Forest and Grasslands Task Force

Report to CCICED
2001 Annual Meeting

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I. Background

The Western China Forests and Grasslands Task Force was established in response to the Government's increased policy emphasis on both forests/grasslands management and on the economic development of Western China. With the catastrophic flooding of the Yangtze River in 1998 and recurring drought in the Yellow River Basin, the Government acknowledged the severity of upstream ecological degradation and its consequent downstream inimical effects. In addition to frequent and sometimes disastrous flooding, other adverse downstream impacts of upstream ecological degradation include siltation of reservoirs, water shortages, and severe dust storms, such as those experienced recently in Beijing.

To address the problems, the Government first instituted the Natural Forest Protection Program (NFPP), which includes a logging ban in provinces in the middle and upper reaches of the Yellow River and upper reaches of the Yangtze River and a logging reduction in the northeast provinces. Later, policy measures were expanded to include requirements for the conversion of steep cropland to forest or grasslands. In October of 2000, following initial implementation of both the logging ban and the conversion policy, it was announced that the State Council had approved a large-scale plan for protecting natural forests and increasing forest cover through these policies. Total investment for the plan is to be almost one hundred billion yuan, with close to eighty percent to be provided by the central government. Finally, while deforestation and agriculture on sloping lands have received more focused attention and funding, there is increasing awareness that grassland degradation is a third issue contributing to downstream problems and requiring policy attention.

At the same time as these ecologically motivated and economically important policies are being implemented and in order to address the economic gap between the nation's East and West, the Government has announced its Great West Development Program as a key initiative of the new millenium. Given the fragility of the West's environment, ecological protection is to be an important component of the Program, with the aforementioned logging ban and cropland conversion policies playing a key role. In the short term, however, there will inevitably be some conflicts or difficult choices between the ecologically driven policies that withdraw forests and farmlands from production and the objective of increasing incomes and employment of the households and more generally

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1 December 2000, *China Daily*, cited by Hein Malle in Preface to *China's New Forest Policies*, 2001, and this figure is only for the NFPP. Investment in land conversion program is arranged on yearly basis. For year 2000 and 2001, budget for land conversion was set at 2 billion yuan level each.
accelerating development of the West, which could benefit from utilization of these natural endowments.

The government’s efforts to control deforestation so as to derive several environmental benefits is salutary. Indeed, the efforts are all the more so, because the government has backed up its policy intentions with substantial sums of financial and food aid resources as incentive payments to those affected (households, enterprises, and township and country governments) from these programs, rather than using command and control approaches, to achieve objectives. It is important that these efforts yield results. Experience of other countries indicates that organizing such programs effectively is complex. To achieve the desired outcomes requires a clear definition of the precise expected environmental benefits (from among the array of many) and their desired weighting when there are multiple sets of benefits which either are mutually inconsistent or some more important than others. One needs to know the time period and spatial scale over which the targeted benefits are to be achieved, the potential beneficiaries of these benefits (e.g. electrical power generating units as well as drinking water units and consumers of electricity and water) and the potential suppliers (households, forest enterprises etc.).

Given the highly location specific nature of the landscapes that would supply the environmental benefits and the diversity in their spatial characteristics, design of incentives to the suppliers tends to be very complex, location specific, and based on a substantial amount of information, local knowledge, and capacity. It is not amenable to blueprints over large areas. Hence, this first phase report only identifies some of the key issues that the Task Force could address relatively quickly to understand the implementation of the existing policy and instruments through a set of case studies. The design of a program with a menu of options in terms of refinement of the current instruments being used by the Government of China and other instruments not currently in the menu, but which could be used to achieve the same objectives more efficiently, equitably, and sustainably will require additional effort. The second phase work of the Task Force is intended to address some of these key design, implementation, and impact issues from a forward looking perspective.

II. Objectives, Scope, and Overall Work Program

The multi-disciplinary, multi-national forests/grasslands Task Force², led by co-chairs Shen Guofang of the Chinese Academy of Engineering and Uma Lele of the World Bank, is intended to support the Government in the ecologically, socially, and economically sustainable development of forests and grasslands in Western China. The Task Force’s aim is to identify and address the relevant knowledge, policy, planning, and implementation gaps; integrate and build upon

² A full listing of Task Force members is given in Annex 1.
recent and on-going work; and to provide independent, quality advice to the State Council, China’s highest policy making body, as well as policy makers at all relevant levels.

The Task Force focuses on assessing the short and long run socioeconomic and environmental impacts of and possible adjustments to national policies so as to achieve sustainable development of the populations dependent on natural resources as well as conservation of forest, grassland, and water resources in the West. Options for alternative policy approaches are being explored as appropriate to localized conditions. Policies being addressed include those directed at conversion of upland agriculture, natural forest protection ("the logging ban"), reforestation, and grasslands management. Geographically, the scope of the Task Force is the twelve Western Provinces (Sha’anxi, Inner Mongolia, Guizhou, Yunnan, Sichuan, Gansu, Qinghai, Tibet, Xinjiang, Ningxia, Chongqing and Guangxi). In practice, Task Force work in the year 2001 has included case studies in the following nine provinces to investigate policy implementation at the local level: Xinjiang, Qinghai, Gansu, Ningxia, Sha’anxi, Inner Mongolia, Sichuan, Guizhou and Yunnan. Among the various types of information and data collected for these studies are the results of over 1400 household surveys. In addition to its own studies, the Task Force has also relied on other similar work, such as case studies conducted by WWF in Sichuan and Shaanxi on cropland conversion and by the Ford Foundation in Sichuan and Yunnan on the logging ban, in reaching the conclusions presented in this paper.

A key emphasis of the Task Force in its work is ensuring that the options proposed enhance the welfare and long-term economic future of the people dependent on the forests, steep lands, and grasslands, while ensuring that the needs of downstream communities are also met. If the sought after benefits of the policy do not materialize and if the appropriate interventions to measure their realization are not made, it is possible that the great efforts made in implementation could go to waste. Therefore, at this first stage of work, the Task Force has begun to look at the financial, economic, and environmental costs and benefits as perceived (or experienced) by the different affected stakeholders at all levels, ranging from the local to the national and including urban people.

A detailed timeline of past and proposed Task Force activities and outputs is provided in Annex 2. The Task Force has been fortunate in having successfully raised the funds necessary to carry out the designed activities for its two year duration. Activities up to August, 2001 have been funded by the Ford Foundation, the World Bank, CIDA and ACIAR. A comprehensive budget, as well as cost tables for each area of activity, is provided in Annex 3.

As is indicated by the timeline, Task Force activities are divided into two phases. The first phase consists mainly of ten case studies in nine western provinces (or autonomous regions) as well as a gap analysis of relevant recent and ongoing work by other organizations. The case studies, using the county as the unit of
study for each case, have had the purpose of answering questions with regard to the socio-economics and environmental impacts at the local level of national level policy for the logging ban and land conversion, as well as grassland rehabilitation. The case study approach was chosen as a means of testing the hypotheses of previous studies on policy implementation and to develop insights into how policy is implemented, what is effective, and what is not.

The second phase of the Task Force work plan will build upon the first phase case studies and gap analysis. The five to six most important forest and grassland policy issues requiring further analysis are being identified based on this first phase work. The second phase of the Task Force will focus on macroeconomic aspects of policy and its implementation, including fiscal, financial, trade, and inter-sectoral impacts of and on the policy.

III. Design and Implementation of Case Studies

A case study steering committee, consisting of Chinese members of the Task Force, was established to select case study sites and develop case study guidelines. The committee was to choose ten case study sites to represent a cross-section of bio-geophysical and socio-economic conditions across Western China and to include locales affected by the logging ban, steep cropland conversion, and grassland degradation. In the end, two case study sites for explicitly examining the impact of the NFPP (the logging ban), seven for land conversion and one for grazing control were identified. (See Annex 4 for geographical distribution of case study themes.)

The guidelines developed by the committee designated the various issues to be addressed by the studies and the methodology to be used. Issues ranged from implementation (e.g. mechanisms to deliver program disbursements) to ecological, state sector, local fiscal, community, and household impacts (e.g. type and extent of forest planted, impact on household income, etc.). Case study teams were also asked to propose solutions to community difficulties, evaluate incentives required to achieve policy goals, and assess the long term sustainability of programs. Finally, they were asked to propose modifications of the policy.

The methodologies designated for the studies included interviews with officials at the county and township levels as well as village and household questionnaires. Before finalizing case study guidelines, the steering committee conducted two pilot case studies (one in Ningxia and one in Guizhou) and adjusted its draft methodology accordingly. In addition to interview and questionnaire requirements, the committee also set requirements on the scale of fieldwork. For case studies addressing cropland conversion, for example, case study teams were required to conduct research in three townships of the county studied and in three villages of each township. As a result of such requirements, 1400
households total were surveyed through the ten case studies. (See Annex 5 for additional details on case study methodology.)

The case study steering committee was also responsible for identifying organizations to carry out the case studies. In addition, each member of the committee was responsible for overseeing the quality of work for one to two studies. The organizations that the committee selected to carry out the case studies are, for the most part, located in the relevant province for each study and were chosen based on their strong academic reputations and good local knowledge and experience. They are listed in Annex 4.

IV. Synthesis of Case Study Results

Based on synthesis of the findings of the ten case studies, we give a brief summary below of policy implementation; responses of local governments, communities and farmers; evaluation of policy; issues remaining to be addressed; and suggestions for policy improvement. Due to their difference in nature, results for NFPP and land conversion are presented separately in most sections. Findings on the implementation experience to date of these two policies are presented according to the following topics:

1. Efficacy (the extent to which the policy is implemented);
2. Efficiency (of the resources used to achieve the policy outcomes);
3. Institutional and financing arrangements for policy implementation;
4. Impact of the policy at the household, enterprise, township, county; provincial, and state levels;
5. Sustainability of the policy and its implementation; and
6. Lessons for future policy implementation and suggestions for improvement of the policy.

Finally, a separate section is provided on the results of the case study addressing grassland degradation.

1. Efficacy

Key findings of the case studies in terms of "efficacy," the extent to which the policy is implemented, are given below for both land conversion and the logging ban.

Land Conversion

A national blueprint of the land conversion policy ("grain for green") was introduced in 1999; but the complete national plan was not approved and implemented until the Spring of 2000. The plan calls for the conversion of steep
cropland (with slopes of over 25 degrees) in the upper reaches of the Yangtze River and in the middle and upper reaches of the Yellow River to forests and grassland, as a key measure to halt water and soil erosion in these regions. During the year of pilot implementation (1999-2000), the target area for land conversion was 5 million mu, or about 334,000 ha, of steep cropland. Economic incentives provided by the central government to households include food (based on estimates of average grain yield, i.e. 150 kg per mu converted for the upper reaches of the Yangtze River and 100 kg per mu for the middle and upper reaches Yellow River), cash (20 RMB per mu converted); and seed and seedlings (worth 50 RMB) for conversion. The sources of the compensation provided by the central government include surplus food in storage, treasury bonds, and central government financial transfers.

*Enthusiastic Local Reaction*

One of the most prominent findings of the case studies on land conversion is the enthusiastic reaction to the policy. At the local level, willingness to participate has been extremely high. Synthesis of results shows that not only local governments welcomed the project, but that majority of the farmers surveyed also viewed the project positively. In almost all of the provinces surveyed, it was found that the conversion target set by the central government for year 1999-2000 was exceeded. For example, the plan for Sha'anxi Province in 2000 called for 800,000 mu to be converted, but actual conversion reached 4 million mu by the end of 2000, some of which was carried out before a national plan was released, as a result of local demand and speculation on the central government's willingness to compensate for this. In fact, at almost all the case sites, researchers heard complaints about difficulties in expanding the quota for conversion and the unfairness in assigning land slated for conversion.

The enthusiasm at the local level can be explained by at least two factors. First, the compensation of food and cash per mu generally exceeds the farmer's net yield, and in many cases, gross yield, on the targeted land. In other words, the land subject to conversion is mostly low productivity land. Second, in the West, especially the Northwest, the past three years have been bad in terms of agricultural output; and food storage was running out when the policy was introduced. The compensation, then, served as emergency aid to farmers. (See Annex 6, table1.)

Despite this early enthusiasm, it is clear that the real challenge is solving the problem of what will happen when the compensation stops after five or eight years. Will the results of the project be sustainable as the central leaders hope? While this issue seems not to have as of yet received enough attention from the central planners, it is actually the most fundamental question facing the project. Farmers will make decisions on type of land use based on assessment of life-long cost and benefit. If the government's goal is to induce long-term behavior that will support control of soil and water erosion, it must determine the best economic instrument to ensure long-term results. For marginal land with low
productivity, if further analysis over a longer time period confirms that actual average yields are lower than the subsidy, then the government might want to reduce the compensation so that available funds may either cover a wider area or a longer period of time. It will be important to ensure, however, that problems with the timeliness of payments be solved or that their value be discounted based on the delay in delivery. In general, an assessment followed by utilization of marginal net yield of the sloping land is needed for development of a longer-term strategy.

**Strict, Swift, and Top-Down Implementation**
Implementation of the policy has been strict in general; and planning and organization of the project have occurred in a swift and top-down manner. Results from the case studies indicate that delivery of the compensation was taken seriously whenever the resources were available. In particular, the Task Force conducted separate surveys in Sichuan and Sha’anxi Provinces on the issue of local complaints; and few cases were reported with regard to misconduct in delivery of compensation.

The abrupt introduction of the policy, without the necessary advance planning for its implementation, however, has created problems. In several cases it was found that the local government organized the land conversion before the central plan was finalized. The conversions occurring in the provinces were, then, mainly based on speculation and experience and often exceeded the targets set later by the central government’s plan. The mismatch in planning and project implementation has already caused difficulties in realizing the promised compensation for farmers. Results from the case studies reveal that the overall delivery rate of compensation has been low. In Ansai, Sha’anxi Province, for example, the compensation covered only 36.81% of the land converted by March 10, 2001. The inadequate delivery of compensation was said to be due to confusion in the methods of delivery, project certification, and division of workload among different government departments. Disagreement in the assignment of land slated for conversion was also said to be contributing to delivery problems. Another consequence of the abruptness and uniformity of implementation of the national policy is the low survival rate of trees planted. The survival rate in general was found to be less than 50% before the replanting of seedlings. After the replanting, however, a portion of the conversion project has met the designated success criteria (a 70% survival rate, See Annex 6, table 2).

In large part due to the swift and top-down nature of implementation, substantial confusion exists among decision makers and farmers. While the target of the central government appears to be the control of soil erosion and excess water runoff upstream so as to achieve the benefits of reduction and/or elimination of flooding, reservoir siltation, water shortages, and dust storms for downstream agricultural and urban populations, and while local governments and a certain proportion of farmers seem to have an understanding of this ecological goal, the
case studies indicate that the majority of farmers still treat the project as a grand financial transfer from the central treasury. Especially in northwest China, as mentioned, delivery of the compensation served as emergency aid, as agricultural output in the region has performed poorly over the past three years and food in storage was becoming depleted.

The speed and top-down nature of implementation, which have resulted in overly uniform mandates and lack of flexibility, have led to a number of other problems that were detected in the case studies. First, over-uniformity of the national policy has led to a great technical bias that favors tree planting over planting of other types of vegetation. Although existing scientific studies in the control of water and soil erosion in China have been calling for an integrated approach in watershed management, the land conversion project relies heavily on activities limited to the forestry sector. Despite designation by higher levels of government of the proportion of trees versus grass to be planted, ratios in the plan tend to be shifted by the local government in greater favor of trees. Taking the Yunnan case study as an example, higher levels of government designated a grass to tree ration of 1:9 for Heqing County’s conversion plan. In the year 2000, however, despite the fact that 3000 mu in the county were slated for conversion to pasture, no grass or legumes were actually planted. It was heard during the case study fieldwork that if a farmer planted grass or legumes instead of trees, he/she would only be compensated 50 yuan per mu (for seeds only) instead of receiving the full compensation package.

With regard to the national goal of control of water and soil erosion, greater efficiency could be achieved if the planning and compensation policy could be altered away from the tree bias and be more flexible in terms of vegetation type. In the Northwest, in particular, there is ongoing debate over whether trees or grasses should be grown. Findings from the case studies have revealed that emphasis on growing trees has proved problematic in this region, even in the early stages of implementation. Average survival rate of trees from all the relevant case studies did not exceed 50%, an indicator of failure of the policy’s technical dimensions. Even of those trees that survive in the Northwest, many are likely to be of very low value ("xiaolo-tou-shu") with low timber yield.

In general, the environment is much more favorable for tree growth in the east of Western China, where the rainfall is higher than 800mm, as opposed to the northwest. Even with such favorable conditions, however, it is difficult to control erosion and sedimentation in the first few years if tree seedlings are planted in low densities on slopes of over 25 degrees. There is room for mixing tree seedlings with grass and shrubs to achieve permanent cover on slopes of over 25 degrees through vegetation succession. The available evidence shows that, when such a strategy is implemented, shrubs will dominate for three to five years, with forest finally dominating after about ten years.

Shrubs and grass are much easier to grow than trees in water poor regions,
except for the gully areas on the Loess Plateau. In these dry areas, land conversion may function as an instrument for adjustment of the existing cropping system, with pasture potentially playing an important role in both control of erosion and income generation for local farmers.

In general, while the national blueprint of the policy is easy to communicate and understand (i.e. the conversion of all lands of over 25 degrees in slope), it appears to lack the necessary flexibility in implementation, given China's highly diverse local circumstances. Do all such lands really need conversion and, for those that do, to what should they be converted? Location specific solutions to achieve national (together with local) objectives are much needed.

There is also a need for appropriate performance indicators to assess the extent to which the policy is being "successfully" implemented to achieve the expected results. Performance indicators must address expected benefits and relate to the intended outcomes of the interventions. Sufficient time and care must be taken in devising the indicators in order for them to be useful in assessing the effectiveness of policy and its implementation. In reality, when policy was made without a clear set of indicators to represent central government objectives, local implementation would tend to seeking quick and easy results, such as to carry out the project along roadside and in large scale. The outcomes of this tendency may be different from what the policy maker wants, such as maximized erosion control (see Annex 6, table 3, 4).

The problem with lack of planning, advance evaluation, and flexibility is also evidenced in the technical bias for tree planting and engineering methods as applied to wastelands. The policy actually calls for conversion of two to three units of land in order for a farmer to receive compensation for one unit. In other words, in order to receive the full unit compensation of food and cash, farmers have to plant trees and grass on one unit of converted land together with plantings on one or more units of wasteland. The issue that arises is whether the plantings on wastelands are necessary, given the goal of control of soil and water erosion. This issue is particularly acute in southwest China where so-called "waste mountains" are generally covered by grass and bushes. For the purpose of erosion control, significant cost reduction could be achieved by not planting trees on these waste mountains.

Finally, another problem emerging from the rapidity and top-down nature of implementation is the need for substantial structural adjustment on a short time scale at the provincial, county, township and household levels. The implementation speed is often beyond the financial, technical, institutional and human capacity of the actors involved. This is an indication, on the one hand, of the strong positive impacts of policy implementation, in some cases leading, as mentioned, to substantial demand for policy implementation, but in other cases a reflection of the fact that rather than interpreting the pilot stage as a learning by doing exercise from which to learn useful lessons for future improved
implementation of the policy, implementation is often in a rigid and top down manner without the necessary consultation with local authorities and households or without regard to their constraints. As an example, another bias that has emerged in implementation is that for economic trees over ecological trees. There is concern on the part of researchers as to whether the planting of economic trees as demanded by households can achieve the intended ecological objectives. It is likely that the decision to plant economic trees is intended to ensure local ownership of the policy, although it might achieve less than the intended ecological results.

NFPP

Reaction to the Logging Ban
In contrast to the widespread enthusiasm toward the land conversion policy, there has been mixed feelings toward implementation of the NFPP. Case study results indicate that for the state-owned forest enterprises that have already suffered serious forest depletion and economic crisis (e.g. Sichuan's Chuanxi Forestry Bureau), the project is welcome because it provides much needed financial aid to enterprises that are harvesting little timber. For the better-off enterprises, however, the policy is not welcomed as it has resulted in a major reduction of income for the enterprise. For the local communities that previously relied on the timber economy (through provision of shipping, services, etc.), the policy has meant removal of a source of income and is thus not popular with these groups either.

Given these mixed impacts, the initial implementation of the logging ban was much more problematic than that of the conversion policy. The logging ban was announced in 1998, but logging actually increased dramatically across regions after the announcement, especially in Sichuan Province. It was only when a ban on transport of logs was enforced that logging started to decrease.\(^3\)

Variability of Local Implementation
One of the major findings of the case studies is that there is considerable variability in the pace and patterns of implementation of the ban, with provincial level elaboration of the policy often playing a crucial role in its overall impact in an area. In the absence of detailed guidelines for implementation, not only have different provinces interpreted the policy differently and pursued their own implementation strategies, often they have added their own additional objectives to the national policy at the provincial and county levels. This variation reflects both the objective diversity of conditions among provinces and hence the particular needs of their populations but also their interpretation (and at times confusion in the interpretation) of the policy. For example, whereas the national policy encourages natural forest protection, Xinjiang Province has introduced a total logging ban of its own even in the face of substantial timber resources in its

\(^3\) Albert Keidel, World Bank study on local forest economies, 2000.
mature forests. On the other hand, it is allowing free grazing of cattle in the forested areas with the result that the soil erosion outcomes of policy implementation, one of the intended objectives of the policy, are less than optimum\textsuperscript{4}.

In other places (Sichuan, Sha'anxi, Yunnan, Guizhou, etc.), the logging ban was initially imposed over-uniformly, with, on paper, zero cutting allowed. This caused great confusion and contention with regard to the collective forests in these provinces. Farmers had planted trees in the collective forests and expected to earn income under the title of their original contracts. With a blanket ban on logging, they were no longer allowed to cut the trees they had planted. Many cases of violation of the logging ban occurred in many places, reflecting the conflicts caused by the policy.

Differences in local interpretation have arisen from differences in understanding of the motivation behind the policy. A major issue, for example, is whether the total logging ban or sustainable forest management should be pursued in areas that have substantial mature forests. The resulting local interpretation in some places has resulted in the waste of scarce resources (e.g. excess timber that could be harvested) and negative impacts of the policy that might have been avoided.

2. Efficiency

The section below summarizes the findings of the case studies with regard to the efficiency with which the available resources are used to achieve desired outcomes of, first, the land conversion policy and, then, the logging ban.

Land Conversion

Synthesis of case study results indicate that the efficiency of implementation of the land conversion policy has considerable scope for improvement.

Need for a More Integrated Approach

In particular, results indicate that a more integrated approach could yield better results. In the case of conversion of cropland to forests or grasslands, farmers need assistance in other related areas of agricultural or non farm systems (e.g. access to credit, marketing, etc.) that are not available, but would enhance efficiency. Economic efficiency must be improved through multi-sectoral integration if the project is to yield lasting results. Based on the current economic

\textsuperscript{4} In the case of Tianxi Forestry Bureau, the national NFPP plan included a reduction in timber harvesting and freezing of plantation activities, based on consideration of balancing forestry with local grazing needs. But starting in 2001, the leaders of Xinjiang Autonomous Region issued orders requiring the ceasing of all timber production. Without any afforestation investment from the central government and with no timber revenue, the workers at the Bureau suffered incredible economic hardship. The high incidence of logging violations at the Bureau earlier this year are likely related to this hardship.
situation in implementation areas, food security imposes a type of reservation price for land use. To ensure long-term ecological benefit from land conversion, development of a dependable base of agricultural land for the involved communities is crucial. The Task Force was pleased to observe that one of its case study sites, Pengyang County of Ningxia Province, had emphasized the construction of terraced land before and during the land conversion project. It is estimated that on average 30% productivity growth can be achieved by terracing the land in this area. Given the three to five-year time scale for land maturation, the terraced land will be able to fill the gap in grain yield created by the land conversion. The results of the case studies point to the fact that control of water and soil erosion can only be maximized through the model of integrated watershed management. Afforestation or reforestation alone cannot achieve these goals, particularly when economic factors are important.

**Plant Selection**

Another area in which there is room for improvement is that of plant selection. It was found that farmers and local governments all have the tendency to promote growth of economic forests instead of ecological trees and grasses, thus deviating from the central government objective of ecological improvement. In some cases, especially those in the northwest regions, it was found that selection of tree species is so limited that people grow almost identical tree species through a given region (e.g. apricot in Ningxia and Gansu Provinces). In general, it was found that little attention has been paid to the possible market prospect and price dynamics of the chosen species.

**Wasteland Afforestation**

Results from the case studies in Yunnan and Sichuan Provinces raise a very strong argument against the current mandatory requirement of wasteland afforestation. Given the national goal of control of water and soil erosion, the benefit of wasteland afforestation is doubtful. The so-called waste mountains in the Southwest are either covered by grasses and shrubs that have sufficiently strong ability to control water and soil erosion, or, in the cases that they are not, there is no way that the planting of trees could be feasible. Thus, emphasis on converting these lands can only increase the cost and reduce the benefits of policy implementation.

The problem in policy implementation with regard to wasteland afforestation is caused largely by the confusion between what is classified as "wasteland" and what is classified as "bareland." Soil erosion from bareland (defined as land having less than 30% coverage) in the upper Yangtze River is severe. It is thus sensible to include bareland rehabilitation as a part of the program. So-called

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5 County leaders in Pengyang reiterated to the Task Force that they had learned from the failure of a World Food Program (WFP) project in nearby Xiji County, a project very similar to the ongoing land conversion program. In the Xiji project, almost all of the land was reconverted back to cropland when food compensation stopped.
wasteland, however, often has much higher coverage. In the case of Heqing, Yunnan, coverage of wasteland by grasses or shrubs is 85%.

**Recommendation for Improving Efficiency**

In place of the current somewhat narrow approach of land conversion, the Task Force recommends a more fine-tuned, location-specific application of the policy with greater identification of local constraints and opportunities and a more integrated approach to policy implementation involving several different sectors—agriculture, livestock, soil and water conservation, rural industrialization, and rural finance.

**NFPP**

The case studies addressing the logging ban indicate room for improvement in the efficiency of resource use, identifying, in particular, provincially-imposed blanket bans as being problematic. While the imposition of the logging ban in the upper reaches of the Yangtze River in 1998 seemed practically a necessity, the ban in many provinces is actually imposed across sectors and forest types (both natural and plantation forest), rather than being limited to state-owned natural forests, as officially targeted by the central level government. From the surging number of logging ban violations, it can be sensed that the ban, as implemented, is becoming a major source of social conflict. Putting aside the issue of whether a logging ban is the best way to achieve the objective of natural forest protection, the banning of logging in collective forests lacks a legal basis. According to the Forest Law, farmers who plant trees on collective land (including contract responsibility land and private plots) own those trees and can harvest them based on the principle of the harvest quota system.

This issue should be addressed directly by policy and more detailed implementing regulations. Currently, shortcomings in implementation of the logging ban are resulting in the discouragement of private investment, including investment by farmers, in reforestation. The kind of policy volatility characterized by the provincially-imposed blanket bans has already hurt investment in forestry tremendously. As a first step, it is recommended that all sorts of private investment in forest regions that occurred before the logging ban be allowed proper compensation.
3. Institutional and Financing Arrangements

The section below summarizes the findings of the case studies with regard to the institutional and financing arrangements for implementation of the land conversion and logging ban policies.

Land Conversion

Synthesis of case study results shows that the institutional and financing arrangements for implementation of the land conversion policy vary a great deal from province to province, but with forestry departments generally playing a central role. Which government departments control the government-provided finances and food for distribution, how those resources are allocated, and through which agency they are channeled all influence how the resources are used, e.g. the extent to which the forest bureaus work in isolation or in partnership with other sectoral departments. Currently, the organization leading policy implementation at the local level is headed by local government leaders, usually the county mayor or vice mayors, and composed of officials from local governmental agencies that supervise planning and finance. Despite the often broad sectoral representation, nobody can deny that the land conversion project is a forestry project, due to the fact that, from the central to local level, the planning is carried out by the forestry agencies, with the channeling of funding and technical choices being set in the plan. Channeling of financial resources through a single forest-related set of agencies, as often appears to take place, might be inhibiting adoption of a more integrated approach to policy implementation drawing on the positive experiences in other sectors that are already available. The Task Force recommends greater attention to decisions with regard to the allocation of resources, their channeling and institutional arrangements with a view to carefully address how incentives for a more integrated holistic approach to policy implementation could be put in place.

Another institutional issue that was raised again and again in the case studies is the lack of farmer participation in the planning and designing of the land conversion project, not to mention the lack of any plan for a participatory scheme for management of local natural resources for the long run. Many farmers told case study researchers that they were not well informed of the content of the conversion policy. Also, almost 100% of the farmers surveyed indicated that they did not have any influence on the choice of technology or species of vegetation to be used. Lack of farmer input in project design could easily result in conflicts between government goals and farmers’ needs and a mismatch of technology and local conditions. Without involvement in planning, farmers are more inclined to treat the ecological program as purely a government project and to have little incentive to manage the natural resources sustainably.
NFPP

In terms of institutions, case studies show that the NFPP has been carried out by the forest sector, with strong local government support. To ensure the success of the logging ban in the Southwest, a log transport ban was imposed; and roads to forest area were either blocked or destroyed with the support of local government.

In terms of financial resources, there are areas that need such resources, but are not included in the plan. Furthermore, the current implementation system lacks the ability to respond to emergency financial issues emerging from the implementation process. There is no agency, for example, with the mandate of helping to alleviate the poverty created by the logging ban; and when groups suffering loss from the logging ban seek to be compensated, local agencies do not have the means to respond\(^6\), thus causing further distrust of government policy.

4. Impact

Findings of the case studies in terms of impact of policy at the household, enterprise, township, county, provincial, or state level are summarized below for both the land conversion and logging ban policies.

Land Conversion

The case studies indicate that the land conversion program has a number of significant impacts on households. First, the program directly affects households in terms of the amount and types of crops (as opposed to trees and grasses) they can plant and access on their private and communal lands. Second, compensation provided to farmers seems to have exceeded the net yield from the marginal land in recent drought years, though the longer term benefit /cost ratio is less certain. This, then, has improved the economic situation of farmers in the short-term; and, in some cases, has improved opportunities for households to diversify out of agriculture into other activities. Negative impacts on households include a reduction in (on-farm) household employment and increasing uncertainly in user rights of households to lands and trees, especially in locations where farmers enjoyed customary rights over the waste mountains for grazing, firewood collection, etc.

Certain community impacts of the land conversion program have also been identified. The conversion of open access land to some form of managed land

\(^6\) Several cases have been reported with regard to loss by private investors in natural forest areas. The investors were contracted by the local forestry authority to develop infrastructure before the logging ban. In return, they were entitled to share the timber revenues in which the development resulted. The logging ban completely eliminated the possibility of timber revenue, however, and the investors suffered great loss with no clear prospect of getting compensated.
has increased the risk of local conflicts. In addition, the subsidies granted for land conversion were found to benefit the better off households, which possessed more land slated for conversion, relatively more than the poorer households, thus widening the gap between the two.

Provincial and local level governments appear to have benefited from the increased financial resources made available by the policy, without having suffered significantly from reductions in revenue expected as a result of the policy. In general, the policy was found to have resulted in increased financial resources available to counties and provinces from the state. Particularly at this period of time, when in the Northwest drought has lasted for two or three years, the project has provided a substitute for local government poverty aid in the affected areas. At the same time, the expected reduction in government revenue from agricultural tax was not significant, in some cases leading to complaints and somewhat reduced benefits for farmers. In such cases (e.g. the Ningxia case study), the agricultural tax was not deducted from the converted land as was required by central planners. In other cases (e.g. Gansu case study), the converted lands are mostly newly cultivated wasteland that had not been subject to agricultural tax anyway. In sum, although local officials complained frequently to case study researchers about lack of funding for the implementation effort, the enthusiasm from both the authorities and farmers indicates that financial effects were either small or positive.

In terms of the national level objective of improving the ecological environment, it is too early to be firm about the impacts, but in all likelihood these would be less than expected. While it was found in some cases that implementation has perhaps achieved the national objective of reducing soil erosion, in some cases this has been at the cost of also reducing water flows. Overall, lack of enough emphasis on forest and land management may also hinder the achievement of national level objectives.

**NFPP**

Results of the case studies show that natural forest protection through the logging ban has had a major impact, namely income reduction, on forest enterprises, households dependent on those enterprises for employment, and counties dependent on revenues from such enterprises.

In addition to directly reducing the employment and incomes of those households affiliated with forest enterprises, the policy has had a number of other impacts on households. By affecting the supply of timber and other forest products to local areas, for example, it has affected households not necessarily involved in forest enterprises in terms of their access to fuel wood, building materials, etc. On the

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7 The recent incidence of the case in which the police were attacked in Gansu Province was a typical result of this type of conflict, in which the local community has lost its customary right to forest resources.
positive side, the policy has resulted in the release of labor in households, as well as forest enterprises, from the arduous labor involved in logging. Incomes of rural households with incomes dependent on timber production (i.e. families working for logging contractors, timber transport businesses, and hotels, restaurants, and recreational enterprises serving those involved in the forestry sector), however, have been reduced significantly. The lost income among the various types of households involved has not only caused local economic recession, increases in the school drop-out rate, etc., but could lead to problems of community instability. In general, these latter impacts, being a degree removed from forest enterprises, have received less attention in the planning process.

In terms of the objectives of the state, the policy has had both positive and negative impacts. On the whole, the policy appears to have helped to accelerate the process of natural forest protection. The timber supply from areas covered by the policy has been reduced, however; and there is evidence that the ban may be resulting in the "export" of deforestation to other regions and to other countries. Finally, ecological goals are not fully met in that the promotion of monoculture plantings in protected areas fails to ensure preservation of biodiversity.

5. Sustainability

The sustainability of the conversion policy and its implementation should be considered in terms of fiscal/financial sustainability at various levels of the government; sustainability at the household level—whether the benefits to the households are greater than the costs; ecological sustainability—whether the solutions being brought to bear will improve and maintain the improved environmental benefits in the foreseeable future; and institutional sustainability—whether institutional capacity exists for the program to deliver services needed and to learn from experience so that design and implementation may be improved.

Since implementation of the pilot phase is based on the exchange of surplus grain for green, its fiscal/financial sustainability seems assured in the short and medium run. Provided the pilot program leads to alternative employment opportunities by diversification within and outside of agriculture over the eight-year period during which the policy would be implemented and subsidies provided, sustainability at the household level would also be assured.

Given the value inherent in land and food security for farmers in our case study sites, environmental sustainability is more likely where sufficient cultivated land is kept from conversion and investment in technologies that help raise land productivity (terracing, drought resistance technology, etc.) is made. Pengyang County (Ningxia Province) is an example of a county where such measures have
been taken and the prospects for sustainability are good. In other cases, where large numbers of farmers have had to give up more than half of their land to the conversion program, the uncertainty of sustainability after the compensation period is high.

Institutional sustainability also becomes a major concern when the adopted technology is not mature or even totally inappropriate for the specific locations. Inappropriate technology results in low survival rates of vegetation and therefore low revenues for the farmers and low ecological function for the region, providing incentive for stakeholders to reverse the effort. Inappropriate technology may also cause reduced water supply to major water basins, hence reducing the willingness to pay on the part of water consumers and thus deteriorating the support from Chinese society for the central government's policy.

The overall sustainability of the wider proposed program, beyond the pilot phase, at the national level will depend on:

- The continuity of resources from the government for an enlarged program—in turn the result of the government’s ability to demonstrate benefits of the program which results in additional resource mobilization;
- Stability and predictability of the policy and institutional arrangements which will create confidence among all stakeholders about its continuity;
- Success in restructuring agriculture, including diversification of employment opportunities outside the agricultural sector; market development for alternative products from converted cropland, and
- Continued fine-tuning of policy and improvement in implementation based on learning by doing.

The NFPP program provides opportunity for heavily degraded natural forests to recover. The arranged subsidy addresses economic problems facing the state-owned forest enterprises and local government, but not the local community dependent on timber economy and the forests’ side products. Moreover, uniformed logging ban provides a very powerful disincentive to farmers and private sectors to plant trees, inducing negative effect in the mid and long run for sustainable forest development.

6. Lessons Learned and Preliminary Recommendations

Final recommendations of the Task Force will of course emerge at the end of the second phase. Based on the work carried out so far, however, it is possible to offer some tentative general lessons and preliminary recommendations that can be helpful almost immediately in fine tuning the design and implementation of the programs studied. Conclusions made are based primarily on the results of the Task Force case studies and similar work carried out by other organizations. The Task Force's preliminary conclusions and recommendations are given below, beginning with those that apply to both the logging ban and conversion
policy, followed by more specific recommendations for each of these policies, respectively.

**Cross-Cutting Lessons and Recommendations**

- **A cost-benefit evaluation of the project in terms of the society affected should be conducted.** In general, it has been found that the induced socio-economic costs have proven to be much larger than the program planners had estimated.

- **The various national and local objectives (ecological, economic, central, local and community) should be considered in a holistic manner.** Long-term sustainability of the policy impacts will depend on the extent to which implementation focuses on achieving strong complementarity between the state objectives of improved ecological restoration and the provincial and local objectives of improved income and employment opportunities, with ensured food security.

- **Study technology and management system suitable for natural forests and adopt it gradually where appropriate, to reduce social cost from the complete logging ban.** Technologies that reduce cost and increase benefit should be adopted.

- **Monitoring and evaluation should be put in place almost immediately.** This is important but currently is a very weak aspect of policy implementation. There is relatively little monitoring and virtually no evaluation of policy implementation. It is also particularly important that the evaluation be carried out on a routine basis but by a neutral party that can maintain a distance from the program and is therefore able to view its accomplishments and weaknesses with an objective perspective (e.g. academics, sectors that are related but not involved, etc.). Furthermore, it is important that the evaluation be operationally useful to the improvement of program design and implementation rather than simply an expost exercise. Currently, some of the most important lessons for the improvement of future policy implementation and the policy itself are perhaps being lost. The Task Force recommends that strong and immediate attention be given to the issues of monitoring and implementation with a view to increase learning by doing, improving capacity of institutions through regular training and adaptation of the policy to China’s highly diverse circumstances in a more methodical planned manner.

- **Funding should be provided for monitoring and continuous evaluation.**
Recommendations for Land Conversion Policy

- **Down sizing wasteland planting** to reduce cost (labor, management and financial cost) and emphasizing mountain closure to increase ecological benefits

- **Relying more on natural regeneration** of anti-drought species, focusing more on stoppage of steep land cultivation, stressing less on vegetation planting—another policy that reduces cost and increases ecological benefit.

- **Explore the rationality of continued compensation after the 5/8 year period**, with lower standard but longer commitment, in return for less water and soil erosion, and bigger water supply from the west to the east.

- Better timing of land conversion plan, making assignment and funding available before the fall of the year, to ensure better productivity and to reduce mismatch between local implementation and central government target.

- Land conversion should be integrated into watershed management (with construction of a high-yield agricultural land base as a key element) and adjustment of the existing agricultural system to maximize and stabilize ecological benefit.

- **Farmer property rights on converted land should be reinforced.** Farmers should be given the freedom to utilize the converted land within the boundaries of the required ecological crop (i.e. trees, grasses, shrubs, fallow, etc.) as long as they receive compensation. The system should be different from the logging control system that is based on logging quotas.

- **The Task Force recommends greater attention to decisions with regard to the allocation of resources, their channeling and institutional arrangements with a view to carefully address how incentives for a more integrated holistic approach to policy implementation could be put in place.**

- **In the long run, the criterion for measuring successful performance of vegetation rehabilitation work should be refined according to erosion and sediment control parameters.**

- **Establishing a monitoring system to evaluate progress and identify weakness** in the process of policy implementation, guiding policy improvement and adjustment.
Recommendations for NFPP

- The logging ban in collective forests should be lifted.
- Compensation should be provided for the losses of private investors and forest farmers.
- The technologies and management systems suitable for natural forests should be studied and adopted gradually where appropriate, so as to reduce the social costs from a complete logging ban. In a lot of cases natural resource conservation can coexist with timber utilization, given carefully designed operations plan and appropriately applied harvesting scheme.

7. Results from Grassland Degradation Case

As one of its case studies, the Task Force examined the impact of the government's grazing control and grassland regeneration project in Darlag County, Qinghai Province. This is the only one of the ten case studies focusing exclusively on grassland degradation policy. Although cropland is not involved, the grazing control and grassland regeneration in this case are actually considered one of the (adapted) components of the program for converting cropland to forests and grasslands. Due to its ecological importance and its severe degradation problems, Darlag county was chosen by the government as one of two pilot counties in Qinghai Province for implementing grassland improvement policy. The county sits in the headwater area of Yangtze, Mekong and Yellow River basins. Water and soil conservation in the county is thus of national significance. The county suffers serious grassland degradation, a problem shared with a large part of China’s grassland area. Of the total grassland area in Darlag County, 70% has suffered severe drop in quality, shrinkage in grass coverage, encroachment by rats. The main reason for the degradation is overgrazing. To reverse the trend, the county government has accepted the project for grazing control and regeneration of the degraded grassland. Targets of project implementation in the county include:

a: Elimination of rats on 50,000 mu of grassland;
b: Establishment of 30,000 mu of artificial grassland and 20,000 mu of semi-artificial grassland;
c: Fencing of the newly established artificial and semi-artificial grasslands.

To implement the project, a subsidy of 50 RMB per mu for grass seed was provided by the central government.

As implemented in the county, the project requires that, in the first one to two years, grazing on newly established artificial and semi-artificial grassland be prohibited.
Although the responsibility for management of the grasslands is given to the herders, the amount of livestock must be determined based on estimation of the carrying capacity of the grassland they are assigned.

The case study found that, although subsidy for grass seeds was provided, compensation for the reduction of livestock was not, and that therefore willingness of herders to comply with the required reduction has been low. Instead, after project implementation was begun, herders chose to extend nomadic grazing to adjacent areas and prolong their nomadic periods. As a result, consumption of grassland was not reduced; rather, it was transferred to neighboring areas. The low level of enthusiasm for the grassland degradation component contrasts strongly with enthusiasm for cropland conversion. In the former case, only 50 yuan per mu for seeds is provided, while in the latter grain and cash subsidies, in addition to subsidies for planting, are provided to the farmer.

Alpine grassland dominates on the Qinghai-Tibetan Plateau. Taking Qinghai as an example, 1% of total land is farmland, 56% is alpine grassland, and the rest is wasteland. It is obvious in this region that the main cause of degradation is overload of grazing animals. The unwillingness of herdsman to reduce the number of animals is partly due to the frequency of snow disaster in the area, which causes food crises. On the other hand, the animal carrying capacity of the grasslands is much higher in seasons other than winter. Therefore, the government could facilitate reduction in the number of animals by using price as an instrument according to dynamics of the seasons. In the other words, herdsmen should be willing to sell meat at a higher price in the autumn, while getting goats at a lower price in spring. If the grazing pressure is reduced, the vegetation cover will increase dramatically. Comparing the various measures for rehabilitation of grasslands, facing is the most efficient among the grassland management practices. Care should be taken not to replace natural grassland by introduced species, except on barelands. One reason for this is that the herdsmen do not have any experience in plowing and planting grasses. To complete such tasks, then, local governments must hire farmers from outside of grassland areas. Another reason is that a lot of introduced species are not adapted to the region's harsh environment; and ground cover could be reduced quickly after their introduction, leading to negative effects.

Several preliminary conclusions and recommendations with regard to grassland rehabilitation emerge from this case study and related work carried out by other organizations. First, economic incentives need to be provided for herders to downsize their grazing activity. Also, the subsidy for grassland regeneration should be raised to cover the real costs. Better technical assistance and infrastructure are also needed for the project to be successful and sustainable in the long run. Furthermore, due to the externality to the area of much of the ecological improvement sought, central policy makers should take into consideration a compensation scheme that calls for a system that compensates upstream conservation by downstream environmental beneficiaries. Finally, the case study also reveals issues with regard to the institutional arrangements of the project, with
the suggestion emerging being that greater integration of multi-sectoral expertise and resources be sought in implementation of the policy.

Due to the seriousness and speed of degradation in many areas and the differences between pastureland and farmland, policy and regulatory action specifically directed at grassland management is urgent. Although the total available area of grassland in China is almost four times larger than that of farmland, the efficiency is rather low. It was estimated that the average output of grassland per mu is about 300 grams meat, which costs less than 4 yuan. It is worth noting that the estimated annual national average grain consumption per capita has gone down from 134 kg in 1987 to 87 kg in 1999. In other words, increases in grain surpluses are due both to improvement in the cropping system and the growth of animal husbandry. Thus, it is recommended that further development of animal husbandry could be one of the ways used to solve the food crisis in the future. An important question to ask, however, is whether increases in meat production will come from grassland or agricultural areas beyond 2020.

Integration of pasture-based animal husbandry within the farming system in order to release the pressure from grasslands is strongly recommended. Through integration of pasture-animal husbandry within the farming system, the land conversion program could serve as a chance to adjust the existing farming system while at the same time meeting the erosion and sediment control objectives. As a matter of fact, grassland development is not only related to grassland conservation and animal husbandry development, but also to the food security of the country. It is important that such recommendations on policy be made before inflexible policy is implemented in a blanket fashion. So that this can be done, there is strong need for a wider consideration of impacts and alternatives, and then for a systematic and effective consideration of grassland issues at the higher tiers of decision-making. It is thus recommended that a Strategic Environmental Assessment (SEA) of grassland development in Western China be undertaken in the next phase of Task Force work.

V. Future Work

As mentioned, the coming year of Task Force work will build on the above results and the gap analysis and will focus on macroeconomic aspects of the policy and its implementation including fiscal, financial, trade and intersectoral impacts of and on the policy. Approximately six studies will be conducted. A preliminary list of issues that these might address is given below:

1. Technological policy:
   (1) Soil erosion control and planting of trees, grasses and shrubs, definition of wasteland, etc.
(2) Appropriateness of vegetation type (ecological trees, economic trees, grasses, shrubs, etc.) and species (indigenous versus exotic). Work to build on case study finding that the survival rate is very low currently, an indicator of appropriateness of choices to date.

(3) Necessity of setting up a system of standards and institutions to conduct annual investigations of vegetation type and planting technology, evaluating their effect on soil erosion and given them a grade based on this effect (e.g. grade 1, 2, 3, etc.).

2. Life-long assessment of costs and benefits for farmers participating in land conversion program (including shadow price of land and land productivity dynamics when soil erosion exists—with decreasing land productivity considered in the life-long assessment). Comparison of the assessment to current standard of compensation and design of economic instrument to ensure sustainability of the conversion program in the long-run.

3. Long-term policy arrangements:
   (1) Determination of length of compensation based on life-long assessment;
   (2) Determination of standard of compensation based on life-long assessment;
   (3) Property right reconceptualization, including that of water rights within basin, institutional arrangements, water right trading system between farmers in upper reaches and users in lower reaches, etc. Overall, development of a new way of thinking for the land conversion policy.

4. Marketing system: quota, taxation, etc., as these affect private sector investment in forestry and forest management.

5. A budgeting analysis for the land conversion program including:
   (1) Food balance table, projecting how much surplus food will be available in the coming decade and at what price;
   (2) Financial balance table, providing a financial plan (source and use table) for the coming decade; and
   (3) Analysis of appropriate size of program.

6. Economic or legal system to ensure program’s sustainability, addressing:
   (1) Issue of whether economic incentive is great enough (Would compensation forever be required?);
   (2) Legal system: Issue of land contract certificate versus forest certificate—will these work? This should be studied in the context of conflicts of interest after compensation is stopped.
7. Property rights: the extent of rights for use of newly grown trees and grasses. According to national policy, the one who plants owns, but will rural people have full control over vegetation use and harvest? Or should they have to follow a quota like the one used in Forest Law? How should vegetation use on formerly bare mountains that are subsequently planted with trees or grasses under the land conversion program be managed? As collective forest farm, as common property, or through rationing of use?

8. Fiscal and financing policies for environmental services: The principle of beneficiaries (of the programs) pay would need to be operationalized. Therefore, who the beneficiaries are and how they should be charged for environmental services, how to measure environmental output, etc., are issues needing analysis.

9. International trade implications of the logging ban: In view of the fact that China’s imports of forest products have increased considerably since implementation of the logging ban, international trade implications of the policy need to be considered.

10. Strategic Environmental Assessment (SEA) of grassland development in Western China.

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Annex 1: Task Force Members

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## Annex 2
Two Year Timeline for CCICED Western China Forest/Grassland Task Force

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Activity</th>
<th>Outputs</th>
</tr>
</thead>
</table>
| 1. First report to CCICED | - Revised draft to task force for comments  
- Second round of comments from task force members  
- Final draft to CCICED Secretariat (in English and Chinese)  
- Presentation at CCICED Meeting |
| 2. Proposal (Phase I) | - First draft to task force for comments  
- Comments from task force members  
- Revised version for preliminary circulation to donors  
- Final version (with changes based on donor comments) |
| 3. Discussions with potential funders | - Informal discussions by task force members in Beijing with local offices of funders  
- Informal discussions by task force members based abroad with relevant funding organizations  
- Final discussions with potential donors and final securing of funding |
| 4. Matrix of on-going related activities | - Collection of information from relevant domestic and international organizations on their activities  
- Matrix subset centering on relevant field activities prepared for case study steering committee for use in their selection of field sites  
- Full draft matrix provided to task force members  
- Comments from task force members on matrix  
- Final version of matrix  
- Gaps identified and key lessons learned summarized in gap analysis |
| 5. Case studies | - Final draft framework for case studies prepared  
- Institutions for case studies selected and finalized subject to the commitment of funds by donors  
- Launching of case studies  
- Draft reports from consultants carrying out case studies  
- Final reports from consultants carrying out case studies |
<table>
<thead>
<tr>
<th>Activity</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Second task force meeting</td>
<td>-Case study sites visited by task force members and brief memo on each prepared&lt;br&gt;-Meetings with provincial officials at end of visits to case study sites&lt;br&gt;-Task force meeting in Western China; initial formulation of Phase II work plan</td>
</tr>
<tr>
<td>7. Synthesis/analysis of case studies</td>
<td>-Draft prepared for comments of task force members&lt;br&gt;-Comments by task force members&lt;br&gt;-Revised draft</td>
</tr>
<tr>
<td>8. Forest Trends meeting</td>
<td>-Attendance by task force members, summary of relevant items prepared</td>
</tr>
<tr>
<td>9. CIFOR meeting</td>
<td>-Attendance by task force members, summary of relevant items prepared</td>
</tr>
<tr>
<td>10. Second report and policy recommendations to the CCICED</td>
<td>-First draft to task force members for comments&lt;br&gt;-Comments from task force members&lt;br&gt;-Final draft to CCICED Secretariat (in English and Chinese)&lt;br&gt;-Presentation at CCICED meeting</td>
</tr>
<tr>
<td>11. Meeting of subcommittee of task force</td>
<td>-Dissemination workshop on results of case studies (input from Phase One; reporting to CCICED meeting and workshop may be used in final refining of case study synthesis report)&lt;br&gt;-Revision of synthesis of case study results&lt;br&gt;-Final formulation of work for task force's second year (Phase II)&lt;br&gt;-Meetings with central level officials in Beijing to brief them on findings</td>
</tr>
<tr>
<td>12. Ongoing dissemination</td>
<td>-Web site launched/first newsletter&lt;br&gt;-Subsequent newsletters (at least three more issues)/web site updates</td>
</tr>
</tbody>
</table>
### Phase II

<table>
<thead>
<tr>
<th>Activity</th>
<th>Outputs</th>
</tr>
</thead>
</table>
| 1. Phase II Proposal | -First draft to task force for comments  
-Comments from task force members  
-Revised version for preliminary circulation to donors  
-Final version (with changes based on donor comments) |
| 2. In-depth policy, institutional, and technical studies at provincial and national levels | -Policy, institutional, and technical studies conducted  
-Final reports on individual studies prepared |
| 3. Third meeting of the task force | -Meetings with provincial officials  
-Third task force meeting  
-Meetings of task force members with central level officials in Beijing to brief them on in-depth policy, institutional, and technical studies  
-Dissemination workshop on results of Phase II studies |
| 4. Final report and policy recommendations to CCICED | -First draft circulated to task force members  
-Comments from task force members  
-Final report submitted to CCICED Secretariat (in English and Chinese)  
-Final report presented at CCICED meeting |
Annex 3: Task Force Two-Year Budget

1. This annex includes cost tables covering all activities, to the extent possible, of the task force’s two-year work program. An overall budget, integrating all activities, is presented first. This is followed by individual budgets, corresponding to each of the activity groupings covered in the main text of the document.

Indicative Integrated Budget

2. For ease of reference, the following comprehensive budget integrates each of the major items of the task force two-year work plan covered in the proposal. As mentioned, donors may choose to support particular items as these fit in with their priorities and interests.

Table 1  Summary Integrated Budget for 2 Years

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Cost (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Phase I Output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Gap Analysis</td>
<td>2 person/month</td>
<td>5,000</td>
</tr>
<tr>
<td>1.2 Case Studies</td>
<td>9 studies. See Table 3</td>
<td>261,500</td>
</tr>
<tr>
<td>1.3 Workshop/Subcommittee Meeting</td>
<td>See Table 4</td>
<td>30,000</td>
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<tr>
<td>II. Phase II Output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Policy/Institutional/Technical Studies</td>
<td>6 studies</td>
<td>300,000</td>
</tr>
<tr>
<td>2.2 Workshop</td>
<td></td>
<td>30,000</td>
</tr>
<tr>
<td>III. Taskforce Meetings</td>
<td>See Table 5</td>
<td>26,000</td>
</tr>
<tr>
<td>IV. Secretariat Work</td>
<td>See Table 6</td>
<td>75,000</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>727,500</td>
</tr>
</tbody>
</table>

3. Funding secured to date and organizations providing funding are indicated in the table below. Forest Trends has committed US$5,000 to fund the Gap Analysis to be carried out in Phase One. The Ford Foundation has committed US$600,000 to the Task Force’s two-year program. ACIAR has committed US$57,000 for the purpose of providing start-up funding for the Phase One case studies, so that these may be launched as soon as possible. Similarly, the World Bank-WWF Alliance has provided US$25,000 for the initial work of the Task Force Secretariat.
Table 2  Sources of Funding

<table>
<thead>
<tr>
<th>Item</th>
<th>Source of Funding</th>
<th>Cost (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Phase I Output</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Gap Analysis</td>
<td>Forest Trends</td>
<td>5,000</td>
</tr>
<tr>
<td>1.2 Case Studies:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start-Up Funding for Case Studies</td>
<td>ACIAR</td>
<td>57,000</td>
</tr>
<tr>
<td>Subsequent Funding of Case Studies</td>
<td>Ford Foundation</td>
<td>204,500</td>
</tr>
<tr>
<td>1.3 Workshop/Subcommittee Meeting</td>
<td>Ford Foundation</td>
<td>30,000</td>
</tr>
<tr>
<td><strong>II. Phase II Output</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Policy/Institutional/Technical Studies</td>
<td>Ford Foundation</td>
<td>259,500</td>
</tr>
<tr>
<td></td>
<td>Outstanding</td>
<td>40,500</td>
</tr>
<tr>
<td>2.2 Workshop</td>
<td>Ford Foundation</td>
<td>30,000</td>
</tr>
<tr>
<td><strong>III. Taskforce Meetings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ford Foundation</td>
<td>26,000</td>
</tr>
<tr>
<td><strong>IV. Secretariat Work</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ford Foundation</td>
<td>50,000</td>
</tr>
<tr>
<td></td>
<td>WB- WWF Alliance</td>
<td>25,000</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td></td>
<td><strong>727,500</strong></td>
</tr>
</tbody>
</table>
Annex 4: Case Study Sites and Teams

**Cropland Conversion**

1. Ansai County, Shaanxi Province: Institute of Soil and Water Conservation, Chinese Academy of Sciences (led by Mr. Li Rui)
2. Heqing County, Yunnan Province: Institute of Resource Economics, Yunnan Academy of Social Sciences (led by Professor Zhao Junchen)
3. Dingxi County, Gansu Province: Gansu Grassland Ecological Institute (led by Dr. Ge Tang)
4. Zhouzi County, Inner Mongolia Autonomous Region: Inner Mongolia Agricultural University (led by Professor Gao Runhong)
5. Pengyang County, Ningxia Autonomous Region: Center for Chinese Agricultural Policy, Chinese Academy of Science (led by Dr. Xu Jintao and Li Juqing)
6. Dafang County, Guizhou Province: Center for Chinese Agricultural Policy, Chinese Academy of Science (led by Dr. Li Zhou and Xu Jintao)
7. Tianchuan County, Sichuan Province: Sichuan Academy of Social Sciences (led by Professor Du Shouhu)

**Logging Ban**

1. Sichuan Province's Lixian County, Pingwu County, and Chuanxi Forestry Bureau: Sichuan Academy of Forestry (led by Professor Chen Linwu)
2. Xinjiang Autonomous Region: Tianxi Forestry Bureau: Xinjiang Agricultural University (led by Dr. Pan Cunde)

**Grassland Degradation**

1. Darlag County, Qinghai Province: Qinghai Grassland Institute and Gansu Ecological Grassland Institute (led by Professor Ren Jizhou, Ma Yushou and Shen Yuying)
## Annex 5: Case Study Methodology

<table>
<thead>
<tr>
<th>Case Study Site</th>
<th>Number of Townships or Bureau Surveyed</th>
<th>Number of Villages Surveyed</th>
<th>Number of Households Surveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tianxi Forestry Bureau¹</td>
<td>1</td>
<td>9</td>
<td>100</td>
</tr>
<tr>
<td>Li County, Pingwu County and Chuanxi Forestry Bureau</td>
<td>3</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>Tianquan County</td>
<td>3</td>
<td>9</td>
<td>225</td>
</tr>
<tr>
<td>Heqing County</td>
<td>3</td>
<td>9</td>
<td>213</td>
</tr>
<tr>
<td>Ansai County</td>
<td>4</td>
<td>10</td>
<td>208</td>
</tr>
<tr>
<td>Dingxi County</td>
<td>5</td>
<td>5</td>
<td>200</td>
</tr>
<tr>
<td>Darlag County</td>
<td>1</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Zhuozi County</td>
<td>3</td>
<td>7</td>
<td>201</td>
</tr>
<tr>
<td>Dafang County</td>
<td>3</td>
<td>9</td>
<td>70</td>
</tr>
<tr>
<td>Pengyang County</td>
<td>3</td>
<td>9</td>
<td>70</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>29</strong></td>
<td><strong>78</strong></td>
<td><strong>1407</strong></td>
</tr>
</tbody>
</table>

¹ One Forestry Bureau and 9 forest farms.
Annex 6: Policy Implementation

Table 1: Local Reaction

<table>
<thead>
<tr>
<th>Sample County</th>
<th>Project Implementation</th>
<th>Farmers’ Willingness</th>
<th>Land Yield 1999 (Jin/Mu)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Plan Area (10K mu)</td>
<td>Actual Area (10K mu)</td>
<td>Actual Vs Plan (%)</td>
</tr>
<tr>
<td>Dingxi Gansu</td>
<td>1.8*</td>
<td>3.0*</td>
<td>166.67</td>
</tr>
<tr>
<td>Zhuozi Inner Mongolia</td>
<td>14**</td>
<td>14.05**</td>
<td>100.36</td>
</tr>
<tr>
<td>Pengyang Ningxia</td>
<td>7</td>
<td>7.62</td>
<td>108.86</td>
</tr>
<tr>
<td>Ansai Sha’anxi</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heqing Yunnan</td>
<td>1.5</td>
<td>1.5</td>
<td>100</td>
</tr>
<tr>
<td>Dafang Guizhou</td>
<td>2.0</td>
<td>2.0</td>
<td>100</td>
</tr>
<tr>
<td>Tianquan Sichuan</td>
<td>3.9</td>
<td>6.9</td>
<td>177</td>
</tr>
</tbody>
</table>

*:Numbers for Dingxi represent 2001 situation;
**:Inner Mongolia figure includes wasteland area.
Table 2: Delivery of Subsidies

<table>
<thead>
<tr>
<th>Sample County</th>
<th>All Family</th>
<th>Partial</th>
<th>Food Only</th>
<th>Nothing</th>
<th>Total Number Of Family</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Family</td>
<td>%</td>
<td>Family</td>
<td>%</td>
<td>Family</td>
</tr>
<tr>
<td>Dingxi Gansu</td>
<td>11</td>
<td>9.91</td>
<td>100</td>
<td>90.09</td>
<td>0</td>
</tr>
<tr>
<td>Zhuozi Inner Mongolia</td>
<td>78</td>
<td>38.80</td>
<td>59</td>
<td>29.30</td>
<td>28</td>
</tr>
<tr>
<td>Pengyang Ningxia</td>
<td>48</td>
<td>73.85</td>
<td>17</td>
<td>26.15</td>
<td>0</td>
</tr>
<tr>
<td>Ansai Sha’anxi</td>
<td>14</td>
<td>7.29</td>
<td>36</td>
<td>18.75</td>
<td>10</td>
</tr>
<tr>
<td>Heqing Yunnan</td>
<td>9</td>
<td>4.20</td>
<td>187</td>
<td>87.80</td>
<td>15</td>
</tr>
<tr>
<td>Dafang Guizhou</td>
<td>9</td>
<td>15.52</td>
<td>36</td>
<td>62.07</td>
<td>4</td>
</tr>
<tr>
<td>Tianquan Sichuan</td>
<td>9</td>
<td>15.52</td>
<td>36</td>
<td>62.07</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 3: Allocation of Target Among Families

<table>
<thead>
<tr>
<th>Sample County</th>
<th>All Family Involved (1)</th>
<th>Roadside Family (2)</th>
<th>(2) / (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Family</td>
<td>Area</td>
<td>Family</td>
</tr>
<tr>
<td>Dingxi Gansu</td>
<td>111</td>
<td>781.1</td>
<td>22</td>
</tr>
<tr>
<td>Zhuozi Inner Mongolia</td>
<td>65</td>
<td>1435.9</td>
<td>17</td>
</tr>
<tr>
<td>Pengyang Ningxia</td>
<td>109</td>
<td>518.14</td>
<td>176</td>
</tr>
<tr>
<td>Ansai Sha’anxi</td>
<td>213</td>
<td>350.28</td>
<td>43</td>
</tr>
</tbody>
</table>
Table 4: Outcomes of Project

<table>
<thead>
<tr>
<th>Sample County</th>
<th>Survival Rate/ Up-to-Stdd Rate</th>
<th>Share of Sloping Land (%)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Share of Sloping land</td>
<td>Of which, High slope land</td>
<td>Of which, high slope land</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>among Converted Land (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>among Non-Converted Land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dingxi Gansu</td>
<td>23.8*</td>
<td>82.82</td>
<td>49.83</td>
<td>44.63</td>
<td>12.44</td>
</tr>
<tr>
<td>Zhuozi Inner Mongolia</td>
<td>80.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pengyang Ningxia</td>
<td>85.0</td>
<td>93.38</td>
<td>70.83</td>
<td>71.85</td>
<td>52.35</td>
</tr>
<tr>
<td>Ansai Sha’anxi</td>
<td>52.4</td>
<td></td>
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<tr>
<td>Heqing Yunnan</td>
<td>70.1</td>
<td></td>
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<tr>
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<td>97.62</td>
<td>87.63</td>
<td>69.40</td>
<td>48.29</td>
</tr>
<tr>
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<td>90.0</td>
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<td></td>
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</tr>
</tbody>
</table>

*:Up-to-standard rate, meaning 23.8% of the land plots met the standard survival rate of 70% in 2000. Remaining numbers are all survival rates after re-planting.