

Chapter 3

Summary Findings

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The level of grassroots activities has increased in recent years, in part because of increased public interest in environmental issues in general and because of concern over the loss of biological diversity in particular. Not only are more individuals becoming involved and new groups being formed, but existing institutions, such as botanical gardens and arboreta, zoos, and living historical farms, are redefining their activities so they contribute more to national efforts to maintain biological diversity. The activities of grassroots groups have become increasingly sophisticated largely because of network organizations like those highlighted in this background paper which coordinate member programs and consolidate the collective contributions of a disparate sector.

The variations in size and scope of grassroots activities make it difficult to generalize about how they contribute to the maintenance of biological diversity. The characteristics that fuel one organization's vitality or limit its effectiveness may be inconsequential in other organizations. Even within the categories defined in the preceding chapters, analysis is complicated by overlapping functions, varying goals, and differing motivations. Nonetheless, considered as a whole, grassroots efforts preserve a remarkably broad range of diversity in agricultural crops and livestock, wild species, and ecosystems. These contributions have been made at little direct cost to government.

The following are a number of general conclusions about the characteristics, constraints, and opportunities of grassroots groups maintaining biological diversity in the United States.

1. Grassroots activities are a vital part of U.S. efforts to maintain biological diversity. They supplement those efforts by undertaking activities for which they are uniquely suited or especially willing, but they are unable to replace government's broader responsibilities for maintaining biological diversity.

Grassroots individuals and organizations make a genuine contribution to the national effort to maintain biological diversity. Frequently, they undertake activities that Federal or State agencies for a variety of reasons cannot or do not address. In other cases, they complement government activities.

The efforts of grassroots groups to protect the habitats of particular species and preserve areas, which are ecologically or historically unique, may expand existing government reserves or protect sites outside those designated areas. The local nature of grassroots groups frequently allows them to negotiate more effectively than the government for lands to be integrated into existing National and State parks or reserves. Some groups also work to preserve Federal multiple-use lands by having them designated as congressionally mandated wilderness areas. Others actually acquire and manage land, such as the Bicentennial Prairie preserved by the Prairie Preservation Society of Ogle County and the wildlife sanctuaries maintained by the Florida Audubon Society.

Some grassroots groups monitor activities on government-owned lands and stimulate public debate on the fate of certain areas. Their most important contribution, perhaps, is in attracting attention to local or regional areas and issues which might otherwise be neglected by National and State agencies or large national conservation organizations. Although their efforts may bring them into conflict with Federal agencies and other private interests, they serve a useful role by raising issues and providing information to policy makers and the public. Effective grassroots groups, however, are not found in all regions, so important issues may be overlooked.

Some rare plants and animals become endangered when they are exploited in the wild. Although the United States has laws and statutes that restrict their exploitation in this country, these government efforts can be supplemented

by grassroots groups, particularly when local populations are endangered. A more complex situation arises when rare or endangered plants or animals are exploited outside national boundaries and imported to collectors inside the United States. While international agreements, such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) restrict such traffic, enforcement can be difficult. Grassroots groups cannot eliminate these problems, but groups such as the American Federation of Aviculture have instituted guidelines to discourage their members from purchasing illegally imported species.

Grassroots organizations as a whole play a major role in raising general public awareness and concern about the loss of biological diversity. In this way, they increase the constituency for government programs responsible for maintaining natural areas as well as those collecting and safeguarding genetic resources for current and future generations. Educational activities range from general circulation of publications on issues related to maintenance of biological diversity, to exhibits in zoos, botanical institutions, and living historical farms. In addition, environmental education groups such as the Wildlife Education Program for a Living Future have created educational packets that make it easier for schools to integrate an ecology into their curricula.

Grassroots groups depend on membership support, and thus tend to devote most of their attention to organisms or areas with high public recognition or appeal. Most endangered organisms, however, lack the esthetic qualities to generate this sort of attention. Accordingly, primary responsibility for protecting the broad array of threatened species or ecosystems, including those that are less charismatic continues to rest with those government agencies mandated to do so.

Many grassroots groups are maintaining living collections of plants and animals not found in the Federal programs. This is an important function since the cost of expanding existing programs or establishing new ones to incorporate all the material maintained by grassroots groups would be prohibitive. Even materials

which duplicate those in national collections provide important backup in case of catastrophic loss in national germplasm centers. In this regard, grassroots activities are, for the most part, a supplement of little or no cost to government programs.

2. The strength of grassroots organizations lies in a shared commitment to preserve resources which are perceived as valuable and threatened. The local focus and flexibility of many grassroots groups can make them particularly responsive to many issues. These organizations, however, can be vulnerable due to limited or unstable funding, and dependence on the enthusiasm of a single individual or small group.

Individuals engaged in grassroots activities usually are motivated by a personal determination to preserve a resource they perceive as threatened. Groups generally are united by a shared desire to protect a local area or a particular group of plants or animals for which they have a special interest or concern. In many cases, they believe that the resource would be lost without their intervention. Grassroots groups define their own goals and methods. They typically lack the bureaucracy of government agencies or larger national organizations so they can respond quickly and creatively when the resources are threatened.

Because they are geographically close to and intimately familiar with the places or species they protect, grassroots groups are frequently the first to observe trends and articulate needs (45). As part of the local community, grassroots groups often have extensive knowledge of local species or areas as well as greater insights into local interests and concerns. As a result, they may be better able to define their activities to reflect issues of greatest concern to local residents or, at least, are able to define how best to approach local residents on issues they feel need attention.

Locally based grassroots groups often possess a keen understanding of local laws and ordinances. Members may also have close personal contact with local officials so they are better able to attract the attention necessary to achieve their

goals. On the other hand, when they are pitted against larger and more powerful interests, local groups can be constrained by their lack of political clout and legal or scientific expertise. Some are able, however, to secure *pro bono publica* assistance from attorneys and scientists. In some situations, their small size combined with what are frequently perceived to be altruistic motives, can work to their advantage, providing them with greater leverage than would ordinarily be predicted by their size (45).

Funding is the major constraint for nearly all grassroots activities. Many individuals support their efforts with personal resources. Organizations usually obtain operating funds from membership dues, fees, sale of materials, and donations. Because they want to involve as many people as possible, groups frequently are reluctant to increase their funding by raising dues. Several groups depend heavily on grants from charitable foundations or, occasionally, industry. However, many grassroots groups may lack the expertise, inclination, or time to seek such funding. The volunteers in these groups would generally rather devote their energies to actually preserving or protecting agricultural crops or livestock, wild species, or ecosystems than preparing lengthy documents; proposal preparation usually is restricted to those groups with paid staff.

Many grassroots groups depend largely on the enthusiasm and contributions of volunteer members. Grassroots projects can be particularly vulnerable when the organization depends on one or a few individuals. Although this constraint is, to some extent, built into the nature of volunteer grassroots groups, some organizations have tried to overcome it. The Rhododendron Species Foundation is working to ensure its long-term survival by developing endowments which would fund their daily operations. Organizations that are sponsored by other smaller groups, such as the Southeast Alaska Conservation Council and the Greater Yellowstone Coalition, do not concentrate leadership responsibility into one or a few people and are, thus, more easily able to replace key individuals. Institutionalizing their activities would be difficult, however, for many groups and it might reduce the vitality of their efforts.

3. **Federal and State laws, policies, and actions can have a considerable positive and negative impact on the effectiveness of grassroots groups.**

Most of the activities highlighted in this background paper maintain biological diversity with little or no direct government subsidy. These groups frequently serve the public interest at their own expense without expecting reimbursement. However, government laws and policies can inadvertently constrain the efforts of individuals and groups. Conversely, greater government recognition or support could provide both encouragement and stability, in many cases, at minimal expense.

The individuals active in grassroots organizations are usually volunteers. The organizations depend on members and other interested individuals to donate funds, equipment, facilities, and even land to accomplish their goals. The tax deductible status of most grassroots groups is an important device for attracting support. With mounting concerns over Federal budget deficits, charitable contributions are coming under greater scrutiny. Should charitable deductions be reduced or eliminated, donations—a major source of funding—might be seriously curtailed.

Another legal mechanism used extensively by many land preservation groups is the conservation easement. However, tax laws on deductions for such easements are vague, and some local Internal Revenue Service offices have adopted policies which discourage such donations. The frequently complex issues surrounding land donation and acquisition present major obstacles to groups lacking legal expertise. Although the Land Trust Exchange helps grassroots groups address many of the legal questions involved in land acquisition, clarification of the issues, particularly those surrounding conservation easements, could facilitate these efforts.

Federal policies and programs maintaining diversity of plant and animal germplasm vary considerably. Perhaps best defined is the National Plant Germplasm System, which is responsible for collecting, evaluating, and storing agricultural crops and their wild relatives. A number of grassroots groups supplement the

Federal program by maintaining heirloom and endangered commercial varieties of vegetables including many which are not contained in existing national collections. To date, these grassroots activities have received little recognition, and minimal effort has been made to incorporate their materials into the national system. Increased cooperation between these groups could not only strengthen these grassroots efforts but also improve the national collections of crop germplasm. Among other things, representatives of grassroots groups could be enlisted to participate in national plant germplasm advisory committees.

The Federal Government has no formal program to sample, evaluate, and preserve endangered sources of domesticated animal germplasm. However, several grassroots programs maintain living collections of various rare breeds of livestock. The value of these efforts to maintain diversity among minor livestock breeds would be greatly enhanced by establishing a Federal program which could provide direction, technical expertise, and support for these grassroots efforts.

Finally, the effectiveness of grassroots activities could be enhanced through greater assistance from State and Federal agencies in areas that require technical expertise, such as plant or animal breeding or germplasm storage. The expense and expertise required by sophisticated technology put it beyond the reach of most groups and individuals. Although larger botanical gardens, arboreta, and zoos are technically sophisticated, their conservation role is relatively recent and limited, so far, to a few institutions. For smaller groups, appropriate technology is essential. The Seed Savers Exchange, for example, has sought assistance from outside experts in developing simple seed propagation and storage methods which could be used effectively by gardeners who want to preserve seed,

4. Network organizations that coordinate the activities of individuals and small grassroots groups can enhance the contributions to the maintenance of biological diversity.

This background paper has described several organizations that coordinate the efforts of individuals and small grassroots groups. Such network groups overcome many of the constraints described in the previous section by pooling resources, experience, and expertise. They can elicit broader support by defining goals that go beyond the narrow objectives of individuals or local groups. They also can function as intermediaries articulating the concerns of their constituencies to government agencies and decisionmakers.

Network organizations can reduce the vulnerability of rare or endangered plants and animals being maintained by individual collectors. Groups such as the Seed Savers Exchange, the American Federation of Aviculture, North American Fruit Explorers, and the American Minor Breeds Conservancy identify and coordinate the activities of individuals who maintain collections of rare plants or animals. In so doing, they reduce the chances that a collection will be lost if a member, for whatever reason, is no longer able or willing to maintain it. They also reduce vulnerability by encouraging other individuals to become involved in maintaining collections,

Many grassroots groups confront technical or legal problems for which they lack expertise. By allowing them to benefit from the experiences of others with similar interests and problems, network organizations provide technical expertise that might otherwise be unaffordable. The Land Trust Exchange, for example, provides legal information to the land trust community at minimal cost. Networks also can address technical problems such as proper genetic management of captive populations. The Center for Plant Conservation and the American Association of Zoological Parks and Aquariums both set standards and priorities to maximize the use of limited resources.

The technical problems are particularly acute with off-site maintenance of animal germplasm. Most grassroots activities must maintain living collections for a variety of reasons; for example, they cannot use sophisticated propagation or

storage technologies such as cryopreservation of semen or embryos, Grassroots efforts also are criticized because they do not have the breeding expertise necessary to maintain genetic diversity and stability. Even large efforts, such as Texas Game Ranching may inadvertently breed animals so genetically adapted to their new homes that re-introduction to native habitats is impossible. The grassroots community has addressed such problems in part by establishing breed registries and obtaining professional advice through network organizations.

The specific goals of many grassroots groups would receive a more attentive hearing if their connection to larger issues were explained. However, the local focus of many individuals and groups makes it difficult for them to relate their activities to larger national or regional issues. By combining their efforts, such groups can achieve a broader perspective and consequently may accomplish far more than they could individually. The Greater Yellowstone Coalition, for example, unifies the efforts of many groups in a broad region by identifying larger goals and allowing constituent groups to define their interests and potential contributions within that context. Such coordination is essential in conserving large regional sites which are governed by many jurisdictions. The benefits of such cooperation also are evident in the current campaign to coordinate the cleanup of the Chesapeake Bay.

Network organizations also express their constituents' concerns to government. Through lack of expertise or funds, small local groups frequently have difficulty conveying their concerns to decisionmaking officials. Groups with broad recognition, such as the Florida Audubon Society, perform a dual function. First, they help local chapters define local issues; then the network can intercede for them at the State level

when necessary. Similarly, the Southeast Alaska Conservation Council provides technical assistance to its constituent groups and gives them a stronger voice with the Federal Government and the U.S. Forest Service by incorporating their concerns to its overall plans for the region.

The grassroots networks described in this background paper demonstrate how much can be accomplished on very limited resources. The publications they produce are primarily intended to improve their own capabilities but are often of great value to others including government agencies. Notable is the *Garden Seed Inventory* published by the Seed Savers Exchange which identifies threatened commercial varieties of vegetables. The inventory allows seed companies to determine when they are the sole source for a variety, and also could be used by the National Plant Germplasm System to identify commercial varieties to be stored by the National Seed Storage Laboratory. Recent efforts by the American Minor Breeds Conservancy to keep track of rare livestock breeds being maintained by individuals and breed associations could become a similar early warning system that would alert scientists and others to the imminent extinction of specific breeds.

The Federal Government could enhance the effectiveness and reduce the vulnerability of these networks through greater support, including resources, technical assistance, and in some cases, simple encouragement and recognition. Increased communication between grassroots networks and Federal and State agencies also could help identify areas where these sectors could cooperate for mutual benefit. Some of these grassroots networks in effect subsidize government responsibilities; and Federal or State governments could consider supporting such projects accordingly.