

BY TODD R. JOHNSON AND THOMAS K. ERDMANN

CBNRM: Defining “4G” Success

As academic researchers, international conservation organizations, and governments engage in debates and hand wringing about how community-based natural resource management (CBNRM) has failed to deliver on either its conservation or development objectives, an evolution on the ground is producing real successes. Future success may require adaptation and consistent application of this generational evolution.

This article describes what we call “fourth-generation”—or “4G”—CBNRM. Our thesis is that CBNRM’s early focus on conservation objectives, or on governance aspects, highlighted gaps in rural economic development, yet after 30 years and millions of dollars invested, adoption of CBNRM remains donor driven. Shifting CBNRM’s focus to wealth creation may increase its effectiveness while driving organic growth to ecosystem scale.

CBNRM — HISTORY AND APPLICATION

CBNRM is the local management of natural resources to achieve local and national economic development and long-term conservation of those resources. CBNRM developed in the early 1970s as a response to evidence that “command-and-control” methodologies for natural resource conservation were politically, socially, economically, and environmentally unsustainable. Simply put: many governments were too poorly resourced—in financial and human terms—to tackle ecosystem degradation. Empowering local people to manage their natural resources emerged as a superior approach.

CBNRM’s underlying concepts had disparate sources. In Asia, social forestry in Nepal, India, the Philippines, and elsewhere gradually became more widespread and participatory. In Africa, wildlife and forest management involving communities took root. In Latin America, fragmented protected areas were consolidated into landscape-level corridors including inhabited lands.

By the 1980s, the more generic term CBNRM began to be applied to these trends. Bilateral development agencies supported CBNRM field programs, as did multilateral finance institutions (especially the World Bank) and private foundations such as Ford. USAID remains by far the largest supporter of CBNRM, with nearly US\$500 million invested.

What have U.S. taxpayers received in returns on that investment? Are village dwellers in Honduras or Cameroon now managing their forest resources to meet today’s needs and those of succeeding generations? Are coastal communities in Indonesia or Ecuador catching more fish? Have wildlife populations in Zambia or the Philippines seen a reversal of fortunes because of community management of protected areas? Not entirely.

As programs in the 1970s and 1980s began to identify and address the challenges they encountered, the next generation of programs adopted the lessons and adapted their approaches. As Table 1 illustrates, each generation of CBNRM programs draws lessons from the strengths and weaknesses of preceding generations. Even proponents of the CAMPFIRE project in Zimbabwe, for example, admit that decentralizing state authority to Rural District Councils did not provide sufficient incentive or opportunity for rural populations to manage wildlife resources: authority to manage was not devolved to those most directly affected by, and affecting, CBNRM’s success or failure. In Madagascar, where management responsibility was devolved, insufficient rights accompanied this devolution. Likewise, grant-financed “income-generating activities” (IGAs) under third-generation CBNRM programs yielded direct, tangible benefits to community members, but enterprise designs that rely on external (donor) reinvestment largely fail to encourage sound business practice and they discourage commercial financing by distorting the business environment.

THE EMERGENCE OF 4G CBNRM

Earlier efforts at CBNRM are not without successes. Namibia's Living in a Finite Environment (LIFE) program has increased the number and effectiveness of community conservancies, generates \$2 million annually in tourism and other revenues, and is increasing wildlife populations. The Philippines NRM Program (1994–1999) encouraged 500,000 hectares of forest to be brought under community management through 25-year Stewardship Agreements. The government's reluctance to implement policies allowing Agreement holders to harvest timber, however, reduced the incentive for people to join together to manage the forests.

This last example highlights the fundamental precept of 4G CBNRM: the need for incentive-based, asset-focused, wealth-creating options that favor increased long-term income over immediate exploitation that lowers asset value. Participating enterprises must be able to generate at least as much income through CBNRM as could be generated by converting the resources to other uses.

In Malawi, miombo woodlands are being converted to farm land, a process driven by population growth, low agricultural productivity, and limited opportunities for wealth creation. Often, charcoal makers lead the way in this land conversion, with tacit support from neighbors who may then graze animals or plant maize on the cleared land. Charcoal making, however, is hard, unremunerative work. It takes two days to produce charcoal worth \$4. When the forest is worth substantially more as forest than as charcoal, and when that worth provides direct and indirect benefits to a critical mass of households, the forest is much less likely to be converted.

Similarly, in Madagascar, agricultural conversion has long been the principal threat to biodiverse forests. In response, development practitioners have tried intensifying and diversifying agriculture, transferring forest management rights to local communities, and expanding to landscape scales to build on local successes of conservation/development projects that were unable to conserve habitat at the magnitude needed to preserve ecological functions and wildlife populations. Market-based solutions being tested in Madagascar focus on agricultural products, with a few natural forest products such as essential oils under consideration. A significant challenge has been to identify lucrative nontimber forest products that can provide revenue sufficient to cover the costs communities incur when forest management is devolved to them.

The “social fence” provided by resource ownership and benefit creation can be more effective as a local governance structure than central or even local

government. One of the first results from the Philippines NRM program was that uncontrolled fires and timber poaching stopped almost immediately when the forests were transferred to Agreement holders. But while social fences can provide better governance of resources, they cannot feed a charcoal maker's or poacher's family. A recurring theme of conferences, evaluations, and workshops on CBNRM has been the need for direct benefits to accrue to those managing the resources. In southern Africa, where wildlife tourism has begun to benefit community members, the need to diversify the economic base beyond tourism also is keenly felt.

Tourism alone cannot generate enough income for enough people to transform the relationship most people have with the natural capital assets surrounding them, in part because of tourism's seasonality and annual variability. Tourism is also a difficult business to do profitably. Many established lodges around Kruger National Park in South Africa, for example, barely stay in business despite the million-plus visitors each year to the area. We know firsthand from the Great Limpopo Transboundary NRM program that finding ways for communities outside the Kruger Park to operate successful lodges requires longer-term investments.

THE 4G MODEL

Recent efforts in Malawi, Uganda, and Madagascar provide insights into the emerging 4G, but what exactly does 4G CBNRM entail? First is a focus on sustainability, including—and this may be the most difficult imperative for NGO projects to implement—graduation from donor support. Ecological sustainability means not postponing the day when the last ebony is cut down, or the last kudu is eaten, but rather building an economy that does not provide the incentive for the last of any of these natural assets to be liquidated. Social sustainability means not merely placating communities with new clinics or a school roof, but engaging them as partners in managing their assets, with all the risks and rewards that management implies. And economic sustainability means not simply putting \$5 into a household, but investing in an expanding menu of opportunities that generate benefits for enough households to become the social fence around the resources.

One example of this emerging 4G is USAID/Malawi's Community Partnerships for Sustainable Resource Management (COMPASS II). Originally designed to support government decentralization in key natural resource sectors—fisheries, forestry, and wildlife—the program has evolved into an enterprise-driven initiative developing market solutions to increase incomes for households (in priority ecosystems), enabling them to derive greater benefits from NRM than from asset conversion. COMPASS II's subsector approach supports natural product

TABLE 1: EVOLUTION OF USAID CBNRM PROGRAMS IN SOUTHERN AFRICA

Examples	Primary Purpose	Paradigm for Benefiting	Land Management Authority/Decision-Making Body	Natural Resource Access/User Rights for Community	Financial Incentives for Households
1G—Zimbabwe Communal Areas Management Programme for Indigenous Resources (CAMPFIRE, 1980–present)	Wildlife conservation through community “buy-in” to reduce poaching	Rural District Councils sell hunting leases to safari operators, then manage and disburse funds on behalf of communities	Rural District Councils and state wildlife authority	Very restricted; sometimes received meat from large game (elephants) hunted for trophies	Very few or none; communities received schools, clinics, other non-NRM benefits for reducing poaching
2G—Namibia LIFE (1993–present), Botswana NRMP (1991–2000), Zambia Administrative Management and Design (ADMADe, 1995–1999)	Wildlife conservation and communal economic gains, primarily through shared hunting, tourism revenue	Communal land leased to business operators (lodge, safari, tourism); concession fees go to communal organization (existing or created)	Local government, tribal, or other communal management entity, often created by projects or NGOs; state approval required	Restricted; some minor products harvest allowed (e.g., grasses, fuelwood, mushrooms)	A few low-level jobs in lodges; lease payments to management entity for distributions unrelated to NRM itself
3G—Malawi COMPASS I (1999–2004); Great Limpopo TBNRM (2001–2004); others	Biodiversity conservation through IGAs that provide greater returns for longer periods than resource harvests alone	Village groups receive small grants to establish natural resource-based enterprises, often using minor products from forests, protected areas, or communal resources	Village natural resource committees or similar community organizations, often created by projects or NGOs; state approval required	Restricted access to protected areas; subsistence use outside protected areas allowed with few restrictions	Harvest of minor resources from within protected areas; income from IGAs (rarely enough to cover business costs without continued grant financing)
4G—Malawi COMPASS II (2004–2009); Uganda Productive Resource Investments for Managing the Environment-Western Region (PRIME-West 2003–2008); Madagascar ERI (2004–2008)	Natural resource conservation through utilization that competes favorably against gains from liquidation of natural assets	Technical support in establishing and operating viable natural resource-based businesses in subsectors with robust domestic and regional markets	State transfers management to village government subcommittee or association; enterprises obtain access permits or harvest licenses from village subcommittees	Communities have full managerial authority to regulate access/use rights for customary lands outside protected areas	Incomes from business operations flow directly to households; range of horizontally and vertically integrated subsectors provides diverse business options

value chains that offer commercially viable enterprise options meeting four criteria:

1. Products have established domestic and regional markets with existing unmet demand;
2. Enterprises have the potential to increase incomes of hundreds or thousands of households nationwide;
3. Production provides a direct link between the natural product and natural resource conservation; and
4. When possible, the enterprises do not exclude marginalized households (HIV-affected, women- or youth-headed, etc.).

COMPASS II technical support encourages entry and investment into the value chains by input suppliers, processors, or traders. The program is also training private extension agents on best practices for small-scale commercial production and mobilizing them to sell services to producer associations; providing banks and microfinance institutions with risk-reduction products

and technical reviews of business plans to encourage lending to natural products-based businesses; and developing equipment leasing options and business service providers in rural trading centers.

USAID/Uganda’s PRIME-West and USAID/Madagascar’s Eco-Regional Initiatives (ERI) similarly use market forces to drive rural development at landscape scales, fostering enterprises that use financial and economic incentives both to shift producers from subsistence, survivalist scales toward small commercial businesses, and to provide a critical mass of households in priority ecosystems with valid reasons to conserve assets. ERI first employs an innovative policy and legal mechanism to transfer forest management rights from the state to community associations, then helps these associations identify forest products and enterprises that can generate wealth. In the larger landscape, ERI works with producer groups and cooperatives to improve agricultural production and marketing, working with another USAID project that identifies buyers and private sector partners.

PRELIMINARY FIELD RESULTS

The 4G CBNRM described here cannot occur in a vacuum. One foundation common to any successful CBNRM program is a policy environment conducive to community involvement in NRM, including provisions for the profitable utilization of resources. Another prerequisite is the existence in priority ecosystems of sufficient resources to operate natural products-based businesses at harvest levels that maintain profitability while allowing regeneration of resources. The third requirement is the existence of growing markets within profitable reach of producers—a challenge in much of Africa.

When the policies, resources, and markets are in place, the implementation process involves generating awareness; identifying assets and options for their use; mapping resources and planning allocation according to producer groups' needs; developing management and business plans that include profitability analyses for each enterprise option as well as harvest rates and human and financial resource needs; signing agreements to obtain authority and capital; establishing the enterprises; and measuring and reporting progress—financial, resource-related, or otherwise.

COMPASS II has helped local actors develop management plans for 144,316 hectares of forestland, fishing grounds, and wildlife areas. Natural product subsectors supported include honey, farmed fish, tree-seed oils, wild mushrooms, and home garden products (herbal, medicinal, and culinary). From a base of 60 metric tons of honey produced nationally in 2004 with a value of \$50,000, we expect 4,000 beekeepers to produce 800 tons per year worth \$600,000 by 2009. In 2005, 6,000 subsistence fish farmers produced 500 tons of fish; COMPASS II projects that 500 small-scale commercial farmers will produce that same volume per year. Already in 2006, some 350 baobab suppliers have sold 63 tons of raw material to an oil and powder processor, a market that did not exist last year. And 985 smallholders are producing second and third harvests of high-value vegetables, herbs, grains, and cash crops such as paprika or chilies, using drip irrigation that requires half the water and labor of furrow irrigation.

In Madagascar, ERI collaborates with nearly 1,000 producer groups and forest management associations. Many have doubled their rice yields using techniques introduced by field agents. Contracts are being signed for crops and natural products including maize, red rice (for a niche export market), and oil-producing *Jatropha* seeds. ERI plans to establish a federation of forest management associations so they can access the emerging ecotourism market and increase their power at the negotiating table.

LOOKING AHEAD

In 2000, Marshall Murphree, an intellectual leader of CAMPFIRE in Zimbabwe, made the following observation: “Our final judgment must be that [community-based conservation] has to date not been tried and found wanting; it has been found difficult and rarely tried.”¹ We would amend this statement slightly: it is not that CBNRM has been tried and failed, it is that community management of natural resources remains a work in progress, moving from conservation for its own sake toward providing tangible benefits for a critical mass of households to become better stewards of their natural assets.

The dynamics of nature, wealth, and power underlying CBNRM remain as daunting today as they were 30 years ago, yet by shifting the focus of CBNRM to wealth creation first and foremost, preliminary signs are that the power relationships and natural resource conservation will indeed follow. CBNRM is not rocket science. It is, in fact, more complicated and less predictable. There are no equations to determine the outcomes of millions of rural villagers making decisions every day about how to interact with their environment. But if the dynamic relationships between these individuals and their natural resources are ever to be transformed from liquidation and resource mining to management and reinvestment, the generation of wealth from long-term utilization must lead the way.

¹ Murphree, M.W. “Community-Based Conservation: Old ways, new myths and enduring challenges.” African Wildlife Management in the New Millennium conference. Mweka, Tanzania, December 2000.

Todd R. Johnson is a Senior Development Specialist at DAI with 21 years of CBNRM experience. He is currently the Chief of Party for COMPASS II in Malawi.



A forestry expert who formerly served as a senior program officer for WWF-US' Global Forest Program, Thomas K. Erdmann is Regional Coordinator for USAID's Eco-Regional Initiatives Program in Toamasina, Madagascar.



The opinions and interpretations presented are those of the authors and do not necessarily reflect the views of any government or donor agency. Reproduction of the contents is permitted with an acknowledgment of the source.

DAI Washington
7600 Wisconsin Avenue
Suite 200
Bethesda, Maryland 20814 USA

Tel.: 301-771-7600
www.dai.com

Questions? Comments?
Contact daideas@dai.com