

Development of Sustainable Alternative Livelihoods and Community Participation in the Management of Wetland Resources in the Sanjiang Plain: A Proposal for the Poverty and Environment (PEP) Fund

A. BASIC DATA	
1. Activity Title:	Development of Sustainable Alternative Livelihoods and Community Participation in Sustainable Wetland Management in the Sanjiang Plains
2. ADB Project Officer:	Lourdes Adriano, ECAE, ECRD
3. Requested Date:	November, 2004
4. Implementing Organization:	Forestry Department of Heilongjiang Province (FDHP) (Executing Agency) Center for Integrated Agricultural Development (CIAD), China Agricultural University (Implementing Organization)
5. Types of Intervention:	Pilot interventions and information dissemination activities
6. Amount of Request:	US\$250,000
7. Period of Project:	2 years
8. Country/Province:	People's Republic of China (PRC)/Heilongjiang Province
B. DESCRIPTION OF IMPLEMENTING ORGANIZATION	
<p>In the 2003 Heilongjiang Wetland Regulations, the provincial government designated the FDHP as the lead government agency that will take full responsibility of ensuring sustainable management of the province's wetland resources. The ADB-proposed Sanjiang Plain Wetlands Protection Project (SPWPP), which is expected to start in 2005, will have the FDHP as its implementing agency. The lessons learned from this subproject can immediately feed into the SPWPP and enhance the implementation of the proposed project, particularly its components on (i) Wetland Nature Reserve Management, (ii) Alternative Livelihood, and (iii) Education and Capacity Building.</p> <p>The implementing organization for this PEP-funded subproject will be the CIAD. It will work closely with and will provide periodic feedback to the FDHP. Established in 1988, CIAD is part of the China Agricultural University. It is the first university-based organization in PRC, which offered a holistic and comprehensive approach to sustainable development in the countryside by performing in an integrated manner, multiple functions-- implementation of community-driven projects, rural development action and policy research, training on participatory approaches to sustainable development in the countryside, and consultancy services on policy analysis and advocacy. In the past 15 years, CIAD has developed a track record on a participatory, development-oriented and multi-disciplinary approach to rural and sustainable development in the PRC and is recognized in this field, both nationally and internationally. It operates with a team of qualified professionals- 10 professors, 24 associate professors and senior researchers and 9 assistant researchers. All professional staff members have more than 10 years of work experiences especially in implementing multilateral/bilateral-funded projects; have obtained graduate degrees abroad in agriculture, environment, economics, and other related areas, and can communicate both in Chinese and English. The annual budget of CIAD is about US\$600,000.</p>	
C. PROPOSED SUBPROJECT	
<p>1. Background and Rationale</p> <p>The Sanjiang Plain, a vast complex of marshes, meadows and forests, which is located on the northeast of Heilongjiang Province, PRC and along the Russian border, became a major focus of the government's national grains production program. Starting in 1949, agricultural development programs transformed the Sanjiang Plain from an almost uninhabited wilderness into one of PRC's top eight grains producing centers of corn, soybeans, and rice. Conversion of the wetlands/forest areas to farmland was exacerbated in the last decade when the heavy industries in the province had to shut down and many of its laid-off workers were encouraged by government to shift to farming. Thus, the proportion of employed people in the primary/resource-based sector jumped from 37% in 1995 to 50% in 2002. The number of rural labor force was 9.3 million in 2002 with about 80% of them engaged in farming and close to half are women.</p>	

The transformation of the Sanjiang Plain to agriculture use was accomplished however, at considerable environmental cost. The immense networks of drainage channels, pumping stations, and flood control dikes that were built in the Plain destroyed millions of hectares of natural marshes and wet meadows, and altered the water cycle of the entire watershed. Deforestation and cultivation of hillsides caused severe soil erosion, diminished water retention capacity of uplands, and increased the vulnerability of farmlands to both floods and droughts. By 2000, over 5,000,000 hectares of wetland and forest had been put under cultivation. Forests and wetlands now cover only 10% and 8%, respectively of the Sanjiang Plains.

In recent years, the national government and the Heilongjiang Provincial Government (HPG) recognized the importance of protecting the wetlands and their watersheds in ensuring the county's sustainable development path. They have adopted policies that emphasize environmental protection and conservation of water, forests, wetlands, and bio-diversity. Similarly, the Country Strategy and Program (CSP) of ADB for the PRC for 2004-2006, also highlighted sustainable use of natural resources as one of its strategic actions for pro-poor growth.

At the request of the Government of the PRC, the ADB provided a project preparatory technical assistance, *PPTA 3998-PRC: Sanjiang Plain Wetlands Protection Project*. A fact finding for the proposed loan investment was done last April 2004 and a draft RRP was prepared, *PRC: Sanjiang Plains Wetlands Protection Project (SPWPP)*. Implementation of the project is expected on 2005. The proposed SPWPP adopts a holistic approach to sustainable development that (i) would protect the natural resources of the Sanjiang Plain wetlands and their watersheds from the continued threats of hydrology changes and desiccation, inappropriate resource use of the Nature Reserves, and conversion of wetlands to farmland; and (ii) would promote the sustainable use of these resources through integrated conservation and development of selected wetlands and forest areas of the Sanjiang Plains. The response measures of the Project include: (i) watershed management (component 1), (ii) wetland nature reserve management (component 2), (iii) alternative livelihoods (component 3), (iv) education and capacity building (component 4), and (v) project implementation (component 5).

The SPWPP is essentially an environment project that would test case environment-friendly technologies, practices, activities, and institutional reforms. It does not focus on the environment-poverty nexus. The SPWPP's target beneficiaries are mostly state farm workers, 90% of whom are non-poor and 956 persons (about 302 households) who will be resettled as a result of the conversion from farmland to wetland. The project sites cover 3,442 has of farmland to wetland in 6 nature reserves in Heilongjiang and affecting 18 counties.

The proposed PEP subproject will not only complement the proposed SPWPP but will also add value to the implementation of SPWPP, specifically its components 2 and 3, and will provide lessons learned that can be replicated by the HPG. The PEP subproject would focus on the environment-poverty nexus. Its prospective beneficiaries would be poor farmers, poor forest workers, and poor minority groups (Koreans who live along the Naolihe River) who reclaimed the wetland area legally (due to the wetland conversion programs in the 1980s) or illegally (farmland expansion to compensate for the low yield caused by flooding and other natural calamities) and whose main income source is farming these lands. The PEP subproject would focus on the poorest county, Raohe (which is also one of the counties of the SPWPP) and its poor villages that are adjacent to the Naolihe nature reserve but are not covered by the SPWPP.¹ As for the alternative livelihood component of the SPWPP, 3 fairly progressive counties have been selected and 3 non-timber forest products (NTFPs- Ionicera, wild grapes, and pot herbs) have already been identified as the alternative livelihood schemes. The PEP subproject on the other hand would explore other NTFPs using the community-based DFID-initiated livelihood development approach.

While rural poverty incidence in Heilongjiang province is not large (9.7% of total population), in absolute

¹ In the Naolihe nature reserve, the HPG plans to convert 24,012 has of farmland to wetland, which would adversely affect 43,700 persons.

number it still accounts for 3.73 million people. Of this total rural poverty population, 1.53 million are in absolute poverty with a per capita net income below CNY625, and 2.2 million of poor population with a per capita net income of CNY625-865. There are 15,580 poor villages with a total land area of 7.8 million has. The land use of these poor villages is 35% farmland (mainly wetland/forest areas that have been converted to cultivable land), 14% forestland, 4% water body, and 12% grassland. Average farmland per capita is 0.44 ha, fairly large compared to the national average farm size of two-fifteenth of a ha.

Majority of the poor rely on farming lands that were previously wetland or forest areas. Key factors for their income poverty are (i) low productivity of converted farmland, which in turn is exacerbated by the extensive (rather than intensive) use of the land and the vulnerability of the area to environment-related natural disasters like drought, water logging, flood, and soil erosion; (ii) limited alternative livelihood and jobs (as shown by the high underemployment; and (iii) lack of productive and environment-friendly skills.

While local governments have prioritized the protection of natural resources as one of their priority agenda, they tend to address the environment concerns without putting equal emphasis on the poverty and other social issues (like gender and focus on minority groups) and on cooperating with other sectors (such as poverty alleviation office). Local governments have also initiated some alternative livelihood measures for the farmers, but many of these were not sustainable because these were not tailored to local situations; employed a top-down approach; and had potentials of widening the income gap between the rich and the poor.

To ensure sustained development of existing wetlands and farmlands that will be converted to wetlands, the proposed PEP subproject would develop options for broadening the income and job options of the poor households especially those residing in the adjacent areas of the nature reserves, taking into utmost consideration the local economic and social conditions. Moreover, poor households in these areas will need to have ownership in the management of these natural resources. The proposed sub-project will develop innovative sustainable livelihood options for the poor households that are participatory, that maximize environment-friendly technologies and practices, and are community-based.² In addition, it will explore innovative mechanisms for developing community-based natural resource management schemes so that the poor can co-exist with its natural resource environment. The lessons learned from the sub-project will help provide the basis for recommending policy measures that can be adopted at the provincial level.

2. Objectives

The goal is to increase farmer's income and reduce poverty in the Sanjiang Plains through sustainable development approaches that address the poverty and environment nexus in poor villages in Raohe county that are adjacent to the Naolihe nature reserve. The specific objectives of the subproject are to: (i) develop and pilot test sustainable alternative rural livelihood activities in poor villages, (ii) develop and pilot-test participatory-based co-management of wetland reserves with community-based organizations (CBOs), nongovernment organizations (NGOs), and/or local government; and (iii) to recommend and introduce policy measures that address the poverty-environment nexus on a sustainable and participatory based manner.

Raohe county is the selected site for the proposed PEP sub-project. It has 93 poor villages, 23,0000 poor households, and 57% poverty incidence (or number of poor households to total number of households in the county). Of these villages, at least 3-5 villages would be selected as the subproject sites. Majority of the poor in this county rely on farming lands that were previously wetland or forest areas. The specific beneficiary targets are (i) poor farm households (including women farmers) who rely on farming wetland

² The proposed project will apply a participatory approach in planning, implementing, and monitoring and evaluating the sustainable natural resource management and alternative livelihood activities so that the people who will be affected by the land conversion program would have ownership of the plans and processes, including the management of the natural resources. Where appropriate, the Sustainable Livelihood Approach (SLA) created by DFID will be applied as the framework to design, plan, and implement the proposed project. CIAD will also conduct the action research for the process and outcome of the proposed project, so that the lessons and experiences in developing sustainable co-management models and alternative livelihoods could be disseminated in other natural reserve management of Heilongjiang Province.

<p>areas that they have converted to farmland through legal and illegal means (or do not have user rights lease from the local government); (ii) minority groups (Korean minority groups) who are also farming wetland areas without any legal user rights contract from government; and (iii) forest workers who depend mainly on farming wetland areas as their major income source.</p>
<p>3. Scope of Work/Description of Proposed Approaches</p> <p>Outputs and Activities: The outputs of the subproject are: (i) development of sustainable livelihood activities in 3-5 villages in Raohe, which are environment-friendly, (ii) improved capacities of the community through formation/strengthening of CBOs in the management of natural resources and through tripartite partnerships with local governments and other non-governmental organizations (NGOs, and (iii) policy measures of the PRC's Wetlands Conservation Program in addressing the poverty-environment nexus in Heilongjiang Details of activities are shown in Appendix 1.</p>
<p>Consultation process: The participatory process will be an iterative process involving major stakeholders, including the prospective poor farm households, CBOs, local government, women's and minority groups associations, and local government agencies. Needs assessment and feedback mechanisms will be undertaken in a transparent and participatory manner, employing appropriate participatory techniques. Involvement of these stakeholders will be ensured in every phase of the subproject cycle, especially in formation and strengthening of CBOs. Monitoring and evaluation systems at localized levels will be developed to ensure that communities take charge of this important process and operate them even after the subproject's term.</p> <p>Stakeholders and Roles: (i) CIAD will play a catalytic role, harnessing its work experience on sustainable livelihood approaches, community organizing, participatory techniques, and policy research and advocacy. It will maximize the use of current participatory approaches technologies, adapting them to the local environments, building up capacities of local community and other prospective partners in applying participatory community development, and conducting the policy action research and providing and advocating policy recommendations on the schemes of development of alternative livelihoods and co-management of natural resources. (ii) At the government level, these are: the State Agricultural Farms who will be actively involved and will participate in the land conversion aspect and has a strong interest in the development of alternative livelihood activities within their jurisdiction. (iii) Local Women's Federations will mobilize women's participation. (iv) Local Poverty Alleviation Offices will assist in helping the poor develop alternative livelihoods; and (v) the line agencies that will provide technical and extension support in the subject matter issues related to the alternative livelihood options proposed by the beneficiaries. At the NGO side, (vi) local NGOs such as local farmers' technical organizations would promote farmers' participation and enhance farmers' bargaining power.</p> <p>Social Issues: In general, the beneficiaries are reluctant to bear the technical, market, financial, and institutional risks in developing alternative livelihoods. To help them develop the sustainable livelihoods, comprehensive support on technical, market, and financial support should be provided to the beneficiary groups. Moreover, women are actively participating in the production and house chores activities in the subproject areas, but they have less access to education and credit services in comparison with men. Local program officials also lack gender sensitivities. Gender-related programs and trainings will be undertaken,</p>
<p>4. Workplan and Reporting</p> <p>The proposed PEP subproject will be for 2 years, with an anticipated date of start of implementation by November 2004. Detailed work plan is in Appendices 3 and 4. CIAD will produce (i) an inception report, (ii) midterm report, a draft final report, (iv) an exit strategy that states the sustainability mechanisms for the alternative livelihood and the co-management schemes as well as the action plan for the replication; and (v) a final report. Each quarter, CIAD will submit a progress report describing progress to date against an agreed work timetable, problems encountered and action/s taken, and anticipated problems or delays in the conduct of the subproject. The ADB and the executing agency will be provided with these reports.</p>
<p>5. Expected Output and Outcomes</p> <p>The performance indicators for the inputs, activities, outputs, and outcomes are detailed in Appendix 2.</p>
<p>6. Subproject Evaluation and Information Dissemination</p> <p>Incorporated in the action plans of the 3-5 communities will be the M&E system (including indicators,</p>

inputs, outputs, and outcomes) and mechanisms that have been developed by the communities themselves, in partnership with other major stakeholders like local government agencies and local NGOs. At the community level, practical and simple systems of disseminating information will be developed on the status of subproject with community members/CBOs/ and other stakeholders. Village meetings will also serve as regular feedback of subproject's progress. Inter-community exchanges among villages will be done to facilitate views on best practices. Periodic dialogues with major stakeholders will be undertaken at community/county level; a multi-stakeholder steering committee may be established at the village/county level to address conflicts. In the case of the policy action research and reform, briefing materials and seminars, workshops, and at least 1 conference at provincial level will be held to disseminate the policy reform recommendations. Study tours by policy makers in the villages will also be done.

7. Scope of Replication/Use in other DMCs

There is much scope for replication of the lessons to be generated from the subproject, considering that (i) as earlier mentioned, the national government itself has stressed the importance of and is committed to increasing farmer's income and addressing environmental concerns as priority agenda of the government in the next 2 decades; and (ii) poverty-environment nexus is one of the primary complex issues afflicting the western and poor western regions of PRC. The good practices that will emerge from the subproject will have relevance to other DMCs with similar agro-ecology environments, such as Mongolia.

D. COST ESTIMATE AND DISBURSEMENT SCHEDULE

The total cost of the subproject is \$334,000, of which \$250,000 (or 75% of the total cost) is to be financed through the Poverty and Environment Project Fund and \$84,000 (or 25%) is counterpart funds from the FDHP, CIAD, other local government agencies, CBOs, and beneficiaries. Detailed cost breakdown is shown in Appendix 5.

E. PROPOSED SUBPROJECT MANAGEMENT SYSTEM

A steering committee will be established at the county level, comprising officials from the FDHP, county Forestry Bureau, State Agriculture Farm, CIAD, and representatives from CBOs/NGOs. It will provide the policy guidance in the subproject development and through CIAD, will provide periodic reporting to ADB and the provincial government. At the village levels, similar steering committee levels will be established, with representations from poor farm households, minority groups, and women's groups. It will oversee the implementation of the subproject, providing monthly status reports to the county level committee. The CIAD will establish a project management office (PMO) at the county level to facilitate the implementation and financial aspects of the subproject. The Forestry Department at the county level will provide the office space and some staff for the PMO. The PMO will submit quarterly reports, detailing implementation activities, physical and financial accomplishments, problems encountered or anticipated, and actions to be taken to resolve the problems. The PMO will maintain records and accounts in accordance with sound accounting principles, and sufficiently disclose the use of funds under the subproject. It will consolidate the subproject accounts to be audited annually by independent auditors acceptable to ADB.

The steering committee will set up a special group to manage the revolving fund. This group will include the members from FDHP, county Forestry Bureau, CIAD, and representatives of the communities. Each selected sub-project village will set up about 3-5 person managing group to manage the revolving fund. The members and the leader in this village managing group will be selected by farmers themselves. The farmers who want to use the revolving fund have to set up a 5-person group to ensure the repayment of the revolving fund. The interests and the terms of the revolving fund will be determined by discussion among all the farmers, and within the given scope and criteria drafted by the steering committee. The project township Rural Credit Cooperatives will set up a separate bank account for the revolving fund. The steering committee will review the proposals for using the revolving fund and then decide whether to disburse the money. At the village level, each use of the money should have at least three witnesses: 1 accountant, 1 cashier, and the farmer who borrowed the money. CIAD consultants will check the use of the fund when they visit the project villages on a regular basis. The exit strategy will include the mechanisms for ensuring the sustainability of the revolving fund.

Three domestic consultants will be engaged in the needs assessment, action plan, implementation, monitoring and evaluation, and policy study and advocacy (please refer to Appendix 6 for the Terms of Reference). Consultants will be recruited using the ADB's *Guidelines on the Use of Consultants*.

OUTPUTS AND ACTIVITIES

Output	Activity
<p>(1) Development of sustainable livelihood activities in 3-5 villages in Raohe, which are environment-friendly</p>	<p>Activity 1.1: Community-based needs assessment (through qualitative surveys and inventory maps) to get consensus among community members of the resources and assets that they have; the prioritization of their needs and concerns; and importance of sustainable management of natural resources</p> <p>Activity 1.2: Selection by the communities in a participatory manner on alternative on-farm and off-farm livelihood options that harness local indigenous knowledge on wildlife and plant species and which ensure sustainable use and management of the agro forest ecosystem. The livelihood options that will be put on the ground fall into four categories: (i) organically produced agricultural products (e.g., medicinal herbs, traditional rice varieties, sweet potatoes, vegetables, native fruit trees (jackfruit, pomelo, etc.) spices) (ii) forest-related products, (e.g., production of wild vegetables like sweet vegetables and snake acacia, jungle tea, wild fruits, oil from trees, ornamental plants like orchids that are grown on tree trunks, and different grassland varieties for fodder), (iii) livestock or animal raising underneath trees or combined with planting agriculture crops (bee farming and honey production, rabbits, chicken); and (iv) upstream/downstream activities like eco tourism services, traditional paper-making, handicrafts making, marketing/trading activities of cash crops and agriculture inputs like indigenous seeds propagation, organic fertilizers, and/or experiment on sustainable farming practices that take advantage of tested-indigenous technologies (e.g., cultivation of multi-functional trees like a common mulberry tree species for fodder and traditional paper-making, with orchid tree (a multi-purpose species for vegetable, fodder, timber, and medicine).</p> <p>Activity 1.3: Evaluate and approve the livelihood options from the technical, environmental, financial, and market perspectives by the execution agencies and related experts.</p> <p>Activity 1.4: Develop the implementation plan together with the community to implement the approved livelihood activities.</p> <p>Activity 1.5: Develop with communities a monitoring and evaluation (M&E) mechanism.</p> <p>Activity 1.6: Set up and function of the revolving fund management committee to fund parts of the livelihood activities of the beneficiaries.</p> <p>Activity 1.7: Build up community capacities in sustaining sustainable livelihoods by the setting up and functioning of the project implementation and supervision groups at the community levels.</p> <p>Activity 1.8: Build up network for the communities with related organizations, such as marketing organizations and concerned government agencies (like county poverty alleviation office and forestry bureau), and financing mechanisms, e.g., revolving fund).</p> <p>Activity 1.9: Develop with communities exit strategy to ensure sustainability of livelihood schemes and the community-based management of natural resources.</p>
<p>(2) Improved capacities of the community through formation/strengthening of CBOs in the management of natural resources and through tripartite partnerships with local governments and</p>	<p>Activity 2.1 Plan and implement in a participatory manner, the natural resource management activities with communities adjacent to the natural Reserve</p> <p>Activity 2.2 Design, test, and impart operational tools (including GIS inventory mapping) and processes at the community levels for conducting appropriate assessments of material resources in upland areas.</p>

other nongovernmental organizations (NGOs).	<p>Activity 2.3 Recover and incorporate indigenous knowledge into natural resource management</p> <p>Activity 2.4 Provide training to the communities on natural resource management and good farming techniques and practices evolved from indigenous knowledge</p> <p>Activity 2.5 Setting up and functioning of the community natural resource management groups (CBOs) and developing partnership contract arrangements with local governments and NGOs</p>
(3) Policy and institutional reforms of the PRC's Wetlands Conservation Program in addressing the poverty-environment nexus in Heilongjiang and possibly, in poor western regions of PRC.	<p>Activity 3.1 Conduct policy analysis and case studies for the implementation of the alternative livelihoods</p> <p>Activity 3.2 Advocate the policy recommendations to policy-makers through briefing papers, workshops, and local study tours to the sites</p> <p>Activity 3.3 Disseminate the models to other natural reserves in Heilongjiang and in PRC</p> <p>Activity 3.4 Disseminate the models to other consulting work related to rural development and natural resource management</p>

PERFORMANCE INDICATORS

	Indicator
Input	Domestic consulting services for 12 person-months, equipment, capacity building packages, surveys, GIS maps, grants for pilot and co-management activities, support costs= \$305,000, of which \$250, 000 is proposed from PEP and \$55,000 as counterpart from CIAD, local government and agencies, beneficiaries, CBOs in terms of cash, kind, and labors.
Activity	-3-5 qualitative surveys for needs assessment; 10 skills building for livelihood; 3-5 capacity building training for CBOs; 3 inter-community exchanges; 3-5 needs assessment (including inventory mappings of natural resources and assets) and plan development activities; revolving fund for alternative livelihood activities for villages; 3-5 co-management capacity building in 3-5 villages; 1 policy research; 5 advocacy activities for policy reforms through briefing seminars, workshops, and study tours by policy makers in subproject sites; 1 provincial conference; exit strategy formulation process; a community-based monitoring and evaluation system, partnership with related NGOs, government agencies, and academies.
Output	<ul style="list-style-type: none"> • Community-based needs assessment and action plan for 3-5 poor villages in Raohe county on alternative livelihood and co-management of natural resources • At least 100 poor farm households/minority groups, etc. and/or 3 CBOs with alternative livelihood activities that are in place in each of the 3-5 villages • 3-5 co-management mechanisms in the villages • One policy measure in Heilongjiang Wetland Conservation Program incorporating lessons learned from PEP subproject • At least 40% of participants in livelihood activities and public decision-making in each village are women and from minority groups • At least 1 CBO per village has been organized, 2 tripartite partnership contract arrangements • At least 40% of farm households and local government units in each village has participated in the training and capacity building activities • An exit strategy
Outcome	<ul style="list-style-type: none"> • Per capita net income of poor beneficiaries in the 3-5 villages would increase by 20% • Poverty incidence to decrease from 57% (for verification during start of project implementation to establish the benchmark) to 50%, or a decrease of 10%
Replication Potential	In the 10 th People's Congress held in March 2004 in Beijing, the central government stressed increasing farmer's income and addressing environmental concerns as the priority agenda. Participatory approaches to community development in addressing these concerns were also equally stressed as future modus operandi operations of central and local governance. Two government agencies, the Poverty Alleviation Office and the Forest Department, are keen in replicating successful experiences that tackle the environment-poverty nexus and have strong relevance in the poor western regions. The subproject's experiences, which address precisely this concern, could serve as pilots for replication at the provincial level. The Forestry Department and Poverty Alleviation Offices taking the next steps of the replication phase.
Constraints	Because of cold climate and distance of villages from markets, the menu of agri-based products may be limited.
Risks	Market, technical, and financial risks for the livelihood products

WORK PLAN

Output 1: Development of sustainable livelihood activities in 3-5 villages in Raohe, which are environment-friendly

Activity	Time
Activity 1.1: Community-based needs assessment	Month 1-3
Activity 1.2: Selection by the communities in a participatory manner on alternative on-farm and off-farm livelihood options	Month 1-3
Activity 1.3: Evaluate and approve the livelihood options from the technical, environmental, financial, and market perspectives by the execution agencies and related experts.	Month 4
Activity 1.4: Develop the implementation plan together with the community to implement the approved livelihood activities	Month 5
Activity 1.5: Develop with communities a monitoring and evaluation (M&E) mechanism	Month 5
Activity 1.6: Set up and function of the revolving fund management committee to fund parts of the livelihood activities of the beneficiaries	Month 5-22
Activity 1.7: Build up community capacities in sustaining sustainable livelihoods by the setting up and functioning of the project implementation and supervision groups at the community levels.	Month 5-22
Activity 1.8: Build up network for the communities with related organizations	Month 6-22
Activity 1.9: Develop with communities exit strategy to ensure sustainability of livelihood schemes and the community-based management of natural resources	Month 20-22

Output 2: Improved capacities of the community through formation/strengthening of CBOs in the management of natural resources and through tripartite partnerships with local governments and other non-governmental organizations (NGOs)

Activity	Time
Activity 2.1 Plan and implement in a participatory manner, the Natural resource management activities with communities adjacent to the natural Reserve	Month 3-22
Activity 2.2 Design, test, and impart operational tools (including GIS inventory mapping processes at the community levels for conducting appropriate assessments of material resources in upland areas.	Month 2-3
Activity 2.3 Recover and incorporate indigenous knowledge into natural resource management	Month 2-22
Activity 2.4 Provide training to the communities on natural resource management	Month 6, 10
Activity 2.5 Setting up and functioning of the community natural resource management groups (CBOs) and developing partnership contract arrangements with local governments and NGOs	Month 6-22

Output 3. Policy and institutional reforms of the PRC's Wetlands Conservation Program in addressing the poverty-environment nexus in Heilongjiang and possibly, in poor western regions of PRC.

Activity	Time
Activity 3.1 Conduct policy analysis and case studies for the implementation of the alternative livelihoods	Month 13-22
Activity 3.2 Advocate the policy recommendations to policy-makers through briefing papers, workshops, and local study tours to the sites	Month 22-24
Activity 3.3 Disseminate the models to other natural reserves in Heilongjiang and in PRC	Month 22-24 and beyond
Activity 3.4 Disseminate the models to other consulting work related to rural development and natural resource management	Month 22-24 and beyond

WORK PLAN IN CHART

Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
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COST ESTIMATES

Item	Partner Contribution*	Requested \$	Total	Disbursement
Consultants		45,000	45,000	Year 1, 2
Equipment	8,000 (use of office equipment of CIAD and farm implements of beneficiaries)	5,000	13,000	
Travel and Allowance in field	5,000 (local government agencies participating in field)	8,000	13,000	Year 1, 2
Training, seminars, conferences, and other participatory techniques (inter-community exchanges, etc.)	8,000 (venues at local levels; extension services from related government agencies)	20,000	28,000	Year 1, 2
Surveys and maps	5,000 (local government services for maps, and documents and materials about villages)	10,000	15,000	Year 1.5, 2
Investment in Alternative Livelihoods Activities (financial and material input in income-generation activities, cost of technical trainings, etc.)	35,000 (labor particularly for beneficiaries and counterpart fund from local government agencies)	95,000	130,000	Year 1.5, 2
Investment in Co-management of Natural Resources Activities (financial and material input, and technical training)	15,000 (FDHP, Women's Federation, Minority groups Associations, Farmers' groups)	35,000	50,000	Year 2
Miscellaneous and administrative costs	8,000 (office space at county level of FDHP, utilities, staff remuneration)	5,000	13,000	Year 1, 2
Contingency		27,000	27,000	Year 1,2
Total Expenses	84,000	250,000	334,000	

* Partner contribution will be from CIAD, FDHP, other local agencies, and beneficiaries

OUTLINE TERMS OF REFERENCE FOR DOMESTIC CONSULTANTS

The Poverty and Environment subproject will be implemented over a period of 24 months. Phase 1 will comprise 4 months for assessment and analysis, and 2 months for village planning. Phase 2 will comprise the last 18 months for pilot testing alternative rural livelihood activities, capacity building and institutional strengthening for community-participation in the management of the wetland areas, a policy study, advocacy and public awareness programs. A team of domestic consultants from a multidisciplinary background will be deployed in the conduct of the assessment, action-planning phase at the village level, capacity building of community-based management of the wetland areas, and policy study cum advocacy.

1. Sustainable Livelihood Specialist/Team Leader (5 person-months)

- (i) Provide project management for the TA, overseeing administrative and logistical requirements of the subproject.
- (ii) Be primarily responsible for assessing participating villages in terms of livelihoods, assets, and agro-ecological conditions, employing participatory quantitative and qualitative approaches. The consultant will provide reports on the assessments made.
- (iii) Provide expert guidance in the conduct of assessing participating villages in terms of livelihoods and assets employing participatory qualitative approaches.
- (iii) Facilitate the development by the communities of their respective village-level sustainable alternative rural livelihood action plans, which will include a sustainable alternative rural livelihood matrix and investment requirements, identification of methods of funding, and capacity building requirements.
- (iv) Provide reports on all assessments and plans developed. Distribute reports and plans to village and other local stakeholders, the county level, the executing agency, and ADB.
- (v) Identify opportunities for involving stakeholders particularly community based organizations, farmer's/women's/minority groups, other local networks, and NGOs in assessment, capacity building, training, policy advocacy, and awareness raising.
- (vi) Design implementation, and monitoring and evaluation mechanisms for these activities and implement these designs.

2. Agro-ecology Specialist (3 person-month)

- (i) Provide a background report on agricultural and livelihood practices and its impact on the environment, and other environmental issues in the project areas. The report should give an environmental brief identifying key agricultural and livelihood practices that impact on the project area's environment and natural resources.
- (ii) Coordinate resources allocated for asset and natural resource mapping. Provide maps and associated analysis as inputs to the assessments to show the poverty,

agro-ecological environment, and livelihood/asset landscapes. Organize consultation with stakeholders to validate maps.

- (iii) Provide expert guidance and participate in the conduct of assessing participating villages in terms of environmental sustainability of livelihoods.
- (iv) Identify relevant stakeholders for protecting natural resources, and determine opportunities for the community-based organizations, environmental protection bureau and environmental NGOs to participate in all aspects of community-based resource management formation and strengthening activities.
- (v) Assist in the capacity building of the community-based organizations and other local partners involved in the community-based resource management at the village levels.

3. Public Policy Specialist (4 person-months)

- (i) Review and assess the national and provincial policies relating to the wetland conversion program and their impact on farmer's income, agriculture/rural development, poverty reduction, and sustainable use and management of natural resources.
- (ii) Provide pragmatic policy recommendations and conduct policy forums and dialogues with local and national policymakers on the findings of the study..
- (iii) Drafting policy briefs that emanate from the study and design the advocacy activities for the dissemination of the study findings and for ensuring appropriate policy reforms and actions are undertaken.