

Building Effective International, Multicultural Alliances for Restoration of Ejido Forests in the Sierra Madre Occidental

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***Abstract**—Effective NGO-government-community alliances are the key to overcoming the complex socio-political obstacles to conservation in the Sierra Madre Occidental. Over 80 percent of the territory in the Sierra Madre Occidental is communally owned. Agrarian and other socio-economic conditions present both opportunities and obstacles to conservation. Conservation, environmental justice, and community development are inseparable components of effective conservation in the communal lands of the Sierra. Case studies from the Sierra Tarahumara and Madera regions reveal the effectiveness of interdisciplinary, multicultural strategies, participatory planning, and diagnostic processes in weaving the social fabric for environmental protection and restoration.*

Introduction

Anyone concerned about bioregional conservation or restoration of the great watersheds of the Sierra Madre Occidental must recognize that over 80 percent of the endangered pine-oak woodlands of the Sierra are communally owned. The future of this endangered megacenter for biodiversity may very well depend upon the effectiveness of community-based approaches to planning and organizing coupled with resolution of agrarian issues. A second factor, essential to conservation of large regions of the Sierra, is the right to traditional territory and natural resources of the indigenous pueblos of the region. Yet, the majority of conservation efforts in the region fail to focus on community empowerment, neglect the most pressing local priorities, and ignore the tremendous conservation potential of agrarian and indigenous policies.

A regional coalition of NGOs, indigenous leaders, and municipio (county) natural resource technicians known as the Consejo EcoRegional Sierra Tarahumara A.C. with support and collaboration from Sierra Madre Alliance (SMA), U.S. Fish and Wildlife Service, National Commission for Protected Areas (CONANP), Secretariat of Social Development (SEDESOL), and other agencies and private funders is achieving significant conservation gains. Federal agencies and local government have become supportive of the aims of the Consejo and the communities they serve. Intimately tied to the state of the environment is the fate of the Raramuri and Odami (Tepehuan) traditions. Conservation strategies and institutional factors are discussed below that can lead to transformation, pueblo by pueblo, ejido by ejido, municipio by municipio of this world class bio-cultural conservation priority region.

Addressing Environmental Threats

Illegal logging, grazing, subsistence deforestation, cumulative impacts, and illicit drug cultivation are generally noted as

the major threats to the pine-oak forests of the Sierra. Over 99.7 percent of the original old growth forests are gone, and an estimated 90 percent of the riparian areas in the Sierra are considered nonfunctional or at risk. The predominant ecological trend in the region is desertification due to deforestation, catastrophic fire, and replacement of pines by drought resistant trees and shrubs. The bio-cultural diversity of the Sierra is also at risk. The economic and ecological values of the great watersheds of the Sierra, including the Conchos, Fuerte, Yaqui, and Mayo Rivers are endangered.

In such an altered landscape, logging continues to threaten, but must now be seen as one of the tools for long-term restoration. The impact of logging depends upon the silvicultural model and biocultural values of the forest managers. Change in fire regime from frequent low-intensity burns to catastrophic fires is perhaps the biggest long-term threat to the region, yet fire is another essential tool for restoration.

Underlying threats to the environment are socio-economic conditions such as poverty, injustice, illiteracy, health and human rights issues, and the influence of narco culture. The following factors drive environmental decline and complicate solutions:

- Redistribution of land
- Misguided models of sustainable forest management
- Loss of traditional bio-cultural knowledge
- Weak local governance and community organization

Land Tenure and Distribution

The Agrarian Reform Law of 1992 changed one of the most sacred covenants of the Mexican Constitution, Article 27, which since the end of the Mexican revolution had enabled groups of campesinos to band together and petition for permanent usufruct rights of public (and some private) lands. The 1992 reform put an end to Federal land distribution in Mexico and established mechanisms for voluntary privatization of ejido lands. Some argue that the potential of privatization itself is a

threat to indigenous pueblos, based upon historic precedents in Mexico as well as in the United States where the infamous Dawes Act of 1887, which allotted lands to indigenous families, led to the enormous losses of indigenous territory in the Western United States. Others maintain that law itself did not explicitly threaten indigenous pueblos, but established complex legal processes that in application have failed to respect specific rights of indigenous pueblos.

The new agrarian law eliminated the state administration of the ejido system. In place, a Federal court system, the Tribunal Agrario, was established to deal with land claims. A public defenders office, the Procuraduria Agraria (or PA) was established to provide free legal and advisory services to ejiditarios. A Federal agency, PROCEDE, was established under PA to conduct the necessary boundary surveys and, in practice, to promote privatization and reorganization of the ejidos.

The complex regulatory system that has evolved since 1992 has not made it easy to resolve agrarian issues; however, three factors have converged to open communal lands for conservation gains in the 21st century: (1) access to free legal services via the Procuraduria Agraria; (2) increase in NGO support services for communities; and (3) national momentum towards democracy and against corruption. In some ejidos, privatization has led to increased environmental threats, but re-organization of ejidos has in some cases created incentives for more sustainable land management. For example, in the ejido of Tutuaca, land surveys and redistribution of communal forest allotments to individual families ended a long-standing land conflict. Each family now receives an annual timber allotment, which they manage, a system that has given incentives to manage rather than mine the forest. Additionally, the community qualified to receive environmental service payments from CONAFOR (National Forestry Commission) for the protected area in 2004.

In 1995, the second largest nesting concentration of endangered thick-billed parrots was discovered in Tutuaca (figure 1). The best forest and richest nesting concentration in Tutuaca had been protected *de facto* by a boundary conflict with a neighboring ejido that had halted logging, but that conflict was rapidly being resolved. Biologists studying the parrots planned a protection strategy, but had limited contact with the ejiditarios. An innovative strategy was devised by ProNatura Noreste and ITESM (the Monterrey Technical Institute) to establish a wildlife sanctuary in the 2000-hectare core nesting area in exchange for a 15-year rental agreement paid by international donors. Besides the financial offer, two other factors led to establishment of the reserve. First, community workshops sponsored by ProNatura Noreste and SMA empowered women in the community who carried the vote. Second, a local land controversy had been resolved prior to the conservation initiative.

The majority of indigenous ejidos in the Sierra have resisted privatization, but some territories have been reorganized. Many ejidos continue to struggle with historic problems with boundaries and recognition of indigenous land rights. By establishing a program for resolution of agrarian conflicts in conservation priority areas, Consejo EcoRegional Sierra Tarahumara, has coupled a powerful grassroots organizing



Figure 1—Thick-billed parrots. Photo by Javier Cruz, ProNatura.

incentive with conservation initiatives. A combination of public interest legal services, training, and facilitation of community planning has shown to: (1) strengthen overall community organization, (2) improve the responsiveness of local government to community needs, and (3) create opportunities for protected area designation and watershed restoration. Fuerza Ambiental's combination of legal and community organizing tactics have been effective in stopping illegal logging and setting the stage for forest protection in two communities with highly endangered old growth forests: Coloradas de la Virgen and Pino Gordo. National Territories in the great canyons and private landowner strategies also present great opportunities for conservation and restoration.

However, the net impact of land tenure reform on conservation depends on community organization and access to technical and financial support from NGOs or the government. Currently, only two NGOs assist agrarian issues linked to conservation in the Sierra of Chihuahua, Consejo EcoRegional, and CONTEC. PRI-associated Confederacion Nacional Campesino and the independent Frente Democratico Campesino also defend agrarian claims, but have not yet tied agrarian issues to conservation. In total, NGO resources are very limited, and agrarian organizing is painstakingly costly in time and resources. It can take six to 10 years to resolve a seemingly simple case of land fraud. In order for agrarian dispute resolution to produce widespread conservation results more efficiently, a larger economy of scale is needed to support an interdisciplinary team capable of handling a dozen or more cases simultaneously in collaboration with PA, and pro-bono services.

Nevertheless, there is a lot of hope in the process. Illegal logging has been halted on agrarian grounds where environmental law has failed. The old growth forests of the Tarahumara ejido of Pino Gordo have received legal and *de facto* protection due to agrarian claims and related politics, but a final resolution is still in process. In the Pino Gordo (figure 2) case, members of the traditional pueblo claim they were defrauded of their agrarian rights. As they battle to regain their agrarian rights,

they have mounted a defense of their indigenous territorial rights with help of the Consejo EcoRegional, SMA, and the pro-bono services from the U.S. Law firm HellerEhrman and the Environmental Defenders Law Center.

According to the Consejo EcoRegional, the constitutional rights of indigenous pueblos under Article 2 of the Mexican constitution provide an even broader opportunity for conservation of indigenous rights in Mexico. However, it may take combined pressure from indigenous movements and international courts to convince Mexico to establish clear regulatory procedures for recognition of indigenous territorial rights. The land claims of Pino Gordo and Coloradas de la Virgen have been elevated to national priority status, yet the failure of Mexico to codify indigenous rights has opened the opportunity to appeal their cases to the InterAmerican Court for Human Rights with help from HellerEhrman, Consejo EcoRegional, and other Mexican supporters. The results may open potential for conservation nationally, but will more likely enable step-by-step advances for indigenous land claims.

Procuraduria Agraria has a mixed record, but has proven itself to be highly reliable in representing ejiditario claims when ejiditarios are well informed of their rights and responsibilities or have independent technical/paralegal support. The Tribunal Agraria has proven to be slow and dogmatic, but largely independent of political interference.

A bigger problem is maintaining community solidarity and organization during long-term land struggles. The sacrifice required of community leaders fighting for land rights is tremendous. They are among Mexico's poorest, but must find funds to make numerous costly and arduous trips to the state capital to meet with authorities, attend hearings, and comply with a myriad of meticulous regulations regarding ejido processes and documentation. The result is that access to legal rights is denied by lack of resources. Historically, it has been easier to gain official certification of falsified ejido documents than to overturn them later.

Privatization presents both opportunities and tremendous risks for conservation. During the past decade, redistribution of lands to narco-traffickers, tourist operations, and other wealthy interests through legal, coerced, and informal mechanisms has accelerated dramatically throughout the Sierra. The primary interest for most new or expanding landowners is ranching. Trees are viewed as an impediment to pasture, and logging creates short-term capital for ranching. The incentive is to log intensively to create pasture. Foresters have been known to expand logging permits to log already overcut ranches as long as oaks are removed as well as pines.

Many Tarahumara and Tepehuan are forced to sell lands (often informal sales of ejido or communal lands) to mestizos due to poverty. Indigenous families and in isolated cases entire rancherías have been forced into peonage as powerful mestizos fenced off communal forests. In some cases, young relatives have been known to sell rights to the properties of elders. Many of these sales occur on ejido lands outside legal processes, but are accepted by local custom and uncontested by fear. Commonly, mestizos purchase cattle, establish feedlots with government or narco subsidies, and graze communal lands on an unlimited basis, the canyons in the winter and highlands in the summer, with no compensation for the communal landholders. Lands that were previously at capacity with a few dozen indigenous cattle and a few herds of sheep and goats are now heavily overgrazed with large herds of mestizo cattle, whose owners may not even be ejiditarios. Indigenous people who cannot afford to feed their livestock when the pasture gives out, end up losing ground in every aspect, and their watersheds are further degraded year after year.

Sustaining conservation depends upon community commitment, skills and internal organization. Resolution of land conflicts has proven to be a powerful strategic tool for conservation in the Sierra. On the other hand, community planning to restore watersheds has also empowered communities to defend their rights. For example, a large part of the economy



Figure 2—Pino Gordo, traditional life amongst an ancient forest. Photo by the author.

in Baborigame involves drug production and trafficking, yet indigenous and mestizo leaders have agreed in concept to prevent drug cultivation in the area that impacts the town water supply. They are planning to restore 5000 acres of forests and 3 kilometers of riparian area to protect their principal watershed. The Tepehuan are currently organizing to deal with illegal logging and grazing of their lands both within and outside the proposed watershed reserve.

Public interest environmental law is of limited effectiveness in the Sierra unless accompanied by community organization and agrarian action. Mexican environmental law and the environmental side agreements of NAFTA are influential but relatively toothless. Agrarian claims stopped illegal logging and began protection of rare old growth forests in Pino Gordo and Coloradas de la Virgen.

In conclusion, strengthening land tenure advocacy and services to ejidos in conservation priority areas is an integral aspect of building bioregional conservation. Agrarian strategies are not a guarantee for conservation, but are extremely effective when coupled with locally determined conservation objectives. The biggest investment is in basic community organizing that is essential to both conservation and sustainable community development. Therefore, it is most efficient to combine land, conservation, and development objectives in an integrated, long-term strategy in which coalitions of community support organizations with complementary skills can be effective.

Misplaced Models of Sustainable Forest Management

A second overriding threat to the sierra is in the forest management model being implemented Statewide with little consideration for biological impacts, local accountability, watersheds valuable for environmental services, nontimber forest products, or traditional indigenous values. The current model, which is promoted by the National Forestry Commission (CONAFOR), calls for short rotation, selective forestry and is now being certified by the Forest Stewardship Council (FSC) in qualifying ejidos as sustainable. Unknown to FSC, local participation is often discouraged or manipulated by local foresters and caciques. Environmental assessments are nonexistent.

Prior to the establishment of CONAFOR, the most ambitious forestry programs in the Sierra were funded by the World Bank Forestry Program for Northern Mexico and the Canadian-sponsored Model Forest Program in Chihuahua. Both of these programs supported similar short rotation selective forestry models and both lacked effective local participation. A major cause for the cancellation of the World Bank program in 1994 was the resistance of forestry interests to allow biological field studies to proceed in the Sierra, a source of deep conflict between the Secretariat of Agriculture and Hydraulic Resources (SARH) and the Secretariat of Ecology (SEDUE). However, lack of real local participation, especially indigenous participation, was a major contention of NGO opposition to the program.

At the beginning of the World Bank program, only one NGO provided community support in the Sierra, insufficient to effectively challenge the power of the forest industry that

dominated the ejidos. Except for isolated cases like Pino Gordo, little had changed in most of the Sierra by the late 1990s when the Model Forestry Program began a project in the Sierra Tarahumara. According to a former Canadian field manager for the program:

“... the relationship of the program was government to government with the idea that the Canadian government’s viewpoint would be accepted and adapted by Mexican counterparts. What they failed to understand is the dynamics that operate within the Mexican system where the foresters wield the power over the people and thus the forest... The Canadian Model Forest Program put a real effort into encouraging the involvement of all stakeholders in the management of the forests. They did not come in with any prescribed formula for success and found out quickly that what works in Canada cannot be duplicated in Mexico....Where it failed is when the local authorities and governmental officials recognized that empowerment of the local people potentially threatened their positions...” (Cliff Mathies, former Chihuahua Program Manager for the Canadian Model Forest Program, personal interview, April 30, 2004).

Since 2002, ejido El Largo, Mexico’s largest ejido, has been upheld by CONAFOR as one of the exemplar forestry ejidos in Mexico today. El Largo is certified by FSC, and is home to the largest remaining nesting area for endangered thick-billed parrots. Yet, forestry interests have reportedly limited efforts by ProNatura Noreste to establish a thick-billed parrot sanctuary in El Largo. A sanctuary of less than 300 hectares is now under discussion. Such a small area provides no assurance against the long term threats of catastrophic fire and eventual mortality the aspen groves where they nest. Most thick-bills nest in old growth pines, but this population is limited to the only habitat remaining in the area—a few isolated groves of large but vulnerable aspen. Thick-bills eat mostly pine nuts, which are most consistently abundant in older forests.

Community-NGO action has been effective in calling attention to illegal logging, but SEMARNAT continues to lack adequate resources to enforce management plans. SEMARNAT also fails to demand environmental assessments to determine the presence of threatened or endangered species. In the areas where endangered species are documented, no agency provides protection. In the Model Forest Program area, endangered thick-billed parrots were documented nesting, but no measures were taken by the biologists or agencies to protect these areas. The World Bank Program, much larger in scale, also failed to require identification and protection of endangered species and their critical habitat.

The philosophy of many influential foresters in the region is that Mexico is a poor country and cannot afford protection of a few endangered species at the expense of rural profits. The experience of the communities is that they are left worse off following boom and bust cycles of logging, which mainly benefited a handful of families and contractors.

The recently enacted General Law for Sustainable Forest Development contemplates ecosystem forest management

rather than pure administration of timber values, but the effectiveness of this legislation remains to be seen.

Thirty-six communities were represented by COSYDDHAC (a Chihuahua-based human rights commission) in a successful case that exposed systemic governmental negligence to illegal logging before the Commission for Environmental Cooperation. SEMARNAT responded to national and international pressure with a reform of the timber certification program, which has had limited success. However, illegal logging remains commonplace throughout the Sierra and especially in remote, timber rich areas like Guadalupe y Calvo. However, a growing number of foresters, with support from CONAFOR, are working against illegal logging and are promoting establishment of community protected areas, and environmental service payments for protection of watersheds and wildlife habitat, in part to gain FSC certification in selected ejidos in Guadalupe y Calvo and other municipios throughout the Sierra. This conservation and certification process suffers from lack of consultation with biologists and indigenous pueblos, but remains a positive trend in the Sierra.

Without stronger community organization and active participation in forest management and vigilance, the foresters and ejido authorities alone will not be able to stop illegal logging and other factors that threaten sustainability. NGO-community strengthening is needed if this vision of sustainable forestry is to have a chance for success. Many local foresters are now influenced by FSC management philosophies, and a new generation of foresters is more open to forest management alternatives than their predecessors. However, lacking Federal enforcement, it is up to the communities themselves to build a restorative forestry paradigm and to enforce it. It is up to the NGOs to support them and together to build strong relationships with SEMARNAT, CONAFOR, and other agencies to gain both Federal support and enforcement.

Fire Mismanagement

Another disturbing trend in forest management in Chihuahua is the emphasis on fire suppression rather than natural fire management. Not only are catastrophic fires on the increase in the Sierra, but the official fire suppression policy guarantees that this trend will continue indefinitely, and assures the continued desertification of the region. The policy promoted by CONAFOR is to surround, isolate, and extinguish fires and then to reforest. Fear of the forestry authorities has caused many indigenous people to stop the practice of frequent low intensity burning that has sustained the forests for millennium. Reforestation of burned areas is subsidized by CONAFOR, but there are not enough resources to restore even a third of the total losses to fire each year.

Community organization with NGO support is the only effective counter to the current direction of the forest industry in Chihuahua. Research and development of restorative forestry models that incorporate ethno-ecological fire management is needed. SMA is sponsoring research into the natural fire history of the Sierra in collaboration with Dr. Pete Fule at Northern Arizona University. A model ethno-ecological management plan, which incorporates traditional use of fire, is under development in Pino Gordo.

Loss of Traditional Bio-Cultural Knowledge

Loss of bio-cultural knowledge is not only devastating to traditional indigenous culture, but threatens the very management techniques that have formed landscapes and enhanced biodiversity for millennium. Fire is the most documented aboriginal landscape management tool. The NAU/SMA fire studies preliminarily show an increase in low intensity fire frequency, beneficial to the forests, that corresponds to intensification of indigenous settlement in Pino Gordo. Wildlife studies have documented 26 threatened and endangered species in Pino Gordo, many of which are absent or found in greatly diminished abundance in neighboring secondary forests. Ethnobotanist Gary Nabham has noted patterns of indigenous enhanced plant diversity in the Sierra, such as indigenous hybridization of food crops with wild relatives such as beans and corn.

Logging, loss of biological diversity and loss of traditional indigenous knowledge are directly related. Supported by SMA, biologist Andrew Miller of NAU recently completed studies comparing avian diversity and traditional indigenous knowledge in primary and secondary forests in the Sierra. His research is soon to be published and indicates significant losses of both traditional knowledge of birds and avian diversity between primary and secondary forests.

On another realm, the relationship between biodiversity, traditional knowledge and the spiritual balance maintained by the owirume (shamans) is critical to cultural survival and conservation. As Tarahumara leader Prudencio Ramos from Pino Gordo stated: "... if they destroy our forests, the birds are going to disappear. They are important to us. They sing and make us happy. Their pretty songs call the clouds which bring the rains. After the rains, the birds are happy and sing. When we walk through the woods their songs make us happy." Two hundred and twenty-four species of birds, including over 120 migrants, and a total of 26 protected wildlife species have been documented by SMA sponsored biologists in Pino Gordo.

In Pino Gordo and Coloradas de la Virgen, this deep tie to their forests has led the communities to risk everything to stand up against agrarian fraud and illegal logging despite horrendous acts of violence and repression against their leaders. In Coloradas alone, five Tarahumara women successfully blockaded 14 logging trucks in 2003 while Isidro Baldenegro led 20 Tarhuamara into the forests to peacefully stop the illegal loggers. They overcame the terror of 20 years and 36 murders of their brethren to defend the sacred. Isidro was later arrested and spent 15 months in prison before charges were dropped under international pressure; others have resisted constant threats, but their quest for peace and the rights to their traditional lands continues.

SMA supports ethno-ecological vision mapping and forest management planning in Pino Gordo and other communities. Consejo EcoRegional and SMA are developing bilingual (Spanish-Tarahumara) environmental educational materials, videos documenting traditional knowledge of ancient shamans, and facilitate ongoing community planning processes. Even with these tools, there are substantial challenges for indigenous

communities to preserve their traditional land management practices and adapt to the contemporary need for more intensive management and vigilance of their own forests.

Local Governance and Community Organization

Strengthening community organization and the capacity of traditional pueblo, ejido, and municipio governance are the keys to a sustainable and equitable future. De-centralization of Federal programs has empowered the Municipios to directly solicit and manage Federal aid programs, but many rural authorities lack the vision, knowledge, and skills to effectively organize, plan, and solicit support. Traditional powers from the PRI era remain entrenched and resist new stakeholders seeking Federal aid. Indigenous pueblos are further stymied by barriers of language, illiteracy, and traditional governance designed to deal with internal issues but often incapable of facing external threats. The ejido system was imposed upon the Tarahumara from the 1930s through the 1980s, resulting in reduction of traditional authority over their lands and forests as mestizos assumed leadership. Ejidos and municipios have been historically paralyzed to respond to illegal logging, embezzlement, violence, and land fraud. They have been ineffective in soliciting Federal support, resulting in the worst conditions of poverty and marginalization in Mexico's richest forests.

Among ejidos in the Sierra, an exception is Pino Gordo, a pueblo of pure Tarahumara that was isolated from external influence (even missionaries) for decades if not centuries. There, Tarahumara leaders work under the authority of the traditional governor, the guidance of elder shamans, and consensus of the community to defend their territory and forests.

Participatory diagnostic and planning processes, training, and project development sponsored by Coalition members have resulted in the emergence of natural leadership in indigenous communities. The founders of the Consejo EcoRegional have trained rural development coordinators in six municipios in community planning processes with an emphasis on watershed restoration. No less than ten community-based watershed restoration projects are in development throughout the Sierra with many more in planning.

Much work remains, but ejido, municipio, and pueblo governance is being strengthened by collaboration with NGOs. The founders of the Consejo EcoRegional Sierra Tarahumara, recognizing this trend, approached CONANP in 2004 with the prospect of planning a large scale Biosphere Reserve in the Sierra Tarahumara. The director of CONANP, Dr. Ernesto Enkerlin, recognized the convergence of local, State and national trends and provided his support for the reserve to be announced in 2005.

Greater NGO-municipio-community collaboration is beginning to converge with other factors such as the decentralization of Mexican rural aid, the opening of fair elections, and the emergence of opposition parties, all of which are improving responsiveness of government to the needs of rural areas. This path has tremendous obstacles and risks for the NGOs. The Municipios lack resources and experience, and have abused contracts with smaller NGOs, but the emerging

local leadership backed by community approved plans are creating unprecedented opportunity for environmental restoration and protection. The recent formation of the Consejo EcoRegional Sierra Tarahumara A.C., a formal coalition of NGOs, indigenous leaders, and municipio technicians provides a forum that promises greater participation and governmental responsiveness.

Conclusion

The Consejo EcoRegional, ProNatura Noreste, and other regional partners are establishing excellent precedents for community-based conservation in the Sierra. Consejo EcoRegional Sierra Tarahumara A.C. is exceptional among conservation organizations in Mexico as it is establishing protected areas and conducting baseline biological research while strengthening community organization and defending indigenous territorial rights (table 1). These organizations have benefited greatly from associations with SMA and other international partners such as EcoLogic Development Fund and the Wildlands Project (in the case of the Thick-billed Parrot Sanctuary at Tutuaca). The U.S. Fish and Wildlife Service has provided greatly needed support to the SMA backed coalition due to a commitment to conservation priorities over the geo-political comfort of less complicated regions. An inter-institutional forum for indigenous affairs (PIAI) sponsored by the Fundación Empresario Chihuahuense A.C. with participation of all State and Federal agencies and a number of NGOs working in the Sierra has also been supportive of the Coalition and communities mentioned above.

The results to date and potential for watershed restoration and regional conservation are impressive: a 3 million acre "Sierra Tarahumara" Biosphere Reserve has been proposed by the National Commission of Protected Areas (CONANP), the State of Chihuahua, and the Consejo EcoRegional. This large scale reserve will integrate a number of community proposed protected areas, as well as regional watershed and riparian area restoration initiatives planned in the Conchos, Fuerte, and Papigochic watersheds. Nine municipios, once dependent upon timber, have joined with over 50 indigenous governors to date to support the Biosphere Reserve proposal. They are beginning to embrace conservation as an integral part of rural development. These accomplishments are being made by listening to and supporting the most difficult local priorities such as resolution of land conflicts.

In the future, international and multilateral funded programs must respect the growing strength of NGO and citizen participation. CONANP and the Consejo EcoRegional are setting new standards of grassroots participation, a process that needs to be nurtured with greater international and national support. In the 1990s, The World Bank and Model Forestry programs spent over 13 million dollars, an order of magnitude more than the total amount of aid to the NGOs in the region during that decade. (see Mathies interview, World Bank internal report, Forestry Development Program for Northern Mexico, 1990). Those programs supported ambitious goals that can only be fulfilled once the emerging NGO-community partnerships are consolidated and strengthened. This message needs to be

Table 1—Coalition sponsored protected areas, actual and proposed.

Reserve	Area HA	Population affected	Sponsors	Status
Tutuaca Thick-billed Parrot Sanctuary	3,500	450	ProNatura NE	Federal Recognition
Pino Gordo	29,000	1000	Fuerza Ambiental	In Process
Baborigame	2,000	2000	Fuerza Ambeintal	Proposed
Cerro Mohinora	4,000	1200	Mcpo G. y Calvo, Fuerza Ambiental	Proposed
Sirupa	38,000	20	Fuerza Ambiental	Proposed

headed by larger conservation NGOs now entering the region. Critics such as Mac Chapin (see World Watch, “A Challenge to Conservationists,” November/December 2004) have alleged that the larger conservation NGOs focus on top-down, technically oriented approaches with mid-level involvement rather than community-based processes in indigenous regions.

Criteria need to be established to guide international aid in the region, whether private or public, conservation, development, or security oriented. Effective aid needs to also contribute in substantial ways to all the pillars of effective foreign policy in the region: strengthening democracy, respect for human rights, stimulating economic growth and diversification, protecting the environment, and ensuring the rights of the First Nations. These mutually supportive objectives can only be accomplished by local participation at all levels of planning and implementation and by creating special programs for autonomous indigenous planning, training, and organizational strengthening. This type of multi-tiered, intercultural, inter-institutional planning model is core to the Biosphere Reserve planning process just getting underway in the Sierra.

From past experience, government to government and multilateral support to government without direct NGO and community involvement cause more harm than good. The well-funded conservation organizations beginning to enter the region would do well to learn from the experience of grassroots support organizations active in the region, and help them out. Historically there have been huge political barriers to integrating conservation with agrarian and indigenous claims, but Mexico has opened up considerably in the past decade.

The Consejo EcoRegional and a handful of other NGOs working in the region have paved the way to more effective international conservation aid. For entrenched powers, slow but true democratic process in ejidos and indigenous pueblos may seem like a tremendous obstacle for progress. However, effective conservation in the Sierra benefits from and contributes to greater progress in Mexico today on many levels. Listening and responding to the priorities of local communities is the place to start.

(Note: More information on the Sierra Madre Occidental, the programs mentioned above, and unpublished reports can be found at: www.sierramadrealliance.org.)