

Introduction

About This Book

A quick look at *Books in Print* under the heading “biodiversity conservation” will turn up at least a score of books that discuss the importance of conserving biodiversity and offer suggestions as to how biodiversity can be conserved. So why did we believe that it was important to write another book on biodiversity conservation? The majority of books that are available have not been written by project staff who have learned through trial and error which strategies and approaches work and which do not. Rather, they have often been written by academics who may have little practical field experience in reconciling the competing demands of biodiversity conservation and community development.

Conserving biodiversity while promoting human prosperity is a challenge that is being addressed every day by managers of conservation and development projects. Yet, the search for practical strategies that are likely to be effective in conserving biodiversity while meeting human needs has often overlooked and undervalued the skills, know-how, and experience of these talented and capable individuals. Most academic texts tend to be either too theoretical or proscriptive and seldom explicitly address the challenges that project staff face every day. In contrast, this book is the product of a participatory project, known as Biodiversity Monitoring and Evaluation (BIOME), that was developed and undertaken by staff members of 11 conservation and development projects in Africa and Madagascar.

WHAT THIS BOOK OFFERS

The Biodiversity Support Program (BSP), implementor and facilitator of the BIOME project, believes that no one is better able to identify, describe, and communicate the most effective strategies for biodiversity conservation than the project managers themselves. They are the ones who must find practical solutions to the challenges of conserving biodiversity while addressing human needs. The information and lessons learned presented in this book come from the personal observations of project staff during site-visit exchanges. These intersite

visits were designed to allow project staff to analyze how a set of principles of conservation, thought to be critical for effective biodiversity conservation, were incorporated into the 11 BIOME projects, and to highlight effective conservation techniques being used today in these projects.

This book describes the problems and opportunities project managers face, what they are doing to address these problems and opportunities, and what can be learned from their experiences. Specifically, this book offers

▀ Techniques and activities that project managers have found effective and observations on how and why these approaches vary across projects, and

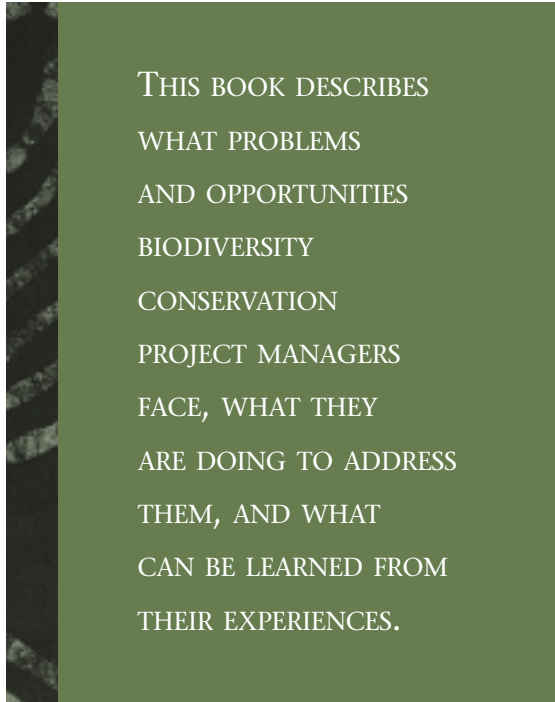
▀ Observations on the role of a set of key principles that the BIOME participants believe underpin effective approaches to conservation of biodiversity within projects across Africa and Madagascar.

The book encourages project managers to reexamine their projects using the insights of other project managers who have struggled with, and, at times, overcome similar challenges.

THE BIOME PROCESS

In 1994, more than 80 biodiversity conservation projects in sub-Saharan Africa were surveyed to determine their interest in participating in an exchange of lessons learned. Thirty-eight projects responded. In February 1995, 26 project managers from 11 projects in Africa and Madagascar were selected to participate in the BIOME project. All participants came together in a workshop held in Ouagadougou, Burkina Faso, in May 1995. The first aim of the workshop was to identify a set of principles that project staff believed would be central to promoting the success of a project, if incorporated into its design and implementation. Participants then decided how to implement the other aim of the project—observing and documenting how the principles were being applied in the field. It was decided that each of the project staff would visit one other project site for two weeks to exchange information and to observe, firsthand, different approaches to meeting conservation challenges. Each project manager would document how the principles were being implemented in the other project. Site-visit exchanges were conducted from September 1995 to August 1996. Finally, participants selected who would be responsible for compiling and summarizing the observations made during the site visits.

Once all site-visit reports were completed and circulated for comments among the BIOME participants, a team of seven participants met for an eight-day



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CONSERVATION
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meeting to finalize the framework within which the observations from the site visits would be summarized and presented. The four primary writers—Yaa Ntiamoa-Baidu, Souleymane Zéba, Deo-Gratias Mboje Gamassa, and Léonie Bonnéhin—prepared preliminary drafts of their contributions, which were reviewed and revised by all participants and by other conservation practitioners. The primary writers then met in Abidjan, Côte d’Ivoire, to finalize their work. At the final workshop in Victoria Falls, Zimbabwe, final participant comments on the text were solicited. An evaluation of the BIOME project was also conducted at the final workshop and documented in a separate report. This book is the product of all BIOME participants.

About the BIOME Projects

The 11 BIOME projects were selected to provide a balanced cross-section of projects representative of the range of biophysical features; cultural, political, institutional, and economic contexts; and conservation approaches found throughout sub-Saharan Africa and Madagascar. To select the BIOME projects, questionnaires were sent to 80 biodiversity conservation projects. Only projects that had been implemented for longer than one year were considered, and the project had to be able to safely host visiting project managers. Thirty-eight projects completed and returned the questionnaires. Out of these, 11 projects were selected for participation in BIOME. (*See BIOME Projects Overview on the next page.*)

The **LIFE**, **CAMPFIRE**, **AMCFE**, and **NATURAMA** projects are all located in arid areas with low, often sporadic rainfall. The **DZANGA-SANGHA**, **VIE ET FORÊT**, and **MASOALA** projects are located in dense tropical rain forest. The **MADAGASCAR WETLANDS** project is located in wetlands surrounded by dry deciduous forest. The **GACON** project is situated in a degraded, moist semi-deciduous forest zone. **KENGO** is operating in two areas: the semi-arid Kitui area, and the wetter areas of the Mount Elgon watershed and the Lake Victoria basin. The **LAKE MBURO** project is located in an area characterized by dry acacia woodland with open grassy areas and wetlands.

Culturally, all of the projects (with the exception of **GACON** and **MADAGASCAR WETLANDS**) are operating in heterogeneous communities and have to work with two or more ethnic groups. The multiplicity of ethnic groups in project areas often constitutes a management challenge that must be addressed. For example, the **LIFE** project in the East Caprivi region of Namibia works with three main ethnic groups: the Mafwe, who are the dominant group; the Mayeyi, who broke off from the Mafwe; and the Subiya. The refusal of the Mafwe to accept the Mayeyi as an independent group and the hostility created

BIOME Projects Overview

Project Name	Coordinating Organization	Participating Staff	Project/Site Visited
Communal Areas Management Programme for Indigenous Resources (CAMPFIRE)—Zimbabwe	ART and ZIMTRUST	Langford Chitsike Njabulo Zondo	DZANGA-SANGHA
Participation of Local Communities in the Conservation of Kaboré Tambi National Park (NATURAMA)—Burkina Faso	NATURAMA	Adama Nana Passing Sawadogo	MADAGASCAR WETLANDS
Dzanga-Sangha Integrated Conservation and Development (DZANGA-SANGHA)—Central African Republic	WWF-US	Julien Feizouré Urbain Ngatoua	MASOALA
Indigenous Vegetable and Fruit Tree Development (KENGO)—Kenya	KENGO	Dolline Busolo Susan Wasike	AMCFE
Masoala Peninsula Integrated Conservation and Development (MASOALA)—Madagascar	CARE, WCS, and The Peregrine Fund	Oliva Rakotobe Jocelyn Rakotomalala	VIE ET FORÊT
Lake Mburo National Park Community Conservation (LAKE MBURO)—Uganda	AWF	Mark Infield Joseph Serugo Moses Turyaho	LIFE
Living in a Finite Environment (LIFE)—Namibia	WWF-US	Karl Aribeb	LAKE MBURO
Madagascar Fish Eagle and Wetlands Conservation (MADAGASCAR WETLANDS)—Madagascar	The Peregrine Fund	Rivo Rabarisoa Jeannette Rajesy	GACON
Research on Multiple-use Plant Species in the Boucle du Baoulé Biosphere Reserve (AMCFE)—Mali	AMCFE	Abdoulaye Diallo Moriba Nomoko	KENGO
Sacred Grove and Biodiversity Conservation (GACON)—Ghana	GACON	John Ntim Gyakari William Oduro	CAMPFIRE
Conservation and Sustainable Development around Taï National Park (VIE ET FORÊT)—Côte d'Ivoire	Association Vie et Forêt/ Life and Forest	Léonie Bonnénin Casimir Koulohi	CAMPFIRE

NOTE: The map on page 11 shows the approximate location of each of these projects in Africa. The descriptions on pages 69-91 give more detailed information on each of the projects.

by this situation was so intense that if a project officer went into the communities and was seen to have called on the chief of one of the groups first, the other group would refuse to receive her. Ethnic divisions and rivalries can make project implementation difficult and can be a source of serious conflict among project participants, unless project managers are sensitive to these issues.

The political context within which the BIOME projects operate also varies enormously, both between countries and between regions within countries. All of the countries involved, however, are operating under the legacy of colonial administration. Some areas are characterized by strong, highly respected traditional governance systems, such as the Khuta system of the East Caprivi people in the **LIFE** project

and the Ashanti chieftancy system in the **GACON** project area. These differences are reflected in people's attitudes and perceptions in terms of what is expected from the central administration and the degree of self-reliance with regard to natural resource management. The cultural and political structures also influence land tenure systems. Thus, whereas projects operating within the West African subregion operate under systems where land is owned by chiefs, clans/tribes, families, and individuals, the central, eastern, and southern African projects are characterized by state, communal, and commercial land-ownership systems.

Institutionally, the 11 projects fall into two categories: large projects initiated and funded by outside donors (e.g., **DZANGA-SANGHA** and **LIFE**), and small projects initiated by local groups that have either benefited from outside funding or still depend on external financial support for their activities (e.g., **GACON**, **NATURAMA**, and **KENGO**). All of the projects are implemented by nongovernmental organizations (NGOs), either a single local NGO or a consortium of European/American NGOs working with a local NGO, or as a government/NGO partnership.

Economically, all of the projects are dealing with rural communities with relatively low material standards of living and few opportunities for generating cash income. Even in areas where people can be considered well-off in terms of overall assets (e.g., pastoral groups whose wealth is often in the form of land or livestock assets), people live in materially poor conditions. The majority of the rural people in the BIOME project areas depends substantially upon the direct use of natural resources for their livelihood.

The dominant approach to conservation within the BIOME projects is wildlands protection (**DZANGA-SANGHA**, **LAKE MBURO**, **MADAGASCAR WETLANDS**, **MASOALA**, **NATURAMA**, **AMCFE**, and **VIE ET FORÊT**). This means setting aside and managing areas that contain relatively intact populations of wild plants and animals where resource use by humans is primarily non-consumptive. **GACON** is concerned with the conservation of nondomesticated plants and animals in traditionally but not legally protected areas; **CAMPFIRE** and **LIFE** both focus on the husbanding of wild animals in communal lands surrounding protected areas; and **KENGO** is interested in conserving domesticated vegetables and fruit trees. While focusing on *in situ* conservation of medicinal plants in the Boucle du Baoulé Biosphere Reserve, **AMCFE** is also considering the potential use of *ex situ* conservation of plant resources.

The BIOME projects were intentionally selected to cover a broad spectrum of climate, vegetation, cultural, and political systems from 10 countries across Africa and Madagascar. They can therefore provide a useful overview of how successfully the BIOME principles are being implemented in projects and can provide

Locations of BIOME Projects



CONSERVATION SCIENCE PROGRAM, WWF-US

- 1) Communal Areas Management Programme for Indigenous Resources (**CAMPFIRE**)—Zimbabwe
- 2) Participation of Local Communities in the Conservation of Kaboré Tambi National Park (**NATURAMA**)—Burkina Faso
- 3) Dzanga-Sangha Integrated Conservation and Development (**DZANGA-SANGHA**)—Central African Republic
- 4) Indigenous Vegetable and Fruit Tree Development Project (**KENGO**)—Kenya
4A) Bungoma 4B) Kitui
- 5) Masoala Peninsula Integrated Conservation and Development (**MASOALA**)—Madagascar
- 6) Lake Mburo National Park Community Conservation (**LAKE MBURO**)—Uganda
- 7) Living in a Finite Environment (**LIFE**)—Namibia
- 8) Madagascar Fish Eagle and Wetlands Conservation (**MADAGASCAR WETLANDS**)—Madagascar
- 9) Research on Multiple-use Plant Species in the Boucle du Baoulé Biosphere Reserve (**AMCFE**)—Mali
- 10) Sacred Grove and Biodiversity Conservation (**GACON**)—Ghana
- 11) Conservation and Sustainable Development around Taï National Park (**VIE ET FORÊT**)—Côte d'Ivoire

examples useful to project managers operating in diverse ecological, social, political, or economic conditions.

About Biodiversity Conservation in Africa

The 43 nations of sub-Saharan Africa and Madagascar (including all islands) encompass some 22 million km² of tropical savannas, woodlands, wetlands, and moist forests. These areas support an extraordinary variety and abundance of plants and animals. Moreover, the livelihoods of more than 520 million people are either directly or indirectly dependent on the productivity and diversity of these landscapes. As these natural resources continue to be essential commodities for people in these nations, how they are managed—from village-level decisions to state policies, from practices of conservation to those of extraction—will determine how much and in what conditions these natural resources will be available to future generations.

CONSERVATION CHALLENGES

An important aspect of the stability of an ecosystem is the maintenance of its biodiversity—the diversity of life. The challenges faced by those working toward the conservation of biological diversity in Africa are numerous. Many of these challenges are similar to those facing conservationists on other continents.

These challenges include

- 🌿 Poverty, hunger, and malnutrition
- 🌿 Rapid population growth (overall population densities may not be a problem, but the distribution and lack of appropriate resource management structures to ensure adequate provision for all sectors of the population give cause for concern)
- 🌿 Inadequate land suitable for farming and settlements (a substantial proportion of people in Africa and Madagascar have to live on marginal lands, which may be subject to seasonal inundation, drought, erosion, etc.)
- 🌿 Political instability and wars/conflicts (civil wars, inter-ethnic wars, *coups d'état*)
- 🌿 Shortsighted policies, especially those that encourage excessive exploitation and undervaluing of natural resources
- 🌿 Inappropriate agricultural technologies (often transferred from foreign countries)

- ▣ Lack of formal and nonformal education and low public awareness of biodiversity conservation issues
- ▣ Suspicion by local communities of government and conservation officers, and
- ▣ Barriers to the flow and exchange of project management tools and approaches among the staff of conservation and development projects in Africa.

Most rural societies evolved with a long tradition of resource conservation that enabled them to survive rather harsh conditions. In modern times, however, people are often compelled by economic and social pressures, compounded by the factors listed above, to exploit at unsustainable levels the natural resources that form the very basis of their survival.

National parks and other categories of protected areas have played a major role in modern systems of biodiversity conservation in Africa and Madagascar and are likely to be an important component of national biodiversity conservation strategies in the future. Historically, protected areas in Africa usually restricted or completely excluded access to and use of wild areas and wildlife by local communities who formerly depended on these areas for their livelihoods. This form of strict protectionism was largely influenced by colonialism, based on exploiting the natural wealth of African countries for the economic development of the colonizing country. The lessons from history show us that this “top-down” approach to natural resource conservation almost always heightens conflicts over resource use.

Only relatively recently have conservation projects recognized that conserving wild resources is not only a biological issue, but also a social, political, and economic one as well. As a result, it is only within the past few years that many conservation and development projects have adopted dual goals of conserving biodiversity and improving human welfare. Given how recent have been attempts to integrate conservation and development, and how considerable are the barriers to exchanging information among projects, it is not surprising how few project staff have had the chance to share their experiences and learn from other projects’ successes and failures. If managers are to avoid reinventing the wheel when designing and implementing conservation and development projects, they must have the opportunity to build on the collective experience of other projects. Providing opportunities for project staff to meet, share knowledge, and exchange approaches is an important step in making biodiversity conservation work. The BIOME project was designed to help promote the flow of information and experience among project staff that face comparable challenges.



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CONSERVATION PRINCIPLES

To a biodiversity conservation project planner or implementer, the BIOME principles are like the instruments in the cockpit of a plane. Without all the guidance provided by the instruments in the cockpit, the pilot may get off the ground but will find it difficult, if not impossible, to reach the correct destination or, worse, may crash en route. The project staff participating in BIOME believed that these principles offer similar critical guidance to planning and implementing biodiversity conservation projects.

Definitions and illustrations of the principles are based on the personal observations and perspectives of project staff involved in the BIOME project as well as on the groundbreaking book, *African Biodiversity: Foundation for the Future*. This book showcased, for the first time, Africans' views of what is most relevant to biodiversity conservation while meeting human needs (Biodiversity Support Program 1993).

Participation: Involving local* people in the management and conservation of biological diversity is essential if project activities are to be effective.

Policymaking: Including a representative cross-section of stakeholders in policymaking is important if local people are to support conservation initiatives.

Indigenous Knowledge: Incorporating local knowledge into project activities can reduce the risks associated with relying on outside technology and with adopting alternative resource use techniques and practices.

Values: Incorporating local values into projects helps ensure that conservation initiatives are compatible with local concerns and builds respect and trust between local communities and project managers.

Community Needs: Efforts to involve local people in the conservation of biological diversity will not succeed in the long term unless local people believe those efforts contribute to their welfare.

Education: Education, training, and awareness raising are the doorways to effective stakeholder participation and empowerment in biodiversity conservation and management.

* In this document, the term *local* refers to individuals, families, and communities living within the geographic area in which the project has conservation and development activities.


🌿 **Monitoring and Evaluation (M&E):** Including communities in M&E programs facilitates consensus-building, enhances the willingness of stakeholders to implement decisions, and improves the effectiveness of the conservation program.

🌿 **Sustainability:** Conservation of natural resources over the long term will not succeed unless resource users have the social, technical, political, and economic capacity to regulate access to and disposition of these resources.

These principles are not independent and empirically defined relationships between variables or phenomena. Rather, they are themes or critical issues, and, like the instruments in the plane's cockpit, they are interrelated and interdependent. They are thus difficult to rank in relative importance and are better viewed more like a web of relations that together guide the performance of a project. For example, we might argue that only through effective community participation can indigenous knowledge, people's needs, and local values be understood. Only when we combine this understanding with information on land tenure systems is it possible to understand conflicts between modern and traditional law (legal status), develop effective education approaches and strategies for M&E, and, as a result, implement effective biodiversity conservation systems that are sustainable and that meet people's needs.

The project staff participating in BIOME believe that the principles constitute an important viewpoint from which to plan a sound project or to diagnose and correct an ongoing project. Observing how these principles are incorporated into BIOME projects has helped BIOME participants reappraise their own projects and is a mechanism for encouraging other project managers from biodiversity conservation and other types of projects to recognize, appreciate, and institutionalize the BIOME principles in the design and implementation of their projects. By popularizing the use of this set of guiding principles, the BIOME project hopes to promote effective biodiversity conservation throughout Africa and Madagascar.

The following sections present project staff observations of how each principle was implemented in BIOME projects. These examples are used to highlight the types of activities that reflect the rationale for and approach to incorporating a principle into project planning and implementation. They do not constitute a complete and exhaustive account of how the principles were applied in each BIOME project.



TO A BIODIVERSITY
CONSERVATION
PROJECT PLANNER OR
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ARE LIKE THE
INSTRUMENTS
IN THE COCKPIT
OF A PLANE.