Conservation Division in the Forestry Department which is responsible for budgeting and will decide what activities will be done (sub-component 2.1.4 of Annex 2).
- Another aspect highlighted was that the management planning process also needs to be strategic in nature and needs to factor in how cooperation can be elicited from key players such as the Ministry of Water Resources (MoWR) and the State Farm system that dominate both water allocation and land use in the province (sub-component 2.1.4 of Annex 2).

Recommendations

- For Sanjiang plain nature reserves to achieve success in conservation management, they must base their management regimes on scientifically designed field studies (monitoring and/or research) and the information generated from the results of these studies. The critical need for continued and increased investment in monitoring and internal processes for ensuring that management decisions are based on monitoring data therefore should be highlighted with respect to budget allocations.

SUB-COMPONENT 2B – WETLAND RESTORATION

Progress and Key Achievements

- Although restoration has begun in five of the six NRs, progress appears to be patchy and the poor investments made in learning from these pilot sites is disappointing (sub-components 2.2.1 and 2.2.2 of Annex 2).

Issues and Challenges

- In view of the experimental nature of this component, the lack of emphasis on systematic scientific monitoring is a serious concern as the real value of this component - development of knowledge and a restoration methodology - will be difficult to achieve without robust field data. This is compounded by the fact that the consultant has no access to the restoration site at Naolohe NRs (controlled by the state farms system) which accounts for about 60% of all areas to be restored (sub-components 2.2.1 and 2.2.2 of Annex 2).
- The areas to be restored do not support other conservation objectives such as species recovery except in Zhenbaodao NR where restoration is linked to the recovery of the Eastern Stalk (sub-component 2.2.1 of Annex 2).
- The ability of the NRs to finance the acquisition of land has been uneven due to the lack of income generated from the NRs. This is further exacerbated by the NRs' dependence on leasing NR land for farming (sub-component 2.2.1 of Annex 2).
- Wetlands protection and restoration continues struggle for political support in the face of stronger political priorities such as the National Basic Farmland Protection Policy under which some farmlands in the Sanjiang Plain Wetlands have been designated as basic farmlands which cannot be restored to wetlands. The lower value placed on farmland-to-wetland conversion is also demonstrated by the fact that farmland-forest conversion receives much higher financial support, presumably because it is a more recognised productive land use activity (sub-component 2.2.1 of Annex 2).
- In view of the difficulties faced, the view was also expressed that protecting the existing wetlands may be more critical than restoration of farmland to wetlands which in any event requires an extremely lengthy time period.

Recommendations

- More investment in generating data to support awareness of wetland ecosystem values in the Sanjian Plains and the notion of payment for ecosystem services may help elevate of the multiple roles and values of the wetland. A programme on valuation should therefore be a priority activity for the PMO which may be funded externally of the SPWPP through inclusion in the annual budget for PMO for 2011.
- A concerted effort to garner more support is needed as is greater commitment from project management to supporting scientific monitoring of restoration sites. Publishing a policy brief on restoration for wider dissemination followed by policy dialogue with high level decision makers appears necessary.

SUB-COMPONENT 2C –WILDLIFE SPECIES RECOVERY

Progress and Key Achievements

- Although the species recovery plans have been slow to materialize, activities on the ground appear to bear positive results (e.g. occupation of the Oriental Stalk nests at Xingkaihu NR). This success (verified through the monitoring activities) can provide

the validation necessary for the NR Bureaus to want to continue investing in these programmes (sub-component 2.3.1 of Annex 2).

Issues and Challenges

- While the results thus far appear promising, the longer term outcomes are linked closely to other project components, especially the water allocation component as well as the biodiversity monitoring programme. While environmental flows are now recognized at provincial policy level, translating this into increased flows on the ground, and in a manner that meets species requirements (e.g. timing, quality) remains a major challenge (sub-component 2.3.1 of Annex 2).
- The target of a 10% increase in habitat area has not been met (sub-component 2.3.2 of Annex 2). This target was set on the notion that the pilot testing of wetland restoration under sub-component 2.2 would trigger further restoration initiatives that would increase wetland habitat by 10% in the NRs. The continued support for grain production however makes such initiatives unlikely.

Recommendations

- Institutionalising the monitoring programmes with clear information flows from monitoring stations to decision making and adequate yearly budget allocations should be given special attention. These monitoring programmes and how they will influence NR management decision making must be clearly set out in the Management Plan for each NR. For this to happen, the value of the investments made in monitoring must become clear to the NR Bureaus and the central and provincial governments that allocate annual funds to the NRs.

SUB-COMPONENT 2D – SUSTAINABLE USE OF NATURAL RESOURCES

Progress and Key Achievements

- Overall progress appears to be very slow. Only the baseline for fishing has been completed, but here too monitoring is not being carried out. No harvest reduction plans have been developed due to the lack of baseline data (sub-component 2.4.1 of Annex 2).

Issues and Challenges

- Notwithstanding the potential adverse impacts on local livelihoods, the significant loss of wetland habitat in the Sanjiang Plains over the past 50 years makes what remains of critical importance for conservation, especially in terms of the globally endangered species (e.g. Red Crowned Crane) for which the Sanjiang Plains is one of the last habitats in China.
- While the wisdom of sustainable use or wise use is generally accepted, the reality in these NRs is that livelihood activities such as fishing and grazing compete directly with the habitats and food base of key endangered species the project seeks to help recover.
- This situation presents a fundamental challenge to the current legal framework shaping wetland NR management. This applies particularly to the rules under the

National Regulations on Nature Reserves (1994) pertaining to activities allowed in the three zones. The practical experiences of this project suggest that the fact that no economic activity other than tourism is allowed in the Experimental and Buffer Zones makes these Regulations out of sync with the need for compromise solutions, and space to experiment in identifying such solutions.

Recommendations

- In light of the wetlands already lost to agriculture, and continued pressure on the remaining wetland areas, protection should be the priority.
- However, whether protection policies can be effectively implemented in practice is uncertain due to the large areas involved and the lack of adequate funds for NRs to monitor and enforce NR rules.
- Notwithstanding the above recommendations, one option for mitigating the impact of livestock grazing and fishing may be for the recovery plans to allow these activities only after the breeding seasons, together with the regulation of equipment in the case of fishing. Emphasis should be laid in the approval and implementation of these plans to allow adequate time for monitoring results and assessing their feasibility.
- Both strict protection and regulation will involve a heavy enforcement cost which the NRs can ill afford. The identification of viable alternate livelihoods should therefore be supported as incentives under the project as part of the harvest reduction plans.
- Overall, the project should actively use real case studies from the NRs to highlight the need to review of the National Regulations on Nature Reserves (1994) at national level so that legal space is provided for NRs to engage in more imaginative resource management strategies in finding their own solutions to conservation-resource use problems. Communication with other wetland conservation projects in China (including those funded by the ADB) may well highlight more examples, thereby enabling a concerted voice for review. Any progress that may be achieved in generating changes to the present legal framework will broaden the project's impact well beyond the Sanjiang Plains and may well be one of its most lasting contributions. This recommendation is not meant to contradict the recommendation above that gives priority to protection. Rather, it is intended to provide the space for NRs to select from a wider range of management options that includes protection.

5.4 COMPONENT 3: ALTERNATE LIVELIHOODS

SUB-COMPONENT 3A – AGROFORESTRY AND NON-TIMBER FOREST PRODUCT INTERVENTIONS

Progress and Key Achievements

- This component which is linked to farmland-to-forest restoration (subcomponent 1A), appears to have successfully offset the potentially negative impacts of sub-component 1A on the livelihoods of the affected farmers. The strategies used include but extend beyond agroforestry and NTFP development, for instance animal husbandry and wage-based employment, but appear to have collectively placed the affected parties in

a better situation than prior to the conversion. It is reported that average per capita annual net income has increased from 7,776 Yuan before conversion in 2005 to 9,473 Yuan in 2008 (see section 3.1 in Annex 2 for more details).

- The key to this success appears to be the diversification of income streams so that each individual does not depend on only one livelihood activity. This has helped overcome perhaps the inability of a single activity to match the income from farming, but has also increased individual's resilience to change.

Issues and Challenges

- None

Recommendations

- Although the results are promising for replication in other areas with relatively low farming values, the economic as well as the environmental feasibility of replication in other sites should be considered, especially in situations where the number of people affected is significantly larger.

SUB-COMPONENT 3B – VILLAGE DEVELOPMENT PLANNING AND PRACTICE

Progress and Key Achievements

- This sub-component that deals with offsetting the livelihoods impacts of the farmland-to-wetland programme (sub-component 2B) also appears to have successfully offset the potential losses and improved the income generating capacities of the affected parties. Details per NR are available under section 3.2 in Annex 2 of this report.

Issues and Challenges

- In the longer term, while this component in the project appears to be relatively small, providing effective and ecologically sustainable alternate livelihood options will become a real challenge if conversion of farmland to wetland is to be up scaled, not only because of the high value of farming, but also due to the intensification or up scaling of alternate livelihoods themselves which may be sustainable at small scale, but less so when scaled up.
- While the alternate livelihood activities under the farmland-to-forest component appears to have been successful, whether these strategies can be transposed to the farmland-to-wetland context needs to be carefully evaluated. For example, whereas the areas converted to forest was legally accessible to the affected people, the situation is quite different in the case of the areas converted to wetland as these will constitute part of the NRs, and thus be inaccessible to the affected people in accordance with the legal framework on NR management.

Recommendations

- The ecological as well as economic impacts of scaling up the various alternate livelihoods should be examined before scaling up of a particular activity is recommended. This will apply especially to activities that directly use wetland

resources (e.g. fodder and grazing space for livestock) or those which may have an indirect impact.

SUB-COMPONENT 3C – SUSTAINABLE ECOTOURISM PLANNING AND DEVELOPMENT

Progress and Key Achievements

- The Eco-tourism Master Plan has been developed and submitted for approval (sub-component 3.3.1 of Annex 2).

Issues and Challenges

- A fact that the plan has not been reviewed by the project's wildlife component to ensure that what is proposed is ecologically sustainable is a serious concern. This is of fundamental importance to the project's overall objectives (sub-component 3.3.1 of Annex 2). Although the Environmental Assessment specialist has established the Eco-tourism Master Plan, the wildlife consultants' inputs would be paramount given their expert knowledge of the ecosystems and also the specific wildlife components of the projects such as species recovery plans.

Recommendations

- Ecotourism must be based on functional understanding of the ecosystem and not just on scenic beauty. Having the two wildlife consultants review the ecotourism plan should be a matter of priority.
- The eco-tourism plan (and the project or PMO) may also need to include the promotion of an adequate regulatory framework regarding various aspects of ecotourism management such as the construction of infrastructure such as distances from core areas, use and sourcing of building material, and waste management.

5.5 COMPONENT 4: EDUCATION AND CAPACITY BUILDING

SUB-COMPONENT 4A – CONSERVATION EDUCATION

Progress and Key Achievements

- A range of activities appear to have been implemented or in the process of implementation. This includes development of a Conservation Education Master Plan, teacher training kits and courses (sub-components 4.1.1, 4.1.2 and 4.1.3 of Annex 2). Thus, a cohesive plan for implementing a systematic education programme in schools appears to be taking shape along with some of the knowledge and tools needed for its implementation .

Issues and Challenges

- While the required awareness material is being produced and training conducted, there is no baseline data to assess the impact of these activities on children's and teachers' awareness of wetlands and their biodiversity (sub-component 4.1.2 of Annex 2).

- Insufficient attention appears to have been given to identifying a pathway to incorporate the programmes tested through the pilots formally into the school curriculum at least at provincial level (sub-component 4.1.4 of Annex 2).
- There does not seem to have been much communication between the education and the wildlife components of the project when developing the Master Plan and education materials (sub-component 4.1.1 of Annex 2).

Recommendations

- Awareness and education is a basic element of conservation. The education activities should in the future seek to take children out of the classrooms and into the wetlands so they can better visualize what they are being taught.
- More collaboration between the education and wildlife specialists should be required in the conceptualisation and development of education programmes and materials.
- The impacts of education and awareness are too often taken as a given. A post-activity survey will help assess the impact of the activities. This is especially important in the case of the pilot school education activities before they are scaled up and formalised.
- The project needs to develop a strategy for incorporating the school wetland education pilot programmes into the formal curriculum at provincial level.

SUB-COMPONENT 4B – PUBLIC AWARENESS

Progress and Key Achievements

- A range of activities seem to have been implemented including the creation of a Public Awareness Master Plan and various awareness material for the public in general and for specific target groups such as field trips for farmers and discussions with fishermen on nets used and which are legal and illegal (sub-components 4.2.1 and 4.2.2 of Annex 2).
- The activities have also supported the alternate livelihoods development component of the project through training on specific livelihood activities such as bee keeping (sub-component 4.2.2 of Annex 2).

Issues and Challenges

- The impact of these activities cannot be verified without a follow-up opinion survey or the use of a proxy that indicates knowledge and attitudinal change. There is also no data on gender related attitudinal change (sub-component 4.2.2 of Annex 2).

Recommendations

- An opinion survey should be carried out to assess the influence of the awareness activities on public perception of the role of wetlands in providing a range of

ecosystem services. The survey will need to be structured to compensate for the lack of baseline data on public awareness levels at project inception.

SUB-COMPONENT 4C – CAPACITY BUILDING

Progress and Key Achievements

- Training needs of NR staff and staff of other related agencies better understood and a range of training programmes have been conducted to various government agency staff or different ranks (sub-components 4.3.1 and 4.3.2 of Annex 2).

Issues and Challenges

- The outreach to agency staff and decision makers appears to be limited to the provincial level, whereas the project seems to generate nationally relevant information, and indeed needs action at national level to alleviate some constraints (e.g. the restrictive zoning with wetland NRs).

Recommendations

- There should be more emphasis on taking stock of experiences that are nationally relevant and using them to leverage policy dialogue beyond the province. This should include dialogue with similar wetlands projects in China (past and ongoing) to identify key issues that have recurred and which require remedial action at the national level. This component seems to be an important gap in terms of the project's potential impact on wetlands conservation in China as a whole.

9. DISCUSSION

This section seeks to use the findings from our assessment above, to place the case of the Sanjiang Plain Wetlands Protection Project in the context of the broader Integrated Conservation and Development Projects (ICDP) literature and explore how the Sanjiang project contributes to some of the fundamental questions linked to ICDPs.

Has wetland wise use been shown to enhance biodiversity conservation in the wetland sites?

The dearth of examples of wise use in the Sanjiang Wetlands due to the very low levels of direct dependence currently on wetland resources makes it difficult to address this question. Moreover, the loss of over 80% of the original wetland area has meant the focus has been on conservation of the remaining wetlands. There however exists a need to explore options for identifying sustainable resource use options given that some degree of illegal resource use continues and in fact competes with the needs of endangered species such as cranes who use the same thatch grass habitats. The current policy and legal frameworks that determine the types of uses allowed in wetlands also do not promote and actively require the balancing of conservation and resource use. This suggests the need to strengthen enforcement or to either identify viable alternate livelihood options outside the wetland or provide for sustainable wetland resource use arrangements. Since the definitions of the three zone system introduced by the National Regulations on Nature Reserves (1994) only allows for tourism as an

economic activity (limited to the Experimental Zone), adopting sustainable or wise use solutions will need to overcome this legal restriction.

Has wetland wise use been shown to directly or indirectly influence the poverty status of communities associated with wetlands, and if so under what circumstances?

The relatively low direct dependence of people on wetland resources currently in Sanjiang has meant that a clear answer to this question has not emerged. It should however be noted that, as indicated by Focus Group Discussions conducted by the authors with selected villages, the situation was quite different prior to the conversion of 80% of the original wetland to agriculture which commenced following the end of the Second World War. These discussions indicated much higher levels of direct resource use (see Mission Report). In fact, this is an example of where wetland conservation has historically had to make way for an entirely different land use in the form of large-scale agricultural production, and thus presents the opposite scenario to wise use. Moreover, the current profitability of farming continues to undermine the economic rationales of wetland conservation. Whether the proposed investments in eco-tourism will change this scenario is left to be seen.

In terms of land uses, this illustrates the importance of valuing a wetland's ecosystem services when the wetland is competing against other and economically more productive land uses, namely agriculture. This appears to be an important gap to be addressed if the longer term policy with respect to land use in the Sanjiang Plains is to be influenced in favour of maintaining the remaining wetlands.

The role of water/hydrology in determining wetland productivity and sustainability

Water emerges as a key condition for achieving the project's conservation objectives. The fact that the wetland is situated downstream of the major rivers (the Heilongjiang, Songhua, and Wusuli) that supply it with water makes the wetland more vulnerable to other water uses that either reduces water availability, changes flow regimes or impacts water quality. In this case all three impacts can be observed as a result of upstream water storage infrastructure and diversions for agriculture (reduction in water availability and disruption of flow regimes), and through agricultural runoff that has degraded the quality of water flowing to the wetlands.

An integrated approach needs to begin with a willingness to understand context through multiple disciplines and perspectives

A key gap in the Project in the view of the authors is that project management as a whole appears insular and not geared to using project experiences as leverage to highlight changes needed especially at national level. The experiences emerging from the project provides it a unique opportunity to contribute to appropriate overall legal and policy and administrative frameworks for wetland management. This is especially so in view of the continuing national pro-agriculture policies that identify the Sanjiang Plain as a key producer of grain, and the restrictions of existing rules on NR management (especially the National Regulations on Nature Reserves (1994)) that strongly influence management options at NR level.

The project is in a strong position to utilize site-level experiences to influence the further evolution of national and provincial policies and legislation on wetlands. Such influence will represent a significant, if originally unplanned, contribution to China's capacities for sustainable wetlands management. It will also help resolve some over-arching constraints and faced in the Sanjiang Plains. Specific aspects to focus on include:

- Re-enforcing the recognition for sustainable wetlands management in view of their multiple-use nature and dual importance from biodiversity conservation and human development standpoints
- Establish clear principles for wetlands management
- Ensure the rules relating to the core, buffer and experimental zones (in the National Regulations on Nature Reserves (1994)) provide scope for balancing conservation and sustainable use. These rules should ideally be restrictive in Core Zones and become gradually less restrictive in the Buffer and Experimental Zones. The kinds of activities permitted in each zone should be informed by a re-evaluation of the roles of each of these zones.
- Identify a single agency with overall authority over wetlands management, and an inter-agency co-ordination mechanism (such as a committee) to facilitate the smooth integration of sectoral laws within an overall wise use context.

In addition, the disconnect that appears to exist between some project components (e.g. the wildlife component has not had the opportunity to review the Eco-tourism Master Plan and Conservation Education Master Plan), operate at the expense of the broader goals the project seeks to influence.

Processes of change occur incrementally over long timeframes with fundamental implications for conventional funding processes

When the key achievements are viewed in terms of the project’s final objectives and the overall long term goal, it becomes clear that these achievements, whilst being critical, in fact represent early steps in change processes that involve a considerable amount of work in the future. The inclusion of environmental flows in the 11th Five Year Water Allocation Plan for the Province is a case in point where its implementation presents a series of technical as well as political challenges as already noted in this Report. Considering that such notable achievements have taken over four years (two-thirds of the project lifespan) to achieve, the importance of donor support for long-term investments in a project especially of this scale becomes clear. Time-frames that allow for complex change processes to be engineered and play out is thus a key driver of what projects can and cannot achieve. To expect truly robust outcomes from short time frames is unrealistic and exerts a self-defeating burden on the project. The need for donors to re-examine funding cycles is thus critical if quality outcomes are what is desired.

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ANNEX 1: PROJECT CONSULTANTS AND PMO STAFF INTERVIEWED IN MARCH 2010

Place	Meeting time	Name	Position
Yi Quan Shan Zhuang, Beijing	9:00 17, March	Ma Zhong	Team leader
	9:00 18, March	Liu Huaquan	Environmental Assessment Specialist
Room 220, Forestry Department of Heilongjiang province, Harbin	9:00 19, March	Xia Guangliang	Hydraulic Engineer
	9:00 19, March	Wen Jijuan	Water Allocation Specialist
	9:00 19, March	Liu Zhenmao	Hydraulic Engineer
	10:30 19, March	Zhou Zhiqiang	Wetland Restoration Specialist
	14:00 19, March	Li Xiaomin	Wildlife Biologist
	14:00 19, March	Tom Dahmer	Wildlife Biologist/Deputy Team Leader
	16:00 19, March	Ni Hongwei	Natural Resource Management Specialist
	9:00 20, March	Chi Defu	Capacity Development Specialist
	9:00 20, March	Yan Shanchun	Conservation Education Specialist
	10:00 20 March	Dong Ming	Project coordinator Resettlement Specialist
	14:00 20 March	Cheng Shaoxia	Director of PMO

Note: The following individuals were not interviewed due to their unavailability as a result of prior work commitments or illness: Ma Zhong, Xia Guangliang, Yan Shanchun and Ni Hongwei.

ANNEX 2: SANJIANG PLAIN WETLANDS PROTECTION PROJECT: EVALUATION OF PROGRESS IN OUTPUTS AND OUTCOMES

Project Progress Assessment Framework in April 2010							
Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs	Scoring of project outputs Conservation Score (+5 to -5) Poverty Reduction Score (+5 to -5)	Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
	<p>Goal: Improved management of natural resources to protect globally significant species and to sustain economic development.</p>						
	<p>Purpose: Achieve an integrated conservation and development model to protect natural resources of the Sanjiang Plain wetlands and their watersheds (biodiversity, water, forests), from continued threats, and to improve the</p>						
	<p>Conservation status of eight key globally threatened species in the Sanjiang Plain lifted from the lists of endangered- to vulnerable species</p>						
	<p>By 2010, populations of native species of flora and fauna in 6 target NRs up by at least 10% (improved biodiversity) By 2010, nature reserve (NR) and watershed water resource management mechanisms in the Sanjiang Plain established and/or integrate wetland water requirements</p>						
	<p>Income status of affected villages maintained or</p>						

Project Progress Assessment Framework in April 2010

Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs	Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
well being of local communities.	<p>increased through environmentally sustainable alternative livelihood mechanisms</p> <p>By 2010, wetland restoration model replicated in 5-6 additional Sanjiang Plain wetland NRS</p>							

Project Progress Assessment Framework in April 2010

Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs		Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)					
Component 1: Watershed Management									
1.1. Forestry Investments	<p>1.1.1 Site preparation, planting, and treatment operations preceding per county schedule over 7-year period</p> <p>By 2012, upper watershed forest cover increased by 11,900 ha in 13 counties and 5 watersheds (including 4,300 ha of farmland-to-forest restoration in 5 counties)</p> <p>By 2012, international silvicultural health standards achieved in 43,700 ha of existing upper watershed forest in 13 counties</p>	<p>8,457 ha of new forest have been planted up to 9 June 2009. Accounts for 71.1% of target. The surviving ratio of the young tree is above 90%.</p> <p>27,880 ha of existing forestry plantations have received treatment. Accounts for 63.8% of target.</p> <p>The poor soil has meant poor results for intercropping. Therefore, not all the restoration sites will be required to carry out intercropping. Each project county will determine this in accordance with their own situation.</p> <p>Various trainings were organized since the project mobilization, which focused on improving the staff's</p>	<p>Most of the converted farmlands are in Baoqing County. These are on sloping land, causing serious soil erosion and flooding. The use of pesticides was also a serious impact on the water resources downstream. After converting farmland into forests, forest vegetation is being restored, soil erosion is being controlled, water sources are being conserved through better soil water retention and groundwater recharge, and the regional climate is likely to improve.</p> <p>A total of 49 forest workers initially lost their farming livelihood due to</p>	+4	+4	<p>A high positive score for conservation in view of the progress made in replanting and the multiple positive conservation impacts. The better slope coverage will be beneficial overall in the wetlands, but not to these specific to the NRs. But they will provide models that will help in the future.</p> <p>A high positive score for poverty reduction based on the positive results of the alternate livelihoods activities as detailed in the first external evaluation report for this component.⁶</p>	<p>Both the conservation and poverty reduction results suggest a successful model for application in other areas with similar issues. The relatively small number of affected people should however be noted. It will be interesting how the challenge of finding alternate livelihoods will be met where the number of affected people is larger.</p> <p>Enhancing staff's capacity and strengthening management is an important basis for smooth project implementation.</p> <p>Regular monitoring is a necessary and key link for project management. Each year each project county (city) carries out an overall inspection of project</p>	<p>Attention and support from decision makers is a key to the success of the project. Significant support and high attention were obtained from the governments at national, provincial and local level.</p>	

⁶ External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Farmland-to-Forest Conversion Project in Baoqing County of Heilongjiang Province (NO.1)

Project Progress Assessment Framework in April 2010

Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs	Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
		<p>project management skills. Project management withdrawal and invoicing management regulations have been developed, and project management procedures have been standardized.</p> <p>Alternate livelihoods activities developed to compensate for loss of income for the 49 affected farmers resulting in increases in per capita net annual income by 2008.⁴</p>	<p>farmland-to-forest conversion.</p> <p>After restoration to forests, the newly planted trees have a quite long growth period so that incomes will take time to materialize, and forest-based incomes will be low for the first two years. Therefore, alternate income streams have been developed to compensate for income losses in these years.</p> <p>Some of the affected people have been employed to carry out patrolling and tree planting, and others have been encouraged to develop NTFPs such as medicinal plants, tree nurseries, animal breeding and engagement in</p>					implementation.

⁴ External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Farmland-to-Forest Conversion Project in Baoqing County of Heilongjiang Province (NO.1)

Project Progress Assessment Framework in April 2010

Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs	Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
1.2. Local (NR) Level Water Resource Planning	1.2.1 Six stakeholder working groups established (1 per NR) and operational by year 1	Established already and operational in each NR. The stakeholders include county government, water conservancy bureau, Environmental Protection Bureau (EPB), agricultural	catering services for tourists. Consequently, per capita annual total net income of the APs is 7776 Yuan before conversion. Since conversion in 2005, average net annual incomes have been 7555 in 2005, 8394 in 2007 and 9473 Yuan in 2008 showing a steady increase as the combination of income streams per affected person begins to materialize. ⁵	+5	0	A positive and high conservation score since the working groups are in place for each NR, and are a key institutional element for more holistic decision making. The score is high also due to the example of how this has	The potential of these administrative arrangements to enhance inter-sectoral coordination at the NR level is clear, and their proper functioning can be a significant support to the NR in moving the agenda forward on vital	While various stakeholders have different needs from water, the fact that many of them do not have allocative authority over water, which means that their

⁵ Further details available in the following project report "External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Farmland-to-Forest Conversion Project in Baoqing County of Heilongjiang Province (NO.1)"

Project Progress Assessment Framework in April 2010

Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs	Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
		<p>committee, NRs, Forest Departments, and local communities.</p> <p>Their mandate is Coordinating the water allocation at county level.</p> <p>The county government is responsible for calling meetings.</p> <p>Decisions are absorbed into the official decision-making process through the direct involvement of the key agencies.</p> <p>In Anbanghe NR, the working group met to discuss a chemical factory which polluted the water flowing into Anbanghe NR. After the meeting, this factory was closed and move to another place. Also in Anbanghe, after the meeting, the local water conservancy department agreed that the NR can use the water from Hongqiling reservoir</p>	<p>have been identified.</p>			<p>led to conservation action.</p> <p>A neutral score for poverty reductions as the relationships to poverty reduction are yet unclear.</p>	<p>issues such as water allocation.</p> <p>How well they will function mainly depends on the leaders of the NRs and the local county governments.</p>	<p>ability to influence allocation is limited.</p> <p>The working groups should be organized, coordinated and partially funded by provincial government; otherwise their effectiveness will be constrained if it is only organized by the related departments.</p> <p>Make every stakeholder understand the importance and value of the establishment of NRs and protection of the environment. Make each stakeholder understand they are one of the key persons who will assume responsibility in the effective operation of NRs.</p>

Project Progress Assessment Framework in April 2010

Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs		Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)					
		when necessary.							
	1.2.2 Biannual water monitoring workshops conducted	Monitoring of river water quality and quantity was conducted in Qixinghe and Anbanghe NRs in 2007. A water quality monitoring plan for the other four NRs has been drafted. This plan was finalized through discussions with the local environmental protection bureaus (EPBs). Based on the finalized plan, the EPBs conducted water quality monitoring.	Improved knowledge of water quality and quantity of NRs due to monitoring based on a planned approach.	+4	0	A positive score since monitoring has been carried out. The score is high as this has provided vital knowledge for influencing provision for environmental flows at higher planning levels. A neutral zero score for poverty reduction as this does not have direct implications.	Because there are too many monitoring sites and the monitored watersheds are too broad, the monitoring activities can't be sustained due to the constraints of involved industries, time and funds.		
	1.2.3 6 NR management plans produced by year 4 incorporating NR water allocation plans by year 5 By project year 5, water resource management sections incorporated into the master plans of 6 NRs By 2012, local water allocation plan for NRs increased by at least	The first phase of Water Resources Baseline Survey covering the 6 NRs was completed. Reports on water resources utilization status for all 6 NRs and their watersheds were completed and, based on these each NR's water demand was estimated. Water resources management plans for	An understanding of water requirements for each NR and their watersheds. Water demand estimates for each NR. Revised overall NR management plans that incorporate the water resources management plan.	+5	0	A positive score for conservation as the indicators expected for the current stage of the project appear to have been met. The score is high also since the management plans for each NR and baseline information generated to facilitate their planning provided a framework for linking water resource needs at NR level with the broader watershed level	The project appears to be on track in meeting its stated outputs. In terms of the longer term goal of securing actual (as opposed to planned) flows for the NRs, the challenge now appears to be working with the Ministry of Water Resources (MoWR) in identifying how additional flows to the NRs can be facilitated in practice. The cooperation of	The integration of the NR water requirements has generally suffered due to very poor participation opportunities. Ensuring adequate link structures between complex administrative arrangements is a key condition for promoting more rational water	

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	<p>20%</p> <p>By 2012, wetland protection criteria and management requirements included in water resource plans</p>	<p>all 6 NRs have been prepared. Anbanghe, Naolihe, and Xingkaihu NRs revised their NR master plans incorporating the water resources management plans. Zhenbaodao NR will revise the NR master plan soon. Qixinghe and Dajiahe NRs will also revise their NR master plans incorporating the water resources management plans.</p>				<p>water allocation plan which now includes provision for water for the NRs (see 1.3 for details).</p> <p>A neutral zero score for poverty reduction as this does not have direct implications.</p>	<p>MoWR given its monopoly over authority to allocate water in the basin, and the relatively limited powers of the NRs, namely controlling water flows out of NRs and water quality within NRs.</p> <p>Getting environmental flow allocations implemented in practice will have to occur in the context of strong competition for water from the domestic and agriculture sectors that have traditionally dominated water resources decision making in tandem with the country's grain production policies and Heilongjiang's particular relevance in this respect. How this will be addressed is to be seen.</p> <p>It should be noted that the project is also considering an alternative of reusing</p>	<p>allocation.</p>

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1.3. Watershed-Level Water Allocation Plan	1.3.1 `By project year 2, interagency coordination body formed, and meeting quarterly Provincial and county	A Water Resources Coordination Leading Group (WRCLG) including all government stakeholders was established at	Establishing this multi-stakeholder forum where there was no such mechanism has created the potential for	+4	0	A high positive score for conservation given the critical need for an inter-sectoral coordination mechanism if environmental flows is to be effectively	agriculture water to mitigate the effects of sectoral competition. The two key conditions for this to be feasible appear to be the ability to access and supply this water at critical time periods for the wetland and species recovery, and the ability to reduce the significant pollution load since the NRs are surrounded by vast tracts of farmland. No significant activities have been initiated thus far by the project to identify or test strategies to address these issues. Director PMO however indicated that the project proposes to seek approval to pilot test organic grain production.	The WRCLG should also be used to provide recommendations for agricultural structural	

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				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
	water management staff participates in 5 annual interagency coordination workshops over life of Project	<p>provincial level. The stakeholders are:</p> <ul style="list-style-type: none"> State farms Local water resources department Wetland NR Bureaus Local Environmental Prot Bureaus, Land resource Department Local forestry Bureaus Heilongjiang Province Water Resources Department <p>The leading group is meant to promote the inclusion of water allocations for the wetlands and NRs in the watershed Water Allocation Master Plan (WAMP).</p>	<p>improved decision making through better coordination among stakeholder agencies for water resources management at watershed level. This is borne out by the recognition of the importance of environmental flows for the first time in the 11th Five Year Plan following discussions in the WRGGL of the high value of water allocation for wetlands.</p>			<p>included on the water allocation agenda at the provincial level. It also provides a forum for continued dialogue with the sectors that dominate water allocation which will be needed for testing and refining future e-flow adjustments. The score is however limited to +4 due to the three issues noted in the performance column which may impact the Group's effectiveness. However, the fact that the MoWR, the water resources decision maker, is represented in the Group is a positive feature of the Group's composition.</p> <p>A neutral score of zero for poverty reduction is given due to the lack of information at this stage on how increased allocations for the wetland and NRs will impact on the domestic and agricultural sectors and poverty levels.</p>	<p>skilfully it is utilized by the NR Bureaus, Forest Department and other agencies with vested interests in promoting environmental flows.</p> <p>Given the ongoing struggle for water between sectors, and a perception of declining water availability (ascribed to climate change), another uncertainty is the future direction the broader policy climate will take, especially with respect to China's grain production and related agricultural policies.</p>	<p>adjustments based on water availability conditions.</p>

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		<p>Some issues:</p> <ul style="list-style-type: none"> The authority of the WRCLG is limited to making recommendations. The authority to make decision on water allocations rests with the Ministry of Water Resources (MoWR). Actual allocations for environmental flows will thus depend on the degree to which the inter-agency dialogues can convince MoWR of the value of such flows. The MoWR is represented in this Group through the Provincial Water Resources Department. The meetings of the WRCLG appear to be irregular, with it having met last in 2008. While it is claimed that it meets only 						

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	1.3.2 Gross water balance estimates completed for 5 NRs by year 1	<p>when necessary (Director, PMO), the question remains as to whether such a forum should be used more often to keep the environmental flows agenda moving.</p> <ul style="list-style-type: none"> The budget for the WRCLG is limited. 			+5	0	<p>A +5 for conservation due to completion of the task and the central nature of the output for promoting water allocations for the NRs.</p> <p>A neutral score of zero for poverty reduction since actual allocations have not yet occurred and the impacts on other sectors is not known.</p>		<p>Local water specialists' participation is fundamental to do this job because they are familiar with local situations and can easily get the data from concerned local departments.</p>

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	<p>1.3.3 Water allocation and flood control policies developed by year 5</p> <p>By 2012, wetland issues integrated into water resources allocation in the Wusuli, Naoli-Qixing, Anbang, and Qihulin/Abuqin rivers</p> <p>By 2012, Songhua River Basin Management Authority ready to adopt integrated Songhua River Basin Management Plan incorporating wetland protection</p>	<p>The need for river water allocation for wetlands preservation has been recognized in the Heilongjiang Province's 11th Five Year Plan prepared by the Heilongjiang Water Conservancy Planning Institute and approved by the Songliao Water Conservancy Commission. It has been submitted to the Heilongjiang Provincial Government and the Ministry of Water Resources for approval.</p> <p>Songhua River Master Plan including water allocation plan to Anbanghe NR is being prepared by the Songliao Water Resources Commission.</p>	<p>The need for environmental flows for the wetland and NRs recognized in the Heilongjiang Province's 11th Five Year Plan.</p>	+5	0	<p>A +5 score for conservation given that this is the first time that ecological water allocation has been recognized in the provincial Five Year Plan. It is thus a significant milestone in the evolution of policy with respect to environmental flows. Although the actual allocated volume to wetlands is likely to be smaller than wetlands' water demand estimated under the Project, this is an issue should not detract from this output.</p> <p>A neutral score of zero for poverty reduction since actual allocations have not yet occurred and the impacts on other sectors is not known, even if increased environmental flows may have to be at the expense of other sectors.</p>	<p>This is a first, be it critical step in a complex process before water flows will change on the ground. How much water will in fact be allocated as runoff to the wetland & NRs is not specified in the Five Year Plan, and is likely to depend on the importance given by decision makers viz. a viz. domestic and agricultural water supply that have traditionally dominated allocation decisions.</p> <p>While the assessments of water requirements for each NR are noted, it is likely that how much water is required by the wetland as a whole and by specific NRs will need to be fine tuned through trials over several years.</p> <p>The Next step is how to implement what is specified by the MP. This is also more complex than merely obtaining more flow, as</p>	

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							<p>what is equally important is the timing and quality of these flows viz. a viz. the requirements of the wetland ecological systems and species recovery plans.</p> <p>Other practical measures such as installing monitoring stations and gates for water diversion to the wetland may also be required if additional runoff to the wetland is approved by MoWR. These will require the submission of a separate proposal to the MoWR for funding.</p>	

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Component 2: Wetland Nature Reserve Management									
2.1. Conservation Management	2.1.1 Permanent monitoring stations established for water, wildlife, and habitat monitoring by year 1	Permanent monitoring stations were established in five NRs excluding Dajiahe NR. This is one of the new NRs and not yet have time and budget to set up the watch towers. This will be done in the future. They have monitoring transects. NR has its own budget to set up 2 towers in 2010 from their own budget. Each NR has assigned a position to continue the monitoring programmes. However, there is very little money for equipment + salary. The main expense will be the vehicle and operating expense of the vehicle. This is the more uncertain factor - no money after the project.	Permanent monitoring stations established in five of the 6 NRs.	+4	0	A high positive score for conservation since the performance target has been almost met. The monitoring stations are enabling NRs to answer some key questions about the status of specific species in need of population recovery. With the red-crowned crane for instance, although good numbers are recorded, it is not clear whether they are breeding. The monitoring will be directed to answering these and similar questions. Monitoring also enables results to be validated. In Xingkaihu NR, the stalk programme has been very successful. More nests have led to more stalks and this success has in turn encouraged managers to build more nests. Monitoring also facilitates better	Intelligence on species population numbers, behaviour and locations are major sets of information for management planning both at species and NR scales. The positive and measurable results thus far appear to have convinced at least some NR managers of the utility of monitoring. However, how the monitoring programmes will be financially supported after the project is a major concern. NRs have no right to implement management decision w/o approval of the Wildlife Conservation Division in the Forestry Department - responsible for budgeting and decides what will be done and not done. This in turn will impact on the ultimate success of the species recovery	Financial and technical supports are most important elements for establishing and operating these monitoring stations for water, wildlife and habitat.	

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							<p>knowledge of the distribution and concentration of species. In Xingkaihu NR, the monitoring staff were able to identify one area with exceptional waterfowl population. Priority conservation areas can be identified in this manner.</p> <p>A neutral score of zero is given for poverty reduction since there does not appear to be a direct impact on poverty.</p>	<p>programmes and of NR management planning in the long term if the condition of species and their habitats cannot be updated on a continuous basis.</p>	
	2.1.2 Monitoring protocols recorded in monitoring manuals by year 4	<p>General method of monitoring of wildlife was developed. Using this method, monitoring of wildlife is being conducted since 2007. Photography monitoring of habitat from fixed points are being conducted by the six NRs.</p> <p>This monitoring will be improved using GIS and remote sensing.</p>	Capacity for wild life monitoring enhanced in the six NRs through the existing monitoring programmes. The capacity for sustaining monitoring will be increased once the manuals are developed this year.	+3	0	<p>A mid-range score for conservation since although monitoring protocols have been established and are practiced, they are yet to be formally documented or integrated into the institutional framework for wetland conservation through Heilongjiang Forestry Department and local forestry and other government agencies as required by</p>	<p>For Sanjiang plain nature reserves to achieve success in conservation management, they must base their management regimes on scientifically designed field studies (monitoring and/or research) and the information generated from the results of these studies.</p> <p>Examples of long-term implications of the link between ecosystem</p>		

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		<p>Monitoring manuals including monitoring protocols for wild life monitoring will be produced this year and for habitat monitoring next year.</p>					<p>this indicator. It is also not clear whether the protocols cover the need to ensure that not only are data generated, but that resulting information is channelled into the management decision making processes. Indeed, monitoring results for the Oriental White Stork recovery program showed that nesting stork numbers increased at Xingkaihu NNR due to the implementation of the SPWPP man-made nest initiative in 2008. However, the project was not continued or expanded as proposed in 2009 and implementation appears unlikely again in 2010. A neutral score of zero for poverty reduction given the absence of a link to poverty.</p>	<p>conservation and poverty reduction can be seen in fishing and livestock grazing in NRS, both of which are tightly regulated in some NRs but unmanaged in others. Where regulation is good, the fish and vegetation resources are protected and can contribute long-term genetic, population, and biomass support to ecosystems outside NRs. Where regulation is absent, resources are degraded and declining.</p>	

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	2.1.3 NR GIS set up by year 4 and data updated continuously	Draft specifications on GIS were prepared, but GIS has not been implemented as contracted. This is presumably because of the geo-political sensitivity of the SPWPP project sites, some of which are located adjacent to or near the international border with the Russian Federation. GIS has been established by the Heilongjiang provincial forestry survey and research institute by HPPD's self funding and will be incorporated into HPPD's database. A fundamental GIS for water birds using Google Earth was developed.	There is no doubt that more, broader, and better integrated use of GIS would benefit conservation management on the Sanjiang plain. This is included as part of the contracted project documents but has not been delivered. Conservation management has suffered, most conspicuously in Sub-Component 2C, which developed its own basic GIS to partially compensate for the absence of the contracted SPWPP GIS.	0	0	<p>A neutral score for conservation as this sub-component has not been implemented to any meaningful degree.</p> <p>A neutral score of zero for poverty reduction given the absence of a link to poverty.</p>	<p>The GIS, which support digitalized simulation, should not only include the 6 NRs of our project, but for the whole Sanjiang Plain. In that way, it can provide more general and integrated information to the management department and the leaders at high level.</p> <p>GIS can be used in concert with remote sensing (RS) to track habitat conditions, land use change, change in wetland area, animal migration patterns, and other trends. Increased use of GIS for NR management would, as described in the SPWPP Project Documents, enable creation, compilation, analysis, and presentation of new information that could greatly enhance conservation management effectiveness over short- and long-term horizons. Examples include monitoring</p>	<p>The principal lesson learned from this failure to deliver GIS is that perceived national security issues (border concerns between PRC and RF) have taken priority over the SPWPP contract commitment to deliver GIS.</p>	

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							<p>stork and crane nesting sites and nest productivity, tracking habitat and land use changes, demarcating NR boundaries, and many others. One important and urgent example of how GIS could be used is: Integration of the Sanjiang-wide efforts to recover Oriental White Stork through installation and monitoring of man-made nests and monitoring of natural nests that has gone on since the early 1990s and continues today with support from SPWPP and some Sanjiang NRS. Such information could be used by leaders in NRS, local governments, provincial government, HFD, Ramsar Authority, SFA, CAS, NEFU, and others to determine how to proceed in future with stork conservation management and</p>	

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	2.1.4 Draft management plans prepared for 6 NRs by year 5	No draft management plans currently exist.	0	0	A neutral score for both conservation and poverty reduction given that this indicator is to be achieved in 2010, and it is thus too early to score.	<p>The key issue here is that a NR Management Plan does not currently exist in the institutional framework for nature reserve management. Similarly, understanding is currently lacking of the concept of nature reserve management according to a plan that outlines science-based conservation objectives, lists actions to achieve these objectives, then describes resource requirements, and finally allocates the funding needed to deliver the required resources. Two changes are needed: (i) NR management planning must be institutionalized through the government system (it must become real in the sense that government requires NRs to formulate and implement management plans.); (ii) NR management plans must</p> <p>NR Bureaus themselves need to believe there is a reason for doing them. Provincial Forestry Department to be convinced that the MPs needed and that it needs to be funded. This is the hardest part. Traditionally the Master Plan deals with staff and admin rather than conservation action.</p> <p>The Province is dominated by State Farm system. If there is no co-op with this system and objectives are not shared, then cannot do much due to the grain First policy is the key driver for the State Farms.</p>			

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							<p>be funded through the government system (This doesn't mean roads, buildings, entry gates, or tourist facilities that are now addressed by the Master Plan, but rather, it means field and other activities, equipment, facilities, contracts, etc. to achieve nature conservation objectives and legal conservation mandates).</p> <p>The MPs will need to draw on both the project experiences and those of the respective NR staff. The MPs will also need to articulate strategies to resolve key challenges such as access to more water, species and habitat recovery, and plan for the sustained management practices such as monitoring as investments in future management capacity. In addition, given that the NRs lack the authority to solve some critical issues especially</p>	<p>Importance of including community perceptions and giving a sense of ownership is important for the success of the implementation of the NR management.</p>

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	2.1.5 Significant recovery of biodiversity achieved within 6 NRs by 2012: occurrence of key threatened species in NRs increased by 10% (number of individuals population size, number of sightings etc.)	Species recovery plans have been drafted, translated, and submitted for HFD review. Oriental White Stork nest numbers increased in six SPWPP NRs from 5 in 2007 to 48 in 2008. Eleven nests also installed by SPWPP at Honghe NNR, also on the Sanjiang Plain. >16% productive nests in 2008 (8/48). Around 25% productive SPWPP nests in 2009 (12/48). Stork numbers on spring migration at Xingkaihu NNR are increasing as shown by			+3	0	A positive score for conservation due to the existence of draft species conservation plans, and the increase in several species populations, especially the Oriental White Stalk. The score is however mid-range because the recovery plans are yet to be approved and some data is yet unavailable. A neutral score of zero for poverty reduction given the absence of a link to poverty.	If institutionalized and funded, these plans will become a foundation for future conservation. Positive results from stork recovery efforts are increasing interest in this species. Continued effort to install man-made nests and improve monitoring and protection are underway. A low but positive score was assigned because recovery of migrating and nesting cranes, ducks, and geese depends to a large extent on successful regulation/control of other human-induced	Stork recovery has been successful but plagued by a stop-start approach to funding of field activities. Recovery is a difficult and long-term process. To achieve success, a commitment is needed to: <ul style="list-style-type: none"> ■ consistent annual funding over recovery actions; ■ integration of NR activities across agency

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2.2. Pilot Wetland Restoration	2.2.1 Restoration of wetland areas from farmland, measured annually, achieving specific targeted area by year 7	<p>monitoring data. Crane and duck-geese numbers, nest numbers, and nest productivity data are collected and compiled but these cannot yet be interpreted due to data gaps, poor data, and monitoring constraints. Nesting season crane numbers at Qixinghe-Sanhuanpao-Dongsheng showed around 500% increase from 2007 to 2008. This is, however, not a real increase but an artefact of enhanced monitoring (more systematic counts, more complete coverage).</p> <p>3,102 ha of pilot farmland-to-wetland sites have been selected in five NRs (Anbanghe, Qixinghe, Daijiahe, Zhenbaodao, and Naolihe). In Xingkaihu NR, a pilot site has been selected and will be confirmed soon. All these areas</p>			+2	+5		<p>activities in NRs (land use change, fishing, livestock grazing, poaching). Based on results at Xingkaihu NNR, stork numbers on migration and nesting numbers and productivity can continue to increase if more man-made nests are installed and maintained and foraging habitats are protected. This is of course also likely to generate new employment for local people.</p>	<p>Jurisdictions;</p> <ul style="list-style-type: none"> ■ local (Sanjiang plain), regional (south China, Russian Federation, Japan, Korea), and global (Ramsar Convention, IUCN, BirdLife International, ICF, and others) integration <p>long-term capacity building through training and recruitment</p>
								<p>Overall, in light of the difficulties with wetland restoration, protection of the existing wetlands is more important. The existing wetland is under threat and need to first protect this. Thus need resources to do this through staff</p>	<p>External drivers such as sectoral policies influence the effectiveness of strategies set out in the project. Thus, in order to protect and restore wetlands, more political and financial support</p>

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		<p>are already within the NR boundaries.</p> <p>However, the largest site (2,000ha) which is in Naolhe NR 2,000ha is controlled by the State farms and cooperation with it has been difficult. Thus, while it is claimed that the 2,000 ha has already been restored, this has not verified.</p> <p>With respect to the other NRs, the biggest issue is in Xingkaihu NR (333ha in core zone). When this project was being processed, the Central government introduced the Law on Basic Farmland Protection which meant that the original site identified for restoration could not be used, and the site had to be changed. The NR proposed a site in the west of the NR, but after studying this area, it was found to be unsuitable. Another site in the NE part of</p>	<p>The real potential value is as pilot sites to come up with a restoration methodology for replication and identifying the problems that need to be addressed. This includes the technical aspects of restoration and the broader political, administrative and financial support needed.</p> <p>The ability of the NRs to finance the acquisition of land has been uneven due to the lack of income generated from the NRs. This is further exacerbated by the NRs' dependence on leasing NR land for farming. NRs earn between RMB 1,000 - 2,000/yr per ha in rent as farmland.</p> <p>NRs expected PMO or the Heilongjiang government to</p>			<p>Naolhe NR (controlled by the State Farms Administration) which accounts for about 60% of all areas to be restored, and a the lack of support for structured scientific approach to monitoring the changes occurring in the restoration areas. This will make it difficult to develop a restoration methodology in practice. The areas restored are also small, and do not overall significantly support other conservation objectives such as species recovery. The difficulties experienced with paying for the land to be restored and supporting the activities themselves also continue to inhibit the learning from this process.</p> <p>The same score for poverty reduction as given for 3.1.4 since the issue of offsetting impacts on people is</p>	<p>training and support management Bureaus to protect existing wetland. Also, the farming has already destroyed the soil structure and will take 10-15 years to restore and this too is only a possibility.</p> <p>The long-term conservation value is linked to the ability to learn from these pilot restoration sites, since this will provide the basis for any further restoration programmes. The current weaknesses in the programme (lack of scientific and systematic monitoring, lack of funds) suggest that this learning potential is seriously compromised.</p> <p>Wetlands protection and restoration continues to struggle for political support in the face of stronger political priorities. New national agricultural</p>	<p>are absolutely important. It will be necessary to publish a policy brief for wider dissemination of lessons learned from the Project and policy dialogue with high level decision makers.</p> <p>Technical training of NR staff is necessary and urgent.</p>	

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				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
		<p>the core zone has now been suggested, but is yet to be evaluated.</p> <p>Anbanghe NR has already finished, but a lot of work on monitoring is needed. However, there is currently inadequate equip and technical capacity for that.</p> <p>Monitoring - proposal written on how to do this and equipment needs. But not yet approved. While field visits are carried out, no data on progress is collected due to lack of required equipment. This has limited the capacity to learn from the pilot sites. In Anbanghe NR for example, over the past 3 years change in vegetation can be observed, but we don't know what changes to species composition and soil characteristics have occurred. No team and equipment to</p>	<p>provide some financial support, but this did not happen.</p> <p>The situation is improving- several NRs (Anbanghe, Qixinghe) are more willing to pay for land and have applied to other national projects to get funds. These NRs are now thinking about how the restoration areas can be used for conservation.</p> <p>Moreover, At first, they not know the bens of wetland protection. But during the past 3 years, they have realized they can make some money from environment (eco-tourism) and have a good environment. They understand the values of ecosystem services. The NRs are thus now willing</p>			dealt with in 3.1.4.	<p>development policies (since 2004) strongly influence land use in the Sanjiang Plain Wetlands. For example, under the National Basic Farmland Protection Policy which requires at least 1.8 billion mu of basic farmlands in the PRC, some farmlands in the Sanjiang Plain Wetlands were designated as basic farmlands which cannot be restored to wetlands. Some model districts were also designated in the wetlands. The National Grains Security Policy designated the Sanjiang Plain as a grains production base. No agricultural tax is required now (since 2004) and agricultural product prices are elevating.</p> <p>Also, farmland, farmland-forest conversion, and grazing field-grass land restoration receive a much higher</p>	

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Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs	Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
		do this. Required training on wetland restoration has been designed and training done, but not enough. University courses available on restoration, but no financial support for NR staff to attend.	to give up rent from leasing farmland - about RMB 100,000 /yr. The initial loss of income of affected farmers and their households appear to have been offset by alternate income generating activities. Incomes are said to have in fact increased compared to the pre-resettlement status. See Resettlement section - 3.1.4 for details.				government subsidy, than for farmland-wetland restoration. No policy to support farmland to wetland . This is a key need. NR protection rules in Heilongjiang Province are thus overwhelmed by agriculture concerns. Given the centralized nature of decision making in China, it is important that the ADB can have dialogue with the Centre government or bring some good experience s from the project to show to the centre government and influence its attitudes. The implications for poverty reduction if restoration was to be scaled up are uncertain despite the positive results achieved by the project. This will depend on the ability to provide alternate livelihood options that can at least compete with the high value	

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				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
	2.2.2 Wetland restoration models, including appropriate technologies and tools for information dissemination prepared by year 6	No baseline data has been collected from the pilot sites and no structured monitoring programme for each site has been developed.	The absence of key features for conducting this demonstration activity suggests that it will be difficult to develop convincing tools for replication.	0	0	A zero score for conservation due to the absence of baseline data and the lack of a structured process for monitoring the pilot restoration sites. This suggests that the capacity to derive technical lessons from these sites may be seriously compromised. A neutral score of zero for poverty reduction given the absence of a link to poverty.	agriculture.	
	2.2.3 By project year 6 at least one national and one international study tour conducted	In September 2009 a study tour to Maipo (in Chile) was arranged for participants who included staff from the NRs covered by the project. A similar tour was organized to Poyang Lake (China).	While NR staff have been sent on study tours, details of these are not available and the actual impact of these tours in terms of learning or even changes to NR management are not known.	+2	0	A positive conservation score since the study tours have occurred, but the score is low due to the lack of information on participation and the results. A neutral score of zero for poverty reduction given the absence of a link to poverty.		

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Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs	Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
	2.2.4 By project year 7, international conference on wetland restoration organized and implemented	2 international workshops on wetlands and lakes protection were organized in June 2008 and September 2009.	The outcomes of these workshops are not clear due to the unavailability of information. They also do not appear to have focused on restoration as required by the indicator.	0	0	<p>A neutral score for conservation due to the lack of information.</p> <p>A neutral score of zero for poverty reduction given the absence of a link to poverty.</p>		
	2.2.5 Total wetland area in 6 pilot NRs increased by 3,433 ha by 2012	3,102 ha of pilot farmland-to-wetland sites have been selected in five NRs (Anbanghe, Qixinghe, Dajiahe, Zhenbaodao, and Naolihe). In Xingkaihu NR, a pilot site has been selected and will be confirmed soon.	The conservation value is not clear given the relatively small areas involved and the lack of ecological monitoring of the restoration process. See 2.2.1 for more details.	+2	+5	<p>A positive score for conservation due to the identification of restoration sites in most NRs, and the potential for developing a restoration methodology. It is however low since progress has been slow, with no access to Naolohe NR (controlled by the State Farms Administration) which accounts for about 60% of all areas to be restored, and a the lack of support for structured scientific approach to monitoring the changes occurring in the restoration areas. This will make it difficult to develop a restoration methodology in</p>	Same as for 2.2.1	

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Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs		Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)	Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
	2.2.6 Wetland restoration models and guidelines developed by year 6 Wetland restoration models replicated in at least 5 other NR sites in the Sanjiang Plain by end of Project, and restoration program functioning in all	Wetland restoration models, including appropriate technologies and tools for information dissemination, will be prepared, incorporating lessons learned from the pilot wetland restoration, and will be replicated to other wetlands.	Models and guidelines yet to be developed. Current status and issues concerning this component are detailed in 2.2.1.	Not scored as there is more time to achieve this indicator	Not scored as there is more time to achieve this indicator	N/A	practice. The areas restored are also small, and do not overall significantly support other conservation objectives such as species recovery. The difficulties experienced with paying for the land to be restored and supporting the activities themselves also continue to inhibit the learning from this process. The same score for poverty reduction as given for 3.1.4 since the issue of offsetting impacts on people is dealt with in 3.1.4.	The weaknesses in this component as noted in 2.2.1 apply here as well. The main concern is whether adequate opportunities exist for solid scientific monitoring that will be central to developing restoration models and guidelines.	

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Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
	Sanjiang Plain wetland NRs by 2012						
2.3. Wildlife Species Recovery	2.3.1 Species Recovery Plans completed for 8 globally threatened species of waterfowl by end of year 4, and measures implemented by year 5	<p>A plan for Oriental White Stork recovery was prepared and translated into Chinese. The plan will be submitted to HPFD for approval. Recovery plans for the other nine targeted globally threatened water bird species were drafted. All recovery plans prepared under this subcomponent will be incorporated into HPFD's master plan after approval of HPFD.</p> <p>The plan for Oriental White Stork recovery was represented at Regional Crane-Stork Workshop (in Pusan, Korea in October 2008) where the Consultant (two international and national wildlife biologists) made presentations and two Xingkaihu NR staff participated.</p>	+2	0	<p>A positive score for conservation due to the positive results with the stork nests, but a low score as the recovery plans are still drafts. A neutral poverty reduction score as there is not obvious link to poverty reduction.</p>	<p>While the results thus far appear promising, the longer term outcomes are linked closely to other project components, especially the water allocation component as well as the biodiversity monitoring programme. While environmental flows are now recognized at provincial policy level, translating this into increased flows on the ground, and in a manner that meets species requirements (e.g. timing, quality) remains a major challenge.</p>	

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				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
	<p>2.3.2 Target species habitat area increased by 10% in all 6 NRS</p> <p>Overall wildlife populations increased</p> <p>Observed populations of 8 key species of globally threatened waterfowl (see list)¹ increased by 10 % by project end</p>	<p>Habitat has not increased.</p> <p>Stork numbers on spring migration at Xingkaihu are increasing. Stork nesting at Xingkaihu is also increasing as is the number of fledged young. Some anecdotal evidence for increase in numbers of Roe Deer.</p> <p>Monitoring will have to increase substantially in quality to obtain reliable data.</p>	<p>Limited progress with increasing habitat - only the pilot restoration sites accounting for only 0.6%.</p> <p>Progress also limited with wildlife species populations.</p>	+1	0	<p>A positive score for conservation due to the increase in stork numbers, but is low due to slow progress and because the number of species showing population increases is small.</p> <p>A neutral poverty reduction score as there is not obvious link to poverty reduction.</p>	<p>The 10% increase target was set on the notion that the pilot testing of wetland restoration under sub-component 2.2 would trigger further restoration initiatives that would increase wetland habitat by 10% in the NRS. The continued support for grain production however makes such initiatives unlikely.</p>	<p>Makes clear the susceptibility of state commitment to conservation to the more central national policy issues such as food production,</p>

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			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)					
2.4. Reduction of Unsustainable Harvesting in NRs	2.4.1. Utilization inventories conducted by end of year 1 Harvesting reduction plans implemented by end of year 4	The baseline for fishing completed, but monitoring is not being carried out. Inventories of natural resources utilization (fishing, wetlands grazing, reeds cutting, wetlands tourism, etc.) will be prepared, and also a plan for reducing unsustainable harvesting in NRs.	Limited progress on baseline development for the various resource uses within the NRs. No harvest reduction plans have been developed. Possibility that these plans will negatively affect some livelihood activities (e.g. fishing, grazing). Details on magnitude of this impact are not clear as yet.	+1	0	A positive score for conservation since the baseline for fishing has been carried out. The score is however low as baselines do not exist for other uses and since the harvest reduction plans are still to be done. A neutral score for poverty reduction given that progress is limited and no on-ground action has been taken.	The significant loss of wetland habitat in the Sanjiang Plains over the past 50 years makes what remains of critical importance for conservation, especially in terms of globally endangered species. The Sanjiang Plains is for example one of the last habitats for red crowned crane in China. While the wisdom of sustainable use or wise use is generally accepted, the reality in these NRs is that livelihood activities such as fishing and	In view of the need to protect the remaining wetlands, the role of alternate livelihoods needs to be recognized where protection requires the cessation of any livelihood activity based in the wetland. The profitability of farming makes enforcement and developing alternate livelihoods a challenge.	

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Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs		Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)	Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
								grazing compete directly with the habitats and food base of key endangered species the project seeks to help recover. One option for mitigating this conflict is highlighted in 2.4.2 below. Another may be the provision of viable alternate livelihood options especially if the number of people affected is high.	
	2.4.2 Prohibited activities minimized - number of apprehensions/seizures increased (with improved enforcement), then reduced and stabilized	Based on proposals made under the Project, an official notice to prohibit animal grazing and fishing inside Dajiahe NR was approved by the NR administration office on 29 April 2009. Qixinghe NR has also prohibited animal grazing and fishing. All the land belongs to the Bureau. Before 2009,	Potentially positive for conservation especially for species under recovery programmes. Negative impact on poverty reduction, especially not since the bans have been accompanied by any alternate livelihoods development.	+1	0	A positive score for conservation as competition for habitat and food needed by endangered species is reduced, but the score is low due to the lack of information relating to how effectively the prohibitions are being enforced. A neutral score since there is no information on the number of people	While regulation based on what are effectively open and closed seasons (as suggested in the recovery plans) is a logical strategy, it may call for a heavy enforcement cost in the absence of an incentive for self-regulation. This needs to be addressed especially in view of the relatively low financial capacities to support enforcement in the		

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				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
		<p>some land leased to local farmers, but this land taken back after lease taken back. Strong in their enforcement although no real monitoring programme. So if they see grazing, they will stop it.</p> <p>Good site to monitor the impacts of the enforcement.</p> <p>Recovery plans suggests ways to incorporate harvesting e.g. allowing livestock after breeding and fishing after breeding and regulation of equipment.</p>				<p>affected and whether any action has been taken to offset any loss of incomes.</p>	<p>NRs.</p> <p>The options available to NRs is further restricted by the very narrow range of activities allowed in the three zones allowed in NRs as stipulated in the National Regulations on Nature Reserves (1994). The fact that no economic activity other than tourism is allowed in the Experimental Zone does not accommodate the exploration of sustainable use approaches. While strong enforcement may be practicable in smaller and better funded NRs, the six NRs supported by this project do not fall into this category. A review of these Regulations thus also seems necessary to provide the legal space for NRs to engage in more imaginative resource management strategies.</p> <p>Wherever prohibitions</p>	

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				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
	2.4.3 Extent of vegetation cover contributed by reeds, thatch grass, wild herbs, and wild fish populations, in the project pilot area increased by 50% by 2012 Illegal international trade in animal species originating in project area reduced by 50% by 2012	The PPTA log frame was written in 2003/4 when reeds were used in paper manufacturing. Since then other ways of paper manufacturing that do not require reeds have been developed. Thus this objective is no longer a priority. However, to some extent livestock grazing has taken the place of cutting as a threat to the recovery of reeds and thatch grass in water bird nesting areas. No progress in reducing illegal international trade and it is unlikely that there will be any progress made on this indicator.	The issue of grazing is covered by 2.4.2	Not scored	Not scored	N/A	on livelihood activities are introduced, the NR management will need to provide viable alternate livelihood activities as incentives to abide by the prohibition. In addition to comments made under 2.4.2 above, the provision of these types of vegetation cover is directly linked to the availability of water, and will thus be dependent on how the provisions for environmental flows will be implemented.	The extension of vegetation cover contributed by reeds, thatch grass...is mainly determined by the water quantity of each NR. If the water quantity is available, these targets are easy to reach.

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			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)					
Component 3: Alternate Livelihoods									
3.1. Intercropping and NTFP	3.1.1 Intercropping proceeds per county scheduled over 7-year period	Intercropping (e.g., soy bean, kidney bean, and Indigo wood Root) on 663 ha was conducted in four out of the five counties (excluding Linkou County) from 2005 to 2007. The results have been poor (low yields) in several farms due to the water and soil conditions which do not support intercropping.	The poor yields appear to have restricted the potential for revenue generation. No data on actual income is available.	0	0	A neutral score for conservation since until an alternative for intercropping is identified, the impacts are unclear. A neutral score for poverty reduction due to the lack of pre- and post-intercropping income data. An assessment of how the situation has changed is thus not possible.			
	3.1.2 At least 20% of area converted from farmland to forest (4,300 ha) allocated for NTFP production.	535 ha out of 2,914 ha of farmland that has been converted to forest has been allocated for NTFP production (18.4%).	While only 67% of the total reforestation target has been met thus far, progress to date represents addition of forest cover and control of soil erosion. Allocation of 18.4% of reforested land for NTFPs has, it appears, contributed to offsetting the loss of incomes of parties	+2	+4	A positive score for conservation because of the addition of forest cover and resulting soil and water quality benefits. The score is low since the entire reforestation target is yet to be met, and since data for quantifying these benefits is not available. A positive score for poverty reduction to reflect the role played by NTFP production in			

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				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
			affected by the conversion.			providing alternate livelihood options for people affected by the conversion.		
	3.1.3 NTFP market feasibility study report prepared.	No data available	No data available	Not scored	Not scored	N/A	N/A	
	3.1.4 Income levels of affected persons maintained or increased throughout life of Project	Maintained or increased income levels of people affected by farmland-to-forest conversion Up to the end of 2009, total 459 persons (not HHs) has affected by this component. After restoration to forests, the newly planted trees have a quite long growth period so that incomes will take time to materialize, and forest-based incomes will be low for the first two years. Therefore, alternate income streams have been developed.	The affected individuals appear to have been able to match or exceed previous levels of income.	0	+4	A neutral score for conservation as the alternate income generating activities do not appear to have an impact, although an environmental assessment of these activities should be carried out. A high positive score for poverty reduction in view of the net incomes resulting from the alternate livelihood activities. Did not get a maximum score to reflect the low incomes in the first two years after conversion.	The results are promising for replication in other areas with relatively low farming values. However, the economic as well as the environmental feasibility of replication in other sites should be considered, especially in situations where the number of people affected is significantly larger.	Encouraging individuals to develop multiple income streams appears to be a key to success since no single option would have matched pre-conversion incomes.

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			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)					
		<p>people have been employed to carry out patrolling and tree planting, and others have been encouraged to develop NTFPs such as medicinal plants, tree nurseries, animal breeding and engagement in catering services for tourists.</p> <p>Consequently, per capita annual total net income of the APs is 7776 Yuan before conversion. Since average net annual incomes have been 7555 in 2005, 8394 in 2007 and 9473 Yuan in 2008 showing a steady increase as the combination of income streams per affected person begins to materialize.⁷</p>							

⁷ Further details available in the following project report “External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Farmland-to-Forest Conversion Project in Baoqing County of Heilongjiang Province (NO.1)”

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3.2. Ecologically Sustainable Alternative Livelihoods (for Wetland Protection)	3.2.1 Resettlement plans for all 6 NRs prepared by year 4 Alternative livelihood development plans for wetland protection prepared and finalized by year 4	This component is to be supported by local government and not ADB. However, it is an ADB requirement that persons affected by the farmland-to-wetland conversions be minimized. Thus, living standards must be at least the same as before. For Qixinghe NR in Baoqing County and Anbanghe NR in Jixian County, the resettlement plans (RP) prepared during project preparation was updated. Implementation of the updated RPs of Qixinghe NR and Anbanghe NR were approved by ADB on 24 October 2008 and 22 April 2009, respectively and the finalized RPs was received by ADB on 18 May 2009. In Anbanghe NR, before restoration,	Helped gain more land for the wetland and offset the relocated people's use of the NRs. The external reviews indicate that incomes of people affected by farmland-to-wetland restoration have been maintained or increased, following an initial period of re-adjustment. Overall, since the preparation of the Project, livelihoods issues including resettlement are much less relevant for neighbouring communities who are not dependant on NR lands for farming. Income is more of an issue, for the NR staff who have been leasing NR land for farming. The alternate livelihood activities addressed their	+1	+4	A positive score for conservation since the alternate livelihoods appear to have helped gain more land for the wetland, and offset the relocated people's use of the NRs. The score is however low as the prior use was not intensive, the relatively small addition to the wetland area, and the ecological implications of the alternate livelihoods appear not to have been evaluated. A positive high score for poverty reduction based on the external evaluation reports that state incomes after conversion are significantly higher.	the another practical purpose of the pilot at that time was to help the NRs to have capacities on operating in a sustainable way as well as the capacity to demonstrate sustainable use and management of natural resources while not disturbing the wetland. While this component in the project appears to be relatively small, providing effective and ecologically sustainable alternate livelihood options will become a real challenge if conversion of farmland to wetland is to be up scaled, not only because of the high value of farming, but also due to the intensification or up scaling of alternate livelihoods themselves which may be sustainable at small scale, but less so when scaled up. The high earnings in	The project should conduct a cost-benefit assessment of HHs resettled including cash and other forms of compensation - cost of resettling a HH and options available for providing adequate compensation. Future livelihood activities need to be sustainable and integrated in both social and conservation aspects.

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		<p>farmland was farmed by 40 of the employees of the NR.⁸ Income from this goes to the NR and Country government and the employees were a salary. After restoration, the NR gave these people new jobs in the eco-tourism park. This employment was supported by training related to their respective responsibilities.⁹ Average annual per capita net incomes for the 40 individuals have increased from 6,604 Yuan (2003) to 16,833 Yuan (2008).¹⁰</p> <p>In Qixinghe NR, the farmland leased by the Qixinghe Village was selected for conversion. On the request of the Village Committee the village was partly</p>	vulnerability.				<p>Anbanghe from tourism appear to provide the affected households with a stable income. In addition, the County government supports project exempts them from 5 years' tax.</p>		

⁸ External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Anbanghe Wetlands Nature Reserve in Jixian County of Heilongjiang Province (NO.1)
⁹ Table 4-4, External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Anbanghe Wetlands Nature Reserve in Jixian County of Heilongjiang Province (NO.1)
¹⁰ Table 6-7, External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Anbanghe Wetlands Nature Reserve in Jixian County of Heilongjiang Province (NO.1)

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			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)					
		<p>compensated by arrangements to link the village to a new highway.¹¹ In addition, RMB 810,000 has been divided amongst the 44 affected households. Training in support of alternate livelihoods (livestock raising, greenhouse vegetable production, skills needed for work in the service sector) was also given to members of these households.¹² Overall, net annual average incomes in the affected households has increased from 3,541 Yuan (2004) to 7,066 Yuan (2008).¹³</p> <p>In Dajiahe NR 6 households (20 individuals) were affected by the farmland-t-wetland conversion. A RP was prepared and reviewed by ADB. The RP were</p>							

¹¹ External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Qixinghe Wetlands Nature Reserve in Baoqing County of Heilongjiang Province (NO.1)

¹² For details, see the External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Qixinghe Wetlands Nature Reserve in Baoqing County of Heilongjiang Province (NO.1)

¹³ Table 7-11, External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Qixinghe Wetlands Nature Reserve in Baoqing County of Heilongjiang Province (NO.1)

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			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)					
		<p>revised incorporating ADB's comments and resubmitted to ADB for approval. Since the land to be converted is illegally reclaimed land, cash compensation is not needed according to local policy. 337mu of state-owned farmlands were contracted to 4 of the 6 affected households (HHs) based on the land proportion the affected farmers used to cultivate illegally in 2007.¹⁴</p> <p>Some affected individuals were given jobs including being absorbed into NR cadre for NR patrolling. Employment was used especially where it is difficult to find alternate land. Those affected who were encouraged to adopt alternate livelihood activities were trained</p>							

¹⁴ External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Dajiahe National Nature Reserve of Heilongjiang Province (No. 1)

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		<p>in agriculture, fruit production, aquaculture, raccoon and fox breeding. Support for other livestock (cattle and sheep) is planned by the NR Bureau within the Experimental Zone.¹⁵</p> <p>Overall in Dajiahe, savings of the affected households has increased from an average of 38,092 Yuan before the conversion to 42,992 Yuan after conversion, by 2009.¹⁶</p> <p>For Zhenbaodao NR, a RP was prepared, however, since the pilot wetland restoration site was changed, a socio-economic survey was prepared and the RP was updated accordingly and submitted to ADB for review.</p>						

¹⁵ External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Dajiahe National Nature Reserve of Heilongjiang Province (No. 1)

¹⁶ Ibid.

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Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs		Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)					
		<p>The original RP for Xingkaihu needs to be updated since the restoration has been relocated; it will be prepared and submitted to ADB after the new site has been confirmed.</p> <p>In relation to Naolihe NR, ADB approved a due diligence report in 2004. A new due diligence report was prepared based on an assessment of the situation and approved by ADB on 23 April 2009 and the finalized report was received by ADB on 27 May 2009.</p> <p>In Naolihe NR 102 households (318 individuals) needed to be resettled.¹⁷ Some households were given alternate land for farming, some were trained in cattle or sheep breeding and others were found employment in various</p>							

¹⁷ External Monitoring & Evaluation Report on Resettlement and Alternative Livelihood of Naolihe National Nature Reserve of Heilongjiang Province (NO.1)

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Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs		Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)					
		<p>businesses such as in restaurants. It is claimed that the people's homes are now closer to their new farmland which are also more productive, and thus also requires less investment in equipment. Overall, net annual household income has increased from 2,046 Yuan (2000) to 35,768 Yuan (2008). Houses were also provided from those left vacant by students and retired army officials.¹⁸</p> <p>Relocation does not mean that people are moved from where they live. The type of land use has changed and people have been given other employment. Alternate land is found for farming from outside the NR.</p>							

¹⁸ Ibid.

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Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs		Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)	Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
	3.2.2 At least 3 new livelihood project processed, funded, and tested for possible revolving fund mechanism by year 7 At least three new livelihood projects initiated and operational in or around NRS by project completion	No details as reporting year is in the future.	N/A	N/A	Not scored	Not scored	N/A		
3.3. Ecotourism	3.3.1 Ecotourism feasibility study and master plan guidelines prepared by year 1	The Master Plan on Eco-tourism Development for Sanjiang Plain Area was prepared. The PMO is currently in contact with the Provincial Tourism Department for the incorporation of ecotourism activities into the provincial tourism plan.	While the Master Plan has been submitted for approval, it appears that it has not been vetted by the biodiversity/wildlife sub-component.	2	0	A positive score for conservation since the Master Plan has been developed and steps are being taken for its incorporation into the provincial tourism plan. It is a low score since the plan has not been reviewed by the wildlife sub-component to ensure that what is proposed is ecologically sustainable, which is of fundamental importance. While it is claimed that the EA specialist has established the EMP, the inputs from the wildlife sub-component would be paramount given	Ecotourism received strong support from NRS management, government and some support from villagers. For example, Anbanghe NR has conducted ecotourism since 2005, and enjoys an exemption from the local government on taxation of its income from leasing farmland so it can be utilized for improving tourism infrastructure. This NR earns about 2 million Yuan annually from tourism. This support should ensure active	Ecotourism must be strongly controlled and should not be seen as the solution to the NRS' financial limitations. Ecotourism must be based on functional understanding of the ecosystem and not just on scenic beauty. Let the tourists participate some activities of environment protection. This could include birdwatchers working with the wildlife monitoring	

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				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
						<p>their expert knowledge of the ecosystems and also the specific wildlife components of the projects such as species recovery plans.</p> <p>A neutral score for poverty reduction as the impacts for both local communities as well as NR staff are still potential impacts. It is also not clear how the Master Plan proposes to involve and support local communities.</p>	<p>participation by the NRs and other local stakeholders.</p> <p>The lack of an opportunity for the project's wildlife sub-component to review the Master Plan however is an issue. This would have helped reduce the potential for degradation of the environment due to over-visitation or poor management of visitors and visitor infrastructure.</p> <p>The eco-tourism plan may also need to include the promotion of an adequate regulatory framework regarding the construction of infrastructure such as distances from core areas, use and sourcing of building material, and waste management.</p>	<p>stations.</p> <p>Proximity to urban centres may be an advantage when considering the feasibility of ecotourism.</p>

Project Progress Assessment Framework in April 2010

Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs	Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
	<p>3.3.2 At least 2 replicable NR-based ecotourism pilot projects initiated beginning in year 4 according to appropriate planning and screening processes</p> <p>Economically and environmentally sustainable ecotourism activities in place in 3 NRs by end of Project</p>	<p>Studies on ecotourism are being conducted in Zhenbaodao, and Xingkaihu NRs, and the plan for Anbanghe eco-park is being reviewed.</p> <p>Anbanghe has designed a Wetland Park and is no longer a NR. Focus will shift from conservation to tourism. Anbanghe trying to peruse ecotourism as it is closer to cities and is thus a good test site.</p>	<p>This activity is in progress with results still pending.</p>	1	0	<p>A positive score for conservation to reflect the current progress. The score is low as it is still ongoing and because the conservation implications are not yet clear.</p> <p>A neutral score for poverty reduction as the implications are not yet clear.</p>	N/A	

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Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs		Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)					
Component 4: Education and Capacity Building									
4.1. Conservation Education (schools)	4.1.1 Conservation education programs developed by end of year 1	A Conservation Education Master Plan was produced. However, this has not been reviewed by the Biodiversity component.	A cohesive plan for implementing a systematic education programme in schools.	+2	0	A positive score for conservation given the development of the plan. A low score however as it has not yet been implemented. A neutral score for poverty reduction due to the absence of a direct relationship to poverty.	Awareness and education is a basic element of conservation. The education activities should in the future seek to take children out of the classrooms and into the wetlands so they can better visualize what they are being told.	The local government's support is crucial to the success of conservation education.	
	4.1.2 Teacher kits developed and teachers trained in their use by end of year 4	80 conservation education cards for five species groups were designed and will be printed and distributed to the schools. 7 handbooks for teachers on wildlife species and wetland environmental education were designed, out of which 3 were printed and will be distributed to teachers and also NR	Capacity for incorporating wetlands awareness is schools enhanced. There is however no baseline data on level of awareness to determine the impact of these programme.	+1	0	A positive score for conservation because of the creation of conservation education tools. A low score however due to the fact that some of these are yet to be produced. There is also no baseline data to assess the impact of the distributed material of children's awareness of wetlands and their biodiversity. A neutral score of zero for poverty reduction	Awareness and education is a basic element of conservation. The education activities should in the future seek to take children out of the classrooms and into the wetlands so they can better visualize what they are being told.	A baseline is necessary to be able to identify the impacts of project interventions. The feedback received from post-initiative survey will then facilitate the learning from these initiatives.	

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			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)					
		and government staff. 5 handbooks on wildlife species for students were designed, out of which 2 were printed and will be distributed to students.					due to the absence of a direct relationship to poverty.		
	4.1.3 Conservation awareness program for schools incorporated into curriculum and implemented in pilot elementary and secondary schools in 5 counties starting in year 4 and running for remainder of the Project	Teacher training courses have been designed. Teacher training will be conducted to improve their knowledge of wetlands and wetland protection and their ability to communicate this to students. This will be done in association between the PMO and the provincial Education Department. More than 20 PowerPoint presentations for teachers training have been prepared. 8 pilot elementary and 4 secondary schools around four NR sites (excluding Naolihe and Zhenbaodao NR sites) have been selected.	The Capacity (tools) for incorporating wetlands awareness is schools enhanced. The training courses have not yet been applied in the schools. The pilot programme can demonstrate the importance of wetland education and provide a model for teaching.	+2	0	A positive score for conservation due to the creation of teaching course which increases the capacity for communicating awareness on the values of wetlands to school children. The score is however low as the courses are yet to be applied in the schools. A neutral score of zero for poverty reduction due to the absence of a direct relationship to poverty.	Awareness and education is a basic element of conservation. The education activities should in the future seek to take children out of the classrooms and into the wetlands so they can better visualize what they are being told.		

Project Progress Assessment Framework in April 2010

Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Conservation and Poverty Reduction Outputs		Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)	Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
	4.1.4 Conservation awareness program incorporated into curriculum of schools and implemented in 8 pilot elementary and 4 secondary schools around 6 NR sites within first 4 years of Project, reaching approximately 5,000 school children	In the 12 pilot schools, wetland protection education has been included in their curriculum. Teachers are giving lectures on wetland protection to more than 3,000 students.	+2	0			A positive conservation score because the indicator has been largely met. The score is low because there is no information of how these programmes are changing perspectives and knowledge of students on wetlands. A neutral score of zero for poverty reduction due to the absence of a direct relationship to poverty.	Awareness and education is a basic element of conservation. The education activities should in the future seek to take children out of the classrooms and into the wetlands so they can better visualize what they are being told. Also, the project needs to identify a pathway to incorporate the programmes tested through the pilots formally into the school curriculum at least at provincial level.	
4.2. Conservation Awareness (communities/ SFFs)	4.2.1 Conservation public awareness strategies developed in year 1	A public awareness master plan was produced.	+1	0			A positive score for conservation due to the awareness activities but it is low given the lack of data on any resulting attitudinal or behavioural changes. A neutral score of zero for poverty reduction due to the absence of a direct relationship to poverty.		The support from local government is very important to the success of those conservation awareness works.

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Component	Performance Indicators set by Project	Actual performance (as of March 2010)	Scoring of project outputs		Rationale for the Output Score	Long-term implications of ecosystem conservation and poverty reduction outcomes	Lessons and Good Practices
			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
	<p>4.2.2 Conservation public campaign developed for 5 counties by end of year 4 and carried out over life of the Project</p> <p>Program for conservation on public awareness developed for 13 counties and at provincial level, and carried out over life of the Project, including at least 45% women participants, during the life of the Project.</p> <p>Web site up and running by year 4 and updated at least quarterly thereafter.</p>	<p>Three conservation awareness activities were conducted in 12 communities.</p> <p>A public awareness manual and profile of the Project were printed and distributed to community residents and also schools.</p> <p>10 posters were designed, out of which one was distributed to community residents and also schools. 10 more posters will be designed. 2 PowerPoint presentations for conservation awareness have been prepared.</p> <p>Training courses for community residents designed to improve their conservation awareness.</p> <p>The activities included field trips for farmers and discussions with fishermen on nets used and which are legal</p>	+2	+1	<p>A positive score for conservation due to the various awareness activities, but is low due to the lack of data on their impacts.</p> <p>A positive score for poverty reduction due to the training on bee keeping. The score is low as we do not know how many people were trained and how many have in fact applied the training.</p>	<p>The dialogues with farmers and fishermen appear to be of particular significance, but it is not clear how these will be followed up.</p>	

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			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)	Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
4.3. Wetland Management Training	4.3.1 Training needs assessment completed by end of year 1	<p>and which are harmful.</p> <p>Two programmes on alternate livelihoods (bee keeping) conducted in Ambanghe NR in which members from communities close to the other NRs participated.</p> <p>A website of the Project was designed and is in a testing phase for uploading to the server.</p>			+5	0	<p>A high positive score for conservation since the indicator has been met.</p> <p>A neutral score of zero for poverty reduction due to the absence of a direct relationship to poverty.</p>		<p>The training need is not just to train existing staff, but to bring in better trained recruits as this affects the quality of data. This has started to happen.</p>

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			Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)	Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
		<p>questionnaires were collected from 219 government officials and NR staff.</p> <p>A master training plan was produced and endorsed by ADB in September 2008. Some PowerPoint presentations for management training awareness have been/will be prepared.</p>							
	<p>4.3.2 Beginning in year 2 short-term training courses for technical NR staff</p> <p>Beginning in year 2, formal higher level courses for professional level NR staff</p> <p>Exchange programs, study tours, internships, and workshops proceeding according to yearly program</p> <p>Comprehensive, targeted awareness training administered</p>	<p>24 short-term training courses have been conducted for about 1,000 people including Directors of PIUs and staff and community leaders.</p> <p>Domestic study tours to Poyang Lake in Jiangxi Province and Mai Po in Hong Kong were conducted in October 2008 and September 2009, respectively.</p> <p>An international study tour to the USA was conducted in November 2009.</p>	Capacity to better administer and monitor the NRs enhanced.	+2	0	<p>A positive score for conservation in light of the various training, but the score is low since there is no evidence of how management has actually improved as a result.</p> <p>A neutral score of zero for poverty reduction due to the absence of a direct relationship to poverty.</p>		<p>Recruiting new staffs, especially the technical staffs, should be paid high attention at each NR.</p>	

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				Conservation Score (+5 to -5)	Poverty Reduction Score (+5 to -5)			
	<p>to 300 NR staff and to 20 community leaders in 13 counties</p> <p>Comprehensive, targeted awareness training administered to at least 15 NR managers and staff during life of the Project</p>	<p>Conducted water bird monitoring training to NR staff every spring and autumn. 25 staff spread between the 6 NRs are now trained in water bird monitoring techniques.</p> <p>Wetland management training courses designed for government and NR staff.</p> <p>Based on the master training plan, short and long-term training courses, study tours, workshops, etc. will be conducted for government staff (including local forestry bureau staff and PMO staff) and most NR staff (including Directors, professional level staff, and technical staff).</p>						

ANNEX 3: CONSERVATION AND POVERTY REDUCTION SCORES FOR PROJECT OUTPUTS

Component 1: Watershed Management		
	C	PR
Forestry Investments		
1.1.1	4	4
Sub-Total	4	4
Ave. Score	4	4

Component 2: Wetland Nature Reserve Management		
	C	PR
Conservation Management		
2.1.1	4	0
2.1.2	3	0
2.1.3	0	0
2.1.4	0	0
2.1.5	3	0
Sub-Total	10	0
Ave. Score	2	0

Component 3: Alternate Livelihoods		
	C	PR
Intercropping and NTFP		
3.1.1	0	0
3.1.2	2	4
3.1.3	-	-
3.1.4	0	4
Sub-Total	2	8
Ave. Score	0.7	2.7

Component 4: Education and Capacity Building		
	C	PR
Conservation Education (schools)		
4.1.1	2	0
4.1.2	1	0
4.1.3	2	0
4.1.4	2	0
Sub-Total	7	0
Ave. Score	1.8	0

Local (NR) Level Water Resource Planning		
	C	PR
1.2.1	5	0
1.2.2	4	0
1.2.3	5	0
Sub-Total	14	0
Ave. Score	4.7	0.0

Pilot Wetland Restoration		
	C	PR
2.2.1	2	5
2.2.2	0	0
2.2.3	2	0
2.2.4	0	0
2.2.5	2	5
2.2.6	-	-
Sub-Total	6	10
Ave. Score	1.2	2

Ecologically Sustainable Alternative Livelihoods		
	C	PR
3.2.1	1	4
3.2.2	-	-
Sub-Total	1	4
Ave. Score	1	4

Conservation Awareness (communities/SFFs)		
	C	PR
4.2.1	1	0
4.2.2	2	1
Sub-Total	3	1
Ave. Score	1.5	0.5

Watershed-Level Water Allocation Plan		
	C	PR
1.3.1	4	0
1.3.2	5	0
1.3.3	5	0
Sub-Total	14	0
Ave. Score	4.7	0

Wildlife Species Recovery		
	C	PR
2.3.1	2	0
2.3.2	1	0
Sub-Total	3	0
Ave. Score	1.5	0

Ecotourism		
	C	PR
3.3.1	2	0
3.3.2	1	0
Sub-Total	3	0
Ave. Score	1.5	0

Wetland Management Training		
	C	PR
4.3.1	5	0
4.3.2	2	0
Sub-Total	7	0
Ave. Score	3.5	0

Reduction of Unsustainable Harvesting in NRs		
	C	PR
2.4.1	1	0
2.4.2	1	0
2.4.3		
Sub-Total	2	0
Ave. Score	1	0

Total	32	4
Ave. Score	4.6	0.7

Total	21	10
Ave. Score	1.3	0.6

Total	5	12
Ave. Score	1.0	2.0

Total	17	1
Ave. Score	2.1	0.1

C = Conservation; PR = Poverty Reduction