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Socioeconomic Road in Ecological Restoration in China

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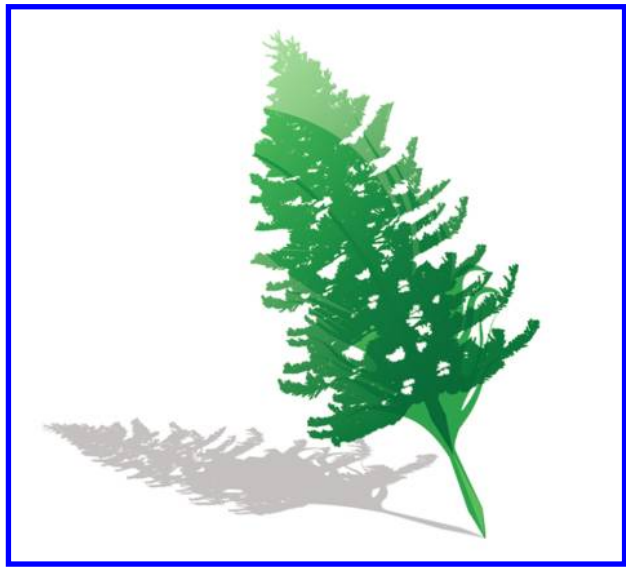
Authors' Viewpoint



RHONDA SAUNDERS

Many factors have contributed to China's environmental crisis and are hindering environmental recovery campaigns (*1*). One neglected factor is the structure of China's government and the resulting decision-making process. To better understand this aspect of ecological restoration, I discuss some lessons learned from China's current bureaucratic system, and propose changes that could make this system work better in the future.

Bureaucratic Constraints on Policy Development

China's national goal of turning the tide of environmental degradation is incompatible with the criteria that determine promotions for governmental officials, which are based primarily on short-term economic and political achievements rather than on long-term progress toward environmental remediation (*2*). As a result, management policies emphasize short-term political or economic prescriptions (*3*).

In addition, the restoration programs have often failed to address significant social problems that are tightly integrated with the problem of environmental degradation. For example, the Grain for Green Project provides food and a subsidized income to farmers and livestock herders who abandon their former livelihood in areas where this livelihood is environmentally unsustainable. Residents who transform their farmland into forests within 8 years or into grasslands within 2 years receive food and money, but do not receive employment training or relocation assistance that would let them seek a sustainable form of employment when the project ends (*4*). Because no support is provided when the project ends, many of the farmers and livestock grazers in project areas have no alternative other than returning to their old way of life as soon as the project ends, leading to resumption of the activities that were responsible for the original environmental degradation and jeopardizing any achievements accomplished under the project (*4*).

Another serious problem is that China's environmental conservation efforts are managed simultaneously by many different government departments. For example, soil and water conservation is guided by the Ministry of Water Resources, grassland restoration by the Ministry of Agriculture, and forestry by the State Forestry Administration. Currently, there is no government structure that coordinates these efforts at a national or regional level. Although policy developers recognize, in principle, the importance of understanding local climatic, resource, environmental, and socioeconomic contexts, in practice they develop policies centrally, with little or no input from conservation biologists, anthropologists, or social scientists (except economists) who have expertise in local conditions and who therefore understand the location-specific impacts of central policies (*2*). In the absence of a formal mechanism that would encourage feedback from local experts and guide central planners in incorporating this feedback in their policies, central planners must make their "best guess" at what policies will prove to be effective.

Another problem relates to competition among stakeholders for the available funding. China's central government has promoted innovation by making departments compete for the available funding; the projects that are seen as most innovative receive the most funding. To increase departmental revenues, government departments therefore compete aggressively. Unfortunately, in the absence of strong feedback from experts in the regions affected by these policies, the resulting innovative ecological restoration projects sometimes focus more on the budget than on the effectiveness of the policy or on cooperation with other departments that would be affected by the policy. In addition, the importance given to economic development means that a project's value is judged more often on economic terms than on its environmental and social impacts. In the long term, the damage done by these projects may overwhelm any economic benefits.

China faces additional difficulties. Because of the urgency of its environmental problems, planners are forced to develop solutions quickly, which greatly reduces the time available to consult with local experts or to conduct long-term research capable of revealing both the benefits and the drawbacks of

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potential solutions. This is exacerbated by the difficulty of deconstructing the economic rationale of a policy and of integrating its environmental and social consequences within a revised form of the policy. As a result, Chinese planners and scholars have focused on political or economic prescriptions rather than on holistic socioeconomic and environmental analysis based on long-term research results (*3*). Many government officials have advocated approaches such as large-scale afforestation that provide rapid results, thereby conveying a legitimate feeling that the government is acting rapidly to solve serious problems, but this has led to the wide-scale adoption of expensive activities with unproven results (*5*). Unfortunately, the need to act rapidly forces managers to rely on short-term assessments, and although initial results often appear promising, it is uncertain whether those results will remain valid in the long term (*2*). The importance of counterbalancing the prevailing economics-dominated approach with a longer and more holistic perspective has been largely neglected because of these political concerns (*3*).

Synthesis and Recommendations

Based on the problems identified in this paper, it is possible to make several recommendations on how to mitigate these problems and increase the likelihood that future large-scale environmental restoration programs will be more effective: (1) Government planners should be rewarded for their long-term environmental achievements, not exclusively based on the economic impacts of their projects. (2) Projects should be evaluated based on their social and environmental impacts, and any deficiencies should be resolved before a project is implemented. This could be achieved by creating a formal mechanism that ensures coordination of the efforts of all departments that are potentially affected by a policy. (3) All large-scale projects should receive a "reality check" based on actively seeking feedback from local economic, sociological, and environmental experts on the impacts of the project on their region. Where unique local conditions would prevent the policy from being effective without modification, the policy should be sufficiently flexible to permit a modified implementation. (4) The current competition between departments for funding has successfully increased innovation, but has also prevented cooperation. To solve this problem, the government should adopt an approach based on "coopetition", in which competition promotes innovation and cooperation ensures that the innovation will effectively integrate the expertise and efforts of multiple departments. (5) The urgency of China's environmental problems requires a rapid response, but some mechanism must be created to allow revision of the response based on monitoring of the results. This will require a change in philosophy to recognize that short-term research results are necessary to permit rapid action, but that careful monitoring will be necessary to ensure that these initial actions are quickly modified if they prove to have harmful long-term consequences. Managers must be rewarded for acting on the best currently available knowledge rather than being penalized when that knowledge proves to be inadequate.

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