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Traditional Knowledge and Sustainable Development

Shelton H. Davis
Katrinka Ebbe
Editors

June 1995



Proceedings of a Conference

held at
The World Bank
Washington, D.C.
September 27-28, 1993



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*Shelton H. Davis
Katrina Ebbe*
Editors

Alicia Hetzner, Editorial Consultant

Proceedings of a Conference
*sponsored by the World Bank Environment Department
and the World Bank Task Force on the International Year
of the World's Indigenous People
held at The World Bank
Washington, D.C.
September 27–28, 1993*



Environmentally Sustainable Development Proceedings Series No. 4
The World Bank, Washington, D.C.



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for Reconstruction and Development/THE WORLD BANK
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First printing June 1995

This report has been prepared by the staff of the World Bank. The judgments expressed do not necessarily reflect the views of the Board of Executive Directors or the governments they represent.

Cover photograph by Frederik J. Van Bolhuis. A local leader in the Warwan Valley, Zaskar, India.

Shelton H. Davis is Principal Sociologist with the Environment Department of the World Bank; Katrinka Ebbe is a consultant to the same department.

Library of Congress Cataloging-in-Publication Data

United Nations International Year of the World's Indigenous Peoples'
Conference (1993 : World Bank)

Traditional knowledge and sustainable development : proceedings of
a conference sponsored by the World Bank's Environment Department and
the World Bank Task Force on the International Year of the World's Indigenous
People held at the World Bank, Washington, D.C., September 27-28, 1993 /
Shelton H. Davis, Katrinka Ebbe, editors ; Alicia Hetzner, editorial consultant.

p. cm — (Environmentally sustainable development
proceedings series ; no. 4)

Includes bibliographical references (p.).

ISBN 0-8213-3188-4

1. Sustainable development—Congresses. 2. Indigenous peoples—
Congresses. I. Davis, Shelton H. II. Ebbe, Katrinka, 1947- .
III. Hetzner, Alicia. IV. International Bank for Reconstruction and
Development. V. Title. VI. Series.

HC79.E5U465 1993

338.9—dc20

94-48104

CIP

Contents

Foreword *v*

Acknowledgments *vi*

Summary of the Conference Proceedings

Introduction	3
Traditional Knowledge and Cultural Survival	7
Traditional Knowledge, Land, and the Environment	9
Traditional Knowledge and Agricultural Sustainability	12
Contributions of Traditional Medicine to Health	14
Traditional Institutions and Participation	18
Government Policies and Traditional Knowledge	23
Building a New Partnership	27
Conclusion	30

Post-Conference Discussion

Traditional Knowledge and Sustainable Development: A Conversation	35
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Appendixes

1. Program	45
2. Participants	47
3. Indigenous Knowledge Resource Centers	50
4. Operational Directive 4.20: Indigenous Peoples	52
5. Selected Bibliography	58

Foreword

Knowledge is perhaps the major factor that will determine whether humankind will be able to create a sustainable future on this planet. Yet, until relatively recently, our conception of knowledge was bound by the philosophy and methods of Western science. Few, outside of some anthropologists and historians, recognized that there are myriad “sciences” embedded in the cultures of other peoples and civilizations throughout the world. Today, both scholars and public policy-makers are recognizing the importance of various local or culture-based knowledge systems in addressing the pressing problems of development and the environment. The United Nations declared 1993 the International Year of the World’s Indigenous People. This was followed by the United Nations’ declaration of 1995 to 2004 to be the Decade of the World’s Indigenous People.

This report, *Traditional Knowledge and Sustainable Development*, records the proceedings of a two-day conference held at the World Bank in September 1993 in support of the United Nations year. The conference brought together a small number of peoples from around the world—some of them members of indigenous or traditional societies—to discuss how the knowledge of indigenous peoples might contribute to creating more environmentally and socially sustainable forms of development.

Interestingly, the conference speakers focused not on abstract propositions but on real world problems, such as the contributions of traditional

knowledge to land use planning and environmental protection, food security and agricultural sustainability, and health and medicine. They also highlighted how traditional or customary social institutions can promote and facilitate the practice of sustainable development.

This conference made no formal recommendations. However, consensus (reflected in reports such as the UN Agenda 21 documents and those from the UN International Year of the World’s Indigenous People) seems to be emerging that a new type of relationship or contract is needed among indigenous peoples, national governments, and international development agencies. The old top-down or paternalistic forms of development policymaking are no longer acceptable to indigenous peoples. Like so many other groups who formerly were unheard or unheeded, indigenous peoples are asking for respect for their land rights and cultural integrity, and the right to participate as partners in the development decisionmaking process.

For all of these reasons, I am glad to see that the *Proceedings* of this conference are being published and will be available to persons involved in sustainable development efforts both inside and outside of the World Bank.

Ismail Serageldin
Vice President
Environmentally Sustainable Development
The World Bank

Acknowledgments

Many World Bank staff contributed to the success of the Traditional Knowledge and Sustainable Development Conference. While some were instrumental in formulating its goals and content, others provided useful suggestions and feedback on identifying speakers, arranging outreach, and collecting pertinent materials. Still others graciously agreed to moderate panels and share their insights on the issues discussed. We would like to thank the following people for their invaluable support: Emmanuel Asibey, Bhuvan Bhatnagar, Leandro Coronel, Timothy Cullen, Gloria Davis, Mamadou Dia, Paula Donnelly-Roark, Mary Dyson, Mohamed El-Ashry, Ashraf Ghani, Rebecca Jaimes, Maritta Koch-Weser, Pierre Landell-Mills, Antonia Macedo, Kris Martin, Ralph Osterwoldt, Mario Ramos, Lars Soeftestad, Bachir Souhlal, Andrew Steer, and Aubrey Williams.

Travel support was generously provided by the Global Environment Facility Administrator's Office; the Capacity Building and Implementation Division, Africa Technical Department, and External Affairs Department of the World Bank; Deutsche Gesellschaft für Technische Zusammen-

arbeit (GTZ); International Fund for Agricultural Development (IFAD); and Fletcher Challenge, Ltd.

Francis Dobbs video-recorded the conference, and Tomoko Hirata provided the graphics for publicity. Logistics were provided by Bill Grundy in the Bank/Fund Conference Office and Donna Clark in World Bank Conference Services. Janis B. Alcorn of the Biodiversity Support Program; Joseph Matowanyika of The World Conservation Union (IUCN) Regional Office for Southern Africa; and Jorge Uquillas, Environment Division, Technical Department, Latin America and the Caribbean Regional Office, World Bank, reviewed and provided useful comments on a draft of the report.

Finally, no conference can be successful without administrative support, and for their excellent work we thank Myrtle Diachok, Denise George, and Nona Sachdeva.

Cristy Tumale typed the manuscript, and Heather Imboden was responsible for layout and page composition. Alicia Hetzner edited the document and managed production; Virginia Hitchcock did the final production edit. Tomoko Hirata designed the cover.

Indigenous people and their communities represent a significant percentage of the global population. They have developed over many generations a holistic traditional scientific knowledge of their lands, natural resources and environment. Indigenous people and their communities shall enjoy the full measure of human rights and fundamental freedoms without hindrance or discrimination. Their ability to participate fully in sustainable development practices on their lands has tended to be limited as a result of factors of an economic, social and historical nature. In view of the inter-relationship between the natural environment and its sustainable development and the cultural, social, economic and physical well-being of indigenous people, national and international efforts to implement environmentally sound and sustainable development should recognize, accommodate, promote and strengthen the role of indigenous people and their communities.

Agenda 21, Chapter 26
United Nations Conference
on Environment and Development
Rio de Janeiro
1992

**Summary
of the
Conference Proceedings**

Introduction

Ma te huruhuru ka rere te manu.
A bird can only fly if it has feathers.

The role of traditional knowledge is the same as the feathers. Traditional knowledge is an enabling component of development.... Our cultural artifacts, our whole cultural fabric, rely on every single interlocking part of the fabric. Our knowledge system is a very integral part of that. So, we have to have access to it. Not just to preserve it, not because it makes us feel good to have it; we have to be able to use it. Without my *tikanga Maori*, I'm just another person. And, if I am just another person, I've failed in my duty to my grandchildren and their grandchildren by not transmitting these values to them.

Whaimutu Dewes
Washington, D.C.
September 28, 1993

On December 18, 1992, the United Nations declared 1993 as International Year for the World's Indigenous People:

... with a view to strengthening international co-operation for the solution of problems faced by indigenous communities in such areas as human rights, the environment, development, education, [and] health.

Resolution 164

The positive response to the International Year and the need for further progress in solving the

problems faced by indigenous peoples led the United Nations General Assembly to proclaim an International Decade of the World's Indigenous People (1995-2004).

To support these efforts, the World Bank held a two-day conference on the topic of "Traditional Knowledge and Sustainable Development." On September 27 and 28, 1993 the conference brought together a group of indigenous peoples with staff members and representatives of nongovernmental organizations (NGOs) and United Nations agencies to discuss the relationship between traditional knowledge and sustainable development. The closing speaker was Whaimutu Dewes, a Maori lawyer who works for one of the largest business corporations in New Zealand. The theme of his summary remarks, as well as the conference itself, was that no contradiction exists between the maintenance of strong cultural traditions and identities and economic development. To the contrary, for development to be socially and environmentally sustainable, it must take into account and draw upon the values, traditions, and cultures of the people in the countries and societies that it serves.

Indigenous peoples—perhaps more than any others—are aware of these relationships between culture and development. According to the United Nations, there are more than 300 million indigenous people in over 70 countries. These people live in almost every climatic zone from the remote Arctic region and the deserts of Africa to the Pacific Islands and the rainforests of Asia and South America. While there is a great diversity of language, culture, dress, and customs among

them, indigenous peoples share a strong sense of ethnic identity and close attachments to their ancestral lands.

Historically, indigenous peoples have been socially discriminated against and culturally marginalized by the process of economic modernization and development. Over the past decade, however, policymakers, development planners, and the public at large have become increasingly aware of the important role that the traditional knowledge of indigenous peoples can play in the promotion of sustainable development.

The significance of traditional knowledge for sustainable development was recognized in the Brundtland Commission's Report, *Our Common Future* (1987), and at the Earth Summit in Rio de Janeiro in 1992. It is also incorporated in the Agenda 21 documents of the United Nations and the International Convention on Biodiversity.

The World Bank and Indigenous Peoples

The World Bank was the first multilateral development agency to establish a special policy for the treatment of indigenous peoples in internationally funded development projects. This policy dates back to the early 1980s, when the Bank became involved in funding several projects that affected the lands and welfare of relatively isolated and highly vulnerable indigenous tribes in the South American Amazon. The Bank policy called for the recognition, demarcation, and protection of indigenous peoples' lands, and the providing of culturally appropriate social services, especially to protect and maintain their health.

In the late 1980s the Bank reviewed its project experience in this area and, in 1991 issued a revised policy. This new policy extends the definition of indigenous peoples to reflect the much broader range of social and legal definitions and situations in Bank member countries. Some of the earlier protective measures are maintained, but the new policy also stresses the need to promote the informed participation of indigenous peoples and their sharing in the social and economic benefits of development projects.

A major innovation of this revised policy is the commitment of the Bank to assist its borrowers in preparing and financing special Indigenous Peoples Development Plans. These plans, some of which are being prepared, are to be designed

in consultation with indigenous peoples and, where conditions permit, to be implemented by them. These plans are also to respect indigenous peoples' "cultural uniqueness" and take into account "local patterns of social organization, religious beliefs, and resource use."

The Traditional Knowledge Conference

The September 1993 conference was organized as part of the World Bank's activities for the UN International Year of the World's Indigenous People. A major purpose of the conference was to bring together a small number of indigenous peoples from around the world to educate Bank staff on issues relating to traditional knowledge and sustainable development.

The questions that the conference explored were: What is the role of traditional knowledge in sustainable development? What are the contributions that traditional knowledge can make to health and environment programs? How can traditional institutions be used to increase participation in the development process? How can the Bank and other donor agencies improve their performance in planning development projects with indigenous peoples?

The September 1993 conference was only a first step in addressing these issues and did not cover all of the significant cultural and development concerns relating to indigenous peoples. The people who spoke at the conference provided their own personal perspectives and experiences; obviously, they could not represent the spectrum of the great cultural diversity of the world's indigenous peoples. In fact, some regions of the world, such as Asia, were not represented at the conference, even though Asia contains a major segment of the Bank's borrower countries. Furthermore, some of the people who spoke at the conference are members of large African tribal groups, many of which have non-Western cultures and world views but do not fall within the restricted definition of "indigenous" used by the Bank and other international agencies.

To create dialogue, we did not ask the speakers to prepare formal papers. In this way, we hoped to maximize the amount of interaction among the speakers, participating Bank staff, and other conference attendees, as well as to respect the oral nature of traditional cultures. We also felt

that it was important for Bank staff to hear the “voices” of indigenous peoples—which seldom find their way into development institutions, which are located far from the often remote areas in which indigenous peoples live.

Format

This *Proceedings* contains two sections. The first summarizes the conference itself. In this section we highlight several themes: the importance of traditional knowledge to the cultural survival of indigenous peoples; the relationship of this knowledge to the land and environment; the contributions that traditional knowledge can make to agricultural sustainability and health; the relevance of traditional institutions for development planning; and, some recent government and international initiatives in the areas of traditional knowledge and indigenous peoples’ rights.

The first section concludes with remarks made to the participants by Ismail Serageldin, Vice President for Environmentally Sustainable Development at the World Bank. His presentation is significant in that it represents the growing interest on the part of the Bank in integrating these themes into its development agenda.

The second section of this report is a transcript of a roundtable discussion that took place on the day following the conference among some of the conference participants. It presents many of the key issues related to traditional knowledge and development raised by the indigenous participants.

The Appendixes comprise the conference program; names and addresses of conference participants; names and addresses of Indigenous Knowledge Centers recently established throughout the world; the World Bank’s Operational Directive on Indigenous Peoples; and a selected bibliography.

Themes and Perspectives

While the conference made no formal recommendations, participants highlighted a series of themes or perspectives. These themes can be organized around five subjects: culture, development, participation, rights, and partnership.

1. *Culture*. A strong motif of the conference was that traditional knowledge must be under-

stood within the framework of the cultures of indigenous peoples. Indigenous peoples value traditional knowledge, because it is fundamental to their cultural values, spiritual beliefs, and collective identities. To separate traditional knowledge from its cultural context is to lose sight of the meaning that it has for the survival and integrity of indigenous peoples.

2. *Development*. There is no contradiction between the preservation of traditional knowledge and development. To the contrary, traditional knowledge can be seen as a “tool” or “instrument” to promote culturally sensitive or appropriate forms of development. This is particularly clear in the areas of environment and natural resource management, in which the use of traditional knowledge is increasingly recognized as a key to sustainable development. Similar contributions are being discovered in the fields of agricultural development, health and medicine, education, rural finance, law reform, and the strengthening of kin-based social safety nets, especially for groups such as youth, the handicapped, and the elderly.
3. *Participation*. As in so many other areas, local or popular participation is fundamental to the ownership and success of these development interventions. Traditional knowledge can play a role in the design of culturally appropriate participation mechanisms, particularly when government policies and programs and project designs give adequate recognition to indigenous social and political institutions (Chapters 5 and 6). Here, the recognition and support of indigenous women are especially important because women are key transmitters of traditional knowledge and values, and they are significant participants in the development process.
4. *Rights*. The contributions of traditional knowledge to development also must be seen within the larger framework of the struggle of indigenous peoples for social justice and the recognition of their rights. At numerous international conferences, including this one, indigenous participants have stressed the critical role of land rights recognition for the integrity and survival of their people. Other social justice issues voiced by indigenous peoples include the rights

to practice their own cultures and speak their own languages, to be protected and receive appropriate benefits from the use by outsiders of their traditional knowledge (intellectual property rights), to be free from economic exploitation and poverty, and to determine their own development paths and destinies.

5. *Partnership*. Several participants stressed the need for a "new partnership" among indigenous peoples, national governments, and international development agencies. While the nature of this partnership was not spelled out, indigenous peoples clearly are not seeking the old types of "paternalistic" or "top-down" approaches to development so characteristic of past government and donor agency responses to their situations. In contrast, what was expressed during this and other recent fora is the need for a new type of relationship in which indigenous peoples, national governments, and international agencies are *equal partners* in a common effort (that includes other actors) for planetary survival and sustainable development. Obviously, there are lessons here for institutions such as the World Bank, and its affiliates, in designing and funding projects in which indigenous peoples are affected populations or key participants.

Traditional Knowledge and Western Science

It is worth mentioning that, in highlighting the important (and frequently overlooked) role that

traditional knowledge can play in the development process, the speakers at the September 1993 conference were not arguing against the contributions that Western science (if appropriately applied) can contribute to the problems faced by indigenous peoples and other marginalized populations.

None of the speakers questioned, for example, the role that modern medicine can play in the control of diseases among indigenous and other rural peoples; nor did any of the speakers question the utility of modern agricultural and natural resource management techniques in improving food security or rehabilitating degraded landscapes and ecosystems, especially under conditions of rapid demographic growth and social, economic, and cultural change.

The issues at the conference and in this report are raised less as opposing traditional knowledge to Western science than as questioning the current balance among the uses of different types of knowledge in the development process.

Similarly, the challenge is less one of coming out on the side of one form of knowledge or another than of finding areas in which traditional knowledge and Western science can mutually support each other in the common quest for solutions to what up to now have often been intractable local and global problems.

Shelton H. Davis
Katrinka Ebbe
Conference Organizers

Traditional Knowledge and Cultural Survival

What is the meaning to indigenous peoples of traditional knowledge and what role can it play in the development process? Several speakers at the September 1993 conference argued that traditional knowledge is related to the entire culture of a people, including its identity and spiritual and religious beliefs. While some scientists and development planners may see traditional knowledge as a means to resolve certain problems of development, indigenous peoples see it as part of their overall culture and vital to their survival as peoples.

In making this point, indigenous peoples are not saying that their communities are not interested in participating in the development process, or in sharing their knowledge with scientists, development planners, and the global community. They are saying that there must be respect for the cultural values of this knowledge and that their rights to maintain these values must be acknowledged and protected in the development process.

This was the theme of the remarks made by Brazilian Indian leader Jorge Terena, who told the conference that the history of the West's relationship to indigenous peoples and their traditional knowledge has been contradictory. On the one hand, Western cultures have for 500 years rejected traditional knowledge because:

... it is said to be a primitive knowledge, from a primitive culture. It is of the past, and therefore it is no good....now, certain scientists are beginning to realize that this knowledge can be considered scientific.

Why? Because they know that our community has helped preserve the earth, not only the natural resources but humanity as a whole.

This new interest in the scientific value of traditional knowledge, however, poses a paradox for indigenous peoples. Today, there is an interest in the economic value of traditional knowledge; this is especially true in the area of biodiversity and the uses of medicinal plants. Many companies, Terena said, are identifying traditional medicines and patenting them but not giving back anything to the indigenous communities. Furthermore, there is little understanding on the part of these companies or the development community in general about the meaning that this knowledge has for indigenous peoples. Terena told the conference:

This knowledge that we have, we are not so eager to sell it and not so eager to patent it. Because it is on this knowledge that our community depends for its living. The important thing is our community has a traditional belief, a spiritual belief, that controls this knowledge. This goes far beyond just thinking of the economic value that the knowledge has.... It is something sacred to us.

Roberto Haudry de Soucy, a Venezuelan economist who works with the International Fund for Agriculture Development (IFAD), made a similar point: we should look at a people's culture as having "intrinsic value" and hence invest in it as part

of our development lending and assistance. To do so, however, he said, we will need to accept indigenous peoples as “equal partners” who bring their own cultural assets and identities to the development process. He suggested that this acceptance means financing such activities as the strengthening of indigenous organizations, cultures, and languages. Haudry said:

The major asset of any indigenous peoples is its culture, and since this is an inseparable component among the assets making up its heritage, it is to their culture that any international financial institution (IFI) should channel its investment. And if, in reply to the question as to what the investment should be made in, we have said ‘culture,’ then the question as to how such investment shall be made, the reply must be to acknowledge that a culture is indivisible and admits no fragmentation. A manifestation of a people’s culture, such as its productive technology, is bound up with a language, with an environment whence it draws its sustenance, with a pattern of distributing the end product, and with a religious view of the world and practice.

Until recently, a local culture has been seen as a hindrance to development, whereas today we must rather look upon culture as an asset, as a driving force for self-development. Nowadays, one hears it said that if we conserve a heritage (water, forests, biodiversity), future generations will have a larger stock of these component assets of that heritage, and enjoy a correspondingly enhanced wellbeing. Similarly, one might argue that more culture is more wealth, that having more know-how, more languages, and more centers of interest enriches indigenous peoples, as well as enriching in the process the rest of a country’s citizens and some segment of humanity as well.

In a similar way, Whaimutu Dewes noted the importance of traditional knowledge to the cultural identity and survival of the Maori people, and the role which it plays in his people’s development choices.

To the Maori there are three very important questions:

Ko wai koe? Who are you? (identity)
No hea koe? Where are you from? (lineage)
E ahu ana koe ki hea? Where are you heading? (survival)

These questions are the starting point, of all Maori discussions and negotiations with outsiders.

In trying to explain to corporate people with whom we are negotiating joint ventures, we start there. They have to understand that this is a survival issue. Time horizons do not mean a great deal to us. To put it in banking terms, our discount factor is not as high as they are used to because we’ve got a much longer time horizon. However, that is not to say we are going to accept a lower rate of return.

The *leitmotif* of the conference was the intrinsic value of traditional knowledge to the cultural survival of indigenous peoples. Traditional knowledge can play an important role in the development process, not only because it offers some obvious solutions to local problems but also because it is an important component of the identity and spirit of a people.

It has been 500 years that colonialism has been trying to offer us something different, and yet for 500 years the world has still not recognized our traditional knowledge. You must respect our culture, our social structure, and our way of living before you can offer us anything different.

—Jorge Terena

Some implications of this proposition, as well as its operational relevance to the work of the World Bank and other development agencies, were reconfirmed and explored by other participants at the conference. Nowhere was this issue of intrinsic value clearer than in the discussions concerning the relationship of traditional knowledge to land and the environment.

Traditional Knowledge, Land, and the Environment

A second theme of the conference was the idea that traditional knowledge is rooted in the land and the environment. Several speakers noted the importance that environmental values have for indigenous peoples, not only because the environment provides them with food, fiber, and other necessities but also because of their spiritual relationship to the earth and deep respect for it.

Canadian Indigenous Peoples

Conference participant Cindy Gilday from the Dene Nation works with the Department of Renewable Resources in the Government of the Northwest Territories of Canada. She told several stories about the respect that her people have for the land. One of these stories was about a trip that she made to a remote Dogrib village that was involved in land claims negotiations with the Canadian government.

I've travelled a lot, but this place really touched me. It's the first time in a long time that I went into a village and found the children still building animals and houses with sticks and mud and things they can find on the road....

This is also a place in the Northwest Territories where there has just been a massive diamond find. In this village, people reported that helicopters were landing every fifteen minutes during the summer. Within this same area, there is another mining company opening operations and two hydro dams are planned.

She then described a conversation she had while berry picking with women from the village.

The women still wear blue handkerchiefs, long-sleeved blue jackets, blue skirts, and moccasins. These women, as they took me over the hill, said: 'You know, you are not allowed to take the berries home.' I said, 'Why not?' I had a very Western reaction. I thought if I picked them, why cannot I take them home. I would have known better if I had listened to them more carefully in the village. One of them, Mary Ann Football, sat me down and said, 'Aside from the fact that we like the berries, if you move the berries and plants out of the community, it will affect the little animals, who eat them. If they are affected, then all the bigger animals that depend on the little animals will be affected. If those animals are affected, it will impact us. One living being depends on another living being.'

In another story, which took place outside of Yellowknife, the provincial capital, she described what happened to the caribou when there was a sudden influx of outsiders.

A lot of these outsiders started going out hunting without knowing what hunting means to Northerners. They shot caribou from the roadside and butchered them on the road. They left the heads and insides scattered along the roadways. These parts

of the animal are considered to be the most delicate by my people. The chiefs of the Dogrib were absolutely horrified that any civilized group of people would act that way. It goes against the ethics of the way our hunters relate to the land and the animals....

Our people have reconciled the relationship between respect for wild animals and usage. There is a lot to learn from this, and that's Caring-for-the-Earth ethics. For thousands of years, our people survived in this fragile environment. Their traditional knowledge is based on how they've interacted with the animals, their environment, and each other: what they have observed and tested through time and patience and relationship with the environment.

Ms. Gilday used these stories to communicate the deep respect that her people have for the land and its resources. Obviously, the material survival of the peoples of the north depends upon the exploitation and sale of renewable resources, including fur-bearing animals. However, this use of the environment is based on a set of traditional rules, ceremonies, and practices that define the relationships that human beings have to the natural world. While native languages may not have specific terms for the modern concept of "sustainability," it is obvious that many traditional peoples had a sustainable relationship to the earth.

The Faasao Savaii Society of Western Samoa

Moelagi Jackson, founder and president of the Faasao Savaii Society of Western Samoa, also

For the Maori, economic development and culture have a reciprocal relationship that has a metaphor in our relationship to the earth.... I've yet to find a culture that doesn't talk about Mother Earth. For example, sea life has an obligation to sustain me. It's a mutually supporting relationship (*Whanaungatanga*). That's what gives me my right to go and exploit the sea. However, *Tamure*, the red snapper, has got this relationship with me, and I have to sustain her. When we're looking at how we reconcile the tension and the trade-offs, we must make this the metaphor we work within.

—Whaimutu Dewes

described the respect of her people for the land and environment. In her native language, she said:

Oi matou o fatu o le eleele.
We are the seeds of the land.

It is in our language handed down from our ancestors, and we strongly believe that our land and our environment are our heritage from God. We live on it, develop it, enjoy, but never destroy it as the next seeds will have nothing to grow on.

Savaii Island, Ms. Jackson's home, is the biggest island of the Samoan group and the second largest Polynesian island after Hawaii. It is also considered to be "the cradle of all the Polynesians," and until recently was one of the most undeveloped and unspoiled of the islands.

In 1978 when regular ferry service became available, Savaii Island experienced a great deal of development. The government brought more roads, airports, and hospitals; better communications systems; and electrification to the island. One of the consequences of this improved infrastructure was the increased interest of developers.

Development projects led to the clearing of forest land; planters who now had more access to markets began clear-cutting rainforests; and others started to exploit the island's marine resources. "Most of these developments were necessary," Ms. Jackson said, "though some were not. Some of these were launched with or without plans and consideration of those living on the island."

Most important, she explained how these activities threatened the cultural traditions of the Savaii people by reducing their access to the forests. For example, Samoans use forest products for the building of traditional houses and canoes and the making of tools. They also use medicinal leaves, barks, ferns, roots, flowers, and seeds; perfumed oils for skin care; flowering and fruit-bearing trees for predicting the weather; and trees for producing *tapa* clothes and *kava* bowls. She elaborated on the cultural significance of the *kava* bowl.

This is very important to our culture, as it is used for mixing our ceremonial drink. Every meeting conducted in the village is

opened with a *kava* ceremony; guests arriving in the village are welcomed by a *kava* ceremony conducted by chiefs and orators of the village. The purpose of the offering is thanksgiving to God, asking for his blessing, protection, and guidance in our future.. I truly believe this *kava* ceremony will continue to keep our people in peace and harmony due to our total belief in communication with each other and with God.

The Faasao Savaii Society was established in 1990 to protect the environmental and cultural values of the island. It comprises 20 corporate members consisting of 17 villages, 2 youth clubs, and 1 college. The program includes environmental education, ecotourism, forest conservation, handicraft production, encouragement of traditional medicine and healers, and capacity building. One of the Society's major goals is to establish nature reserves around each village that are under the control of village chiefs and orators. When created, these reserves will enable the villagers to maintain their local cultural use of the forest, serve as a place for training young people in traditional forest management, and provide income from tourism.

The Faasao Savaii Society is an example of numerous local and regional indigenous organi-

E tua i le vaoola.

This is an expression often used when someone is doing well. We say, 'He is doing well as he has a living forest to depend upon....' Our everyday and our oratory languages are both rich with expressions pertaining to the cultural values of our land and the rainforest. It is a good indication that without our rainforest, our culture—which has survived for so many generations—will disappear.

—Moelagi Jackson

zations that have arisen throughout the world to provide an alternative vision of land use and management, based on the traditional environmental knowledge of indigenous peoples. One of the challenges that international organizations such as the World Bank and its partners in the Global Environmental Facility (GEF)—the United Nations Development Programme (UNDP) and United Nations Environment Programme (UNEP)—face is how to better incorporate these people and their traditional knowledge into natural resource management and conservation programs. This theme was central to the presentations of other participants, including those who dealt with agriculture and traditional medicine.

Traditional Knowledge and Agricultural Sustainability

Food and agricultural production are perhaps the major areas in which in recent years some scientists and development planners have sought new approaches based on the wisdom and knowledge of traditional peoples. The “Green Revolution” technologies (widespread use of new seeds, chemical fertilizers, and pesticides) introduced after World War II increased food production. However, the costs of this technology transfer, while not immediately evident, are high soil erosion and loss of plant genetic materials that were resistant to pests and other diseases.

Dr. Ntombie Gata, Deputy Director of the Department of Research and Specialist Services of the Zimbabwe Ministry of Lands, Agriculture and Water Development, stressed the importance of traditional knowledge in agricultural development, especially in Africa. She noted that development theory has tended to focus on disparate factors such as land, labor, and capital; technology; socioeconomic conditions; gender; and, more recently, indigenous technology and knowledge systems. However, she said, “We can’t afford shunting back and forth in the train of development picking one factor at a time—sometimes picking the wrong factor. We must seriously examine what it really takes to socially, economically, and environmentally develop sustainably.”

Scientific Validity of Indigenous Agricultural Knowledge

The current crisis in African agricultural production, Dr. Gata said, demands a change in attitudes and approaches on the part of governments and

donor agencies. There must be, she said, a deeper respect for indigenous knowledge, and a commitment to incorporate it into development policies and projects.

Indigenous agricultural practices, reflect the store of experience and knowledge accumulated literally over thousands of years based on sound understanding of soils, plants, and the environment. [This] knowledge is revealed through various practices that are used in crop production, for example, forecasting seasonality, conservation of crop/plant diversity, mixed cropping, land fallowing, and others associated with soil and crop management systems....

Farmers deliberately influenced the natural processes of mutation by careful seed selection over centuries. They developed an intricate range of crop variability generated by sophisticated knowledge.

Dr. Gata stressed the scientific validity of traditional agricultural knowledge. In Zimbabwe, for example, farmers are able to predict the onset of rain using such signs as changes in leaf color of some tree species, shifts in wind direction, cloud formation, temperature and relative humidity fluctuations, and bird and beetle songs and their seasonal migration. These signs,” she said, “are crucial in decisionmaking relating to land preparation, planting and choice of plants....

She went on to discuss the role of women in traditional agricultural systems.

Indigenous women are excellent sources of both genetic and cultural information on plant and animal species, because they have to meet multiple needs within their sphere of household activities.... Women play a crucial role in selecting seed with preferred characteristics, such as color, size, genetic stability, disease tolerance, palatability, storage, and processing.

Working classifications of crops by gender show that crops with multiple uses in form and function (for example, pumpkin and cow peas) are considered women's crops. [This illustrates] the central role played by women in maintaining genetic diversity, which ensures options for responding to environmental changes.

Local Knowledge and Sustainability

Dr. Gata emphasized that agricultural science and technology are not neutral but are deeply rooted in a society's history and culture. Failure to respect other people's knowledge and culture has led to the imposition of alien technologies that often undermine local people's self-confidence. Dr. Gata pointed out: "Failure to recognize the farmer's point of view and analysis has meant that the farmers have never really been part of most development initiatives."

As a counter approach, Dr. Gata and several of her colleagues in Southern Africa are looking toward a new partnership with grassroots communities for the common purpose of promoting sustainable resource use in agricultural development. In this partnership the traditional farmers' knowledge will form the basis for development projects and researcher and extension agent training programs.

Emmanuel Asibey, Senior Ecologist in the Southern Africa Agricultural and Environment

For a project to succeed, local people must be involved, not just in supplying labor but in making crucial decisions. Projects must be based on people's own ideas and knowledge of their farming systems. Such an approach will change the ownership of projects from development agencies to the people.

—Ntombie Gata

Division of the World Bank, described one of these training programs that will be launched in Zimbabwe and other Southern African countries. Its purpose is to study indigenous agricultural and land-use knowledge from village elders and to incorporate this knowledge in training workshops for government research and extension agents. If the program proves successful in Southern Africa, it will be extended to other parts of the continent. Similar programs are being introduced in other parts of the world, as witnessed by the growing international network of indigenous knowledge scholars and applied research centers (see Appendix 3).

In designing these training programs, it is also important, Dr. Gata suggested, to include indigenous women, who are often the repositories of traditional knowledge about plants, seeds, medicines, and other natural products. In many countries women are the key to the survival of traditional agricultural and land-use practices. Some advances have been made, especially in countries such as Zimbabwe, in increasing the number of women attending national agronomy schools and in using local women as agricultural extensionists. However, much more attention needs to be focused on the agro-ecological knowledge possessed by rural indigenous women, and how this knowledge can be usefully incorporated in national agricultural curricula and teaching materials and in local extension programs.

Contributions of Traditional Medicine to Health

Traditional knowledge is also of great value in its contributions to health and medicine. Two of the conference speakers, Dr. Maurice Iwu of Nigeria and Dr. Arturo Argueta of Mexico, are involved in studying traditional medicine and demonstrating its importance for the health and well-being of the world's population.

African Medicinal Knowledge

Dr. Iwu is particularly qualified to address this topic, because he is both a researcher at Walter Reed Army Hospital in Washington, D.C. and a Professor of Pharmacognosy at the University of Nigeria, Nsukka, as well a member of a society of traditional healers. He told conference participants:

The only thing that you can say that traditional medicine has in common with modern medicine is the fact that they both cure disease—one heals, the other treats. But, the role of the traditional healer is much broader than that of a Western medical practitioner.

The traditional doctor is a healer, diviner, adjudicator, and protector of his whole community. Therefore, it is only a part of the traditional healer's role that we are discussing when we compare them to modern doctors.

Dr. Iwu described the three members of the traditional healing team: the healer, the spirits, and the patient. Through ritual and ceremony, he continued, a traditional healer communicates

with and asks for the help of the indwelling spirits (those that reside in every object, plant, and animal); the invoked deities (minor gods who are asked to intercede with the one all-powerful God); and the ancestors (the patient's predecessors who are available for advice and consultation). These religious or spiritual aspects of the traditional healing process are often misunderstood by Western academics, whose cultural conceptions usually pose a fundamental distinction between "science" and "religion."

Despite these differences in the underlying approaches of traditional and Western medicine, Dr. Iwu noted that of "the more than 130 clinically useful major prescription drugs that are derived from higher plants, over 70 percent of them came to the attention of pharmaceutical companies because of their use in traditional systems of medicine."

Since 1978 his research group at the University of Nigeria, Nsukka, has been systematically investigating the plants used in traditional African medicine. He described the research findings of his group:

To date, we have investigated well over 200 plants and have studied about 26 of them in some detail. In nearly all cases, our laboratory findings support the use of the plant drugs as therapeutic agents. We have established from the analyses of plants used in traditional medicine that the preference is for dietary supplements and masticatories rather than non-edible poisonous species....

In an earlier study, we reported the pharmacological activity and the therapeutic application of over 153 dietary plants used in traditional medicine. We included in our report their botanical names, local names in the three main Nigerian languages (Hausa, Igbo, and Yoruba), their medicinal and dietary uses, and of course their chemical constituents....

[Our research has shown] that a high degree of selectivity is involved in the use of plants in traditional African medicine.

Dr. Iwu pointed out that most of the plants from which these drugs derive are found in tropical forests. Although tropical forests constitute only 7 percent of the earth's surface, they contain an estimated two-thirds of its plant species. Dr. Iwu continued:

Unfortunately, tropical forests are now under siege, threatened by over-exploitation, habitat conversion, and the ravages of poverty. It is estimated that over 150 square miles of rainforest are cut down every day in order to accommodate the socioeconomic needs of human inhabitants of forest lands. Habitat conversion threatens not only the loss of plant resources, but also cultural diversity and the accompanying knowledge of the medicinal value of several endemic species.

Economic Needs of Forest Dwellers

In response to these threats he suggested that more attention needs to be focused on the economic needs of forest dwellers, and how their knowledge of plants and other forest resources might be utilized as a "feasible tool for social and economic development." However, he warned against too rapid an acceptance of the premises of recent efforts in what is called "biodiversity prospecting." He argued that the research methodology used by Western pharmaceutical companies is one of identifying biologically active compounds or active constituents from plants and then distilling them into commercial drugs. This methodology, Dr. Iwu said, is "based on the [incorrect assumption] that the plant medicine *as constituted* is not a medicine but has to be refined to distill the true drug." Under these conditions, developing countries are only suppliers of raw plant materials, rather than being involved in the development and commercialization of the drugs. These circumstances, he argued, resemble the "colonial situation in which tropical countries were raided for cheap raw materials."

In contrast, he described a series of projects that he and his colleagues are carrying out in Nigeria and that attempt to draw on traditional knowledge and ensure that a greater proportion of the profits remain both in the country and benefit local people.

The earliest of these projects was termed *Nkana-Nzere*, which roughly means "a documentation

Biotechnology Development Agency (BDA)

BDA is a consortium of scientists, nongovernmental agencies, and private sector entities established in Nigeria in 1990 to apply modern methodology in the study of traditional biological resources. BDA's purpose is to combat the threat to African biodiversity posed by the declining economic value of environment-based resources. The major objectives of the program are:

- To collect, collate, and codify available information on the uses of African plants, with special reference to indigenous food crops, medicinal and aromatic plants, and industrial crops
- To encourage basic research on the chemistry, biology, and industrial application of indigenous natural resources
- To stimulate public awareness and concern about the vanishing resource base of tropical agriculture; to support the activities of public interest groups that are working on these issues; and to foster cooperation and communication among them
- To stimulate activities and policies that lead to a better assessment of the emerging new technologies and highlight their implications for African natural resources
- To initiate and encourage efforts for the conservation of biodiversity as a feasible tool and exploitable resource for sustainable economic development
- To encourage the establishment of small-scale agro-industrial and marketing enterprises and of technologies in related industries that tap local and overseas markets.

of the arts and norms of the Igbo people." This project was launched in 1982 by the Institute of African Studies, the Faculty of Arts, and the Department of Pharmacognosy at the University of Nigeria, Nsukka. It utilized undergraduate students who were trained in field data collection and sent to their home villages to gather information on human interactions with the environment. Data were collected on proverbs, music, oral history, ethnobotany, indigenous biotechnology, and ethnomedicine.

The success of this project led to the establishment in 1990 of a Biotechnology Development Agency (BDA), comprised of Nigerian scientists, nongovernmental organizations (NGOs), and the private sector. This agency seeks to use "available human and material resources in Nigeria for the conservation of biodiversity through establishment of extractive forestry research parks, initiation of village-based social forestry projects, and conducting investigation into the uses of biological resources in the development of novel pharmaceuticals, cosmetics and food additives." (See box for details.) In turn the BDA initiative led to the formation of a regional organization, Bio-resources Development and Conservation Program (BDCP), which pursues the same goals and links similar community-based projects in West and Central Africa.

Mexico's Traditional Medicine Program

Dr. Argueta, an ecologist with the Mexican National Indigenist Institute (INI), also described a comprehensive program underway in his country to protect and preserve the knowledge of traditional healers. This program first sought to document the extent of traditional plant knowledge in Mexico. It included a bibliographic search of all available information on useful plant species, their botanical names, and their ethnobotanical uses. Much of this information existed only in unpublished articles, or in the scientists' files. The program has developed a file on over 3,000 plants, which have nearly 15,000 different uses. This material is being made into the *Atlas of the Traditional Medicinal Plants of Mexico*, which will contain botanical drawings, indigenous names, and maps of their regional distribution.

A second aspect of the Mexican program is the organization of traditional indigenous healers.

For the past several years INI has been organizing regional workshops to foster the exchange of knowledge among traditional medicinal practitioners. There have already been two national congresses and the formation of a National Council of Traditional Indigenous Healers, which brings together fifty-seven local and regional organizations. There have also been meetings with traditional healers from other parts of the continent, and a technical consultation on traditional medicine with the Pan American Health Organization (PAHO).

In collaboration with these and other indigenous organizations, INI has promoted the introduction of reforms in the Mexican Constitution that recognize the multi-ethnic and pluricultural nature of Mexican society. It has also linked traditional healers and other medical practitioners (for example, midwives) with the national medical system. This work has resulted in greater recognition of the role that traditional healers can play in the delivery of primary health care, the use of traditional healers in regional hospitals that serve indigenous communities, and the sensitizing to and training of medical students in the knowledge possessed by traditional medical practitioners.

For an estimated 4 billion people in the world, traditional health care is very important. The materials and the procedures, the beliefs and ideology, the sacred places and the holy plants—the whole thing—provides health for many people in the world. The trend is toward growth in the next decade.... More and more people from Western societies are using non-Western medicinal plants and traditional health systems.

—Arturo Argueta

Traditional Medicine and National Health Care Systems

Following the Mexican presentation, Dr. Gerard Bodeker, an expert on traditional Asian medical systems, spoke from the floor and highlighted the worldwide significance of traditional medicine. He told the conference that the World Health Organization (WHO) has estimated that 80 percent of the world's population, about four

Traditional Medicine: Promise and Problems

The following comment by Jorge Uquillas, Social Scientist in the World Bank's Latin America and Caribbean Region, indicates both the great promise and particular problems of using the traditional medical knowledge and beliefs of South American Indians:

The contributions of traditional medicine to health are enormous. For instance, the great biodiversity of the human tropics and indigenous peoples' knowledge about plants and their nutritional and medicinal value supported whole classes of specialized traditional healers who, because of a recognized ability to cure some diseases, are in great demand, as demonstrated by the popularity of some shamans of the Amazon region.

Yet, it is also necessary to point out that there are also a few instances where traditional medicine has been at fault and has contributed to morbidity and death. The widespread belief of traditional Andean people that persons with diarrhea should refrain from taking liquids because they aggravate matters is a case in point. It has led to many cases of dehydration and early deaths, particularly of infants.

billion people, rely upon traditional medicine for their primary health care. He recommended that international agencies think more in terms of promoting traditional systems of health care rather than promoting medicine. Dr. Bodeker said:

When we look at traditional health-care systems, we are seeing systems that are effective, that are locally available, that are affordable, and that are sustainable. On that basis, I'd like to suggest that traditional health care in this Year of Indigenous People should become a priority agenda issue in international and national health planning. It should quite soon

become a mandatory component of the health planning equation in all countries that have traditional health care systems.

Dr. Bodeker, a consultant to the World Bank's East Asia and Pacific Population and Human Resources Division, has been helping to design a traditional medicine component for a Primary Health Care Project in Viet Nam. In Viet Nam one-third of all medical care is provided by traditional medicine. This includes the use of traditional herbal medicine for the treatment of malaria, gastrointestinal diseases, and common illnesses such as respiratory disorders, fevers, hypertension, cardiovascular conditions, and rheumatism. Traditional acupuncture is also used in analgesia, anesthesia, and the treatment of central nervous disorders and other neuromuscular conditions.

In Viet Nam, as in other Asian countries, these traditional practices are being modernized and integrated into the national health care system at the central, provincial, district, and local levels. Vietnamese government policy, according to a recent report by Dr. Bodeker to the Bank, is:

...to gather, record and disseminate the medical knowledge of experienced practitioners of traditional medicine [and to modernize] traditional medicine, including the use of modern medical means of diagnosis, scientific evaluation of the safety and efficacy of the plant ingredients in herbal medicines, and drug development programs based on knowledge of the bioactive ingredients and properties of medicinal plants.

His report provides several recommendations on how the Bank and other international donors might support the national government's policies on traditional medicine through financing training, improvement of facilities, equipment purchases, and research.

Traditional Institutions and Participation

Several speakers at the conference highlighted the need for more active participation on the part of indigenous peoples in development planning. At the same time they warned against imposing alien organizational forms on indigenous communities in the name of participation. It is often easier to promote successful development interventions by drawing on traditional social structures and using local decisionmaking institutions. The World Bank's recent policy directive on indigenous peoples highlights the need for their "informed participation" in Bank projects, as well as the design of indigenous peoples' development plans or strategies in collaboration with their leadership and organizations. (See Appendix 4.)

Burkina Faso and the Six-"S" Program

One of the best cases of this traditional approach was presented to the conference by Bernard Lédéa Ouedraogo, founder and head of the Burkina Faso-based Association Internationale Six-"S" (Se Servir de la Saison Sèche en Savanne et au Sahel).

Burkina Faso is a country of enormous linguistic, cultural, and ecological diversity. There are approximately sixty ethnic groups in the country, including descendants of the Kingdom of the Mossi, lineage- and village-based agricultural societies, and pastoral tribes. Large areas of the country are arid and pose special problems in terms of natural resource management and agricultural and livestock development.

Ouedraogo and his collaborators in Six-"S" have received worldwide acclaim for their capac-

ity to motivate and organize rural people. He described the trials and tribulations of his early rural development experience and what he learned from working with the people:

I was a civil servant working in a regional government organization. My job was to train rural extension workers. My experience was crowned with some success, and I was told to go to the countryside and try to replicate that success. But I failed miserably.

I realized one of the problems was that I did not speak the same language as the peasants. I then set about studying the philosophical principles of the population. Those principles I found in their proverbs and fables.

I also studied the mentality of each region, the way the society is organized, how the various powers—legislative, political, press, and judicial—govern the environment. I studied the ways and means that are used to carry out economic tasks.

Based on this information, I began to create some trust and motivation. If the farmers do not trust you, they think you have come to cheat them. If the farmers are not motivated, they do nothing. In order to promote development and change, you have to talk their language and create mutual trust. This is what creates the spirit of confidence for the workers.

It was out of this intimate knowledge of local people, and familiarity with their outlooks and motivations, that Ouedraogo and his co-workers came upon the idea of using the traditional Mossi institution of *Kombi-Naam* for purposes of development. The objective of the traditional institution was the “social integration of youth” through the inculcation of the society’s “fundamental values of equality, justice, equity and democracy.” Ouedraogo used this traditional institution as the basis for a more widespread community organization, called the *Groupe-ment Naam*. Its membership was broadened to include other categories of people, including women and the elderly. The elders, in fact, became the “counselors” of the organization providing it with a moral direction that did not exist in other organizations imposed by outsiders or the government.

Due to its acceptability and familiarity to the local people, *Groupe-ment Naam* had great success and grew rapidly—the first group being formed in 1967; with 126 groups existing in 1977, and 4,500 groups active today. These groups also formed into larger networks at the village, district, and provincial levels, and even formed into national federations. Today, the concept of these decentralized local groups—based on what Ouedraogo calls “qualitative democracy”—has spread into neighboring countries, including Benin, Chad, The Gambia, Guinea-Bissau, Mali, Mauritania, Niger, Senegal, and Togo.

According to Ouedraogo, the activities of the *Groupe-ment Naam* respond to two priorities: training local people so they will be competent to address their own problems; and implementing activities that promote self-sufficiency and increase the revenues of their peasant members. The second category comprises numerous activities, but the major focus is local efforts to combat desertification and restore the ecological equilibrium. Almost all of these natural resource management activities have components whose purpose is to increase local food supplies and income. Some of the more successful activities have been the establishment of cereal banks, introduction of simple grinding mills, raising lambs, and numerous women’s activities such as cloth dyeing, sewing, and solar drying of agricultural products. The organization has also established a network of rural credit institutions to

When we train the farmers, we don’t train for the sake of training. We train in response to a need that they have identified. When a farmer applies for training, it is because he is confronted with a problem and he is prepared to act and implement new knowledge to solve that problem. If you want to do something successfully, you have to be involved. That is what we expect of our farmers. They must be involved totally.

—Bernard Ouedraogo

serve these various community-based economic and natural resource management activities.

Bedouin Tribes of Northwest Egypt

Another situation in which the role of traditional institutions in mobilizing people for rural development has been important is among Bedouin tribespeople in the Matruh region of Northwest Egypt. There are over forty tribal groups in this region, most of whom were nomadic sheep, goat, and camel herders until they were sedentarized by the Egyptian authorities in the late 1950s. The process of settlement led the Bedouin to be more dependent upon dryland agriculture, and growing fodder for their livestock. As a result, land has become increasingly overgrazed and soil has become seriously eroded.

The Bedouin of the Matruh region all trace their descent from a common ancestor and are organized into a segmentary lineage system comprising tribes, patrilineages or clans, and local extended-family household groups. While tribal sheikhs represent these people before the government, most aspects of social and economic life take place at the household level. These groups are called *bayt* (*biyut*, pl.), are usually three to four generations in depth, and contain an average of fourteen persons. Describing the significance of these groups among the Bedouin in neighboring Libya, British social anthropologist E. Evans-Pritchard wrote:

The tribe may be the residual owner of land and water, but the *biyut* are the owners in use. Their members live in the same stretch of tribal territory, move during the rains to the same grazing grounds, use the same wells during the dry season,

and cultivate adjacent strips of arable land. The members of a *bait* [that is, *bayt*] have a lively sense of solidarity, and this is most evident in fighting and feuds.

For many years the Egyptian government and international donors supported rural development programs that showed little understanding of these highly complex aspects of Bedouin social structure. Many of these programs were based on notions of the private registry and ownership of land. They also assumed that government-organized cooperatives were the most equitable means of delivering technical assistance, agricultural inputs, and credit to the Bedouin.

Peter Klemann, team leader for the joint German (GTZ)-Egyptian Qasr Rural Development Project (QRDP), related the difficulties that have resulted from imposing these nontraditional concepts and institutions on Bedouin farmers and herders. The government-introduced cooperatives did not have the desired results of producing widespread participation and equality among members, because of the hierarchical organization of Bedouin society. In most cases these cooperatives reflected the interests of the sheikhs or their confidants, not local family, residency, and production groups. Klemann said:

As regards the ownership and use of lands, two systems of land tenure can be distinguished (among the Bedouin). First, there is tribal land, which can be used by all tribal members. This is mainly range land used for grazing. It is a public good, to which all members have access. So, everybody exploits it to the maximum. This results in the well-known effects of over-grazing, which lead to deterioration.

The second form of land tenure is individual land where a Bedouin is considered the owner even without legal registration. This falls under the concept of *wad al yad*, which means that the user has put his hand on it, and has made investments like trees and dams on it. [This land] would seem to be less problematic. This is not the case at all.

In general, this is the most valuable land, with deep soils and enough runoff water to ensure relatively high yields.

Rural development efforts such as construction of dams and dikes, levelling of fields, [and] excavation of cisterns change the size, shape and value of this land. Spaces between two neighbors that formerly had no practical value can be converted into fertile land. This makes clearly defined farm boundaries most important. We often have to adjust our engineering works according to farm boundaries even where another solution would be technically more sound and less costly.

The QRDP, which began as a pilot program in 1988, has encountered several other problems such as the absence of information and research on the Bedouin; difficulties in recruiting staff to live in the Matruh region; lack of trust by small farmers of government employees; and lack of respect for the Bedouin by outside technicians. On this last point Klemann said:

We observed that Egyptian technicians who lived a longer time in the area dealing with the Bedouin lost this attitude. But after we observed some of our younger Egyptian colleagues releasing their extension messages to elderly Bedouin farmers like a captain's orders to his soldiers, we quickly organized a course on didactics for our staff.

In coping with this broad variety of problems, QRDP found that two major principles were consistently the most effective in implementing its work. Again, to cite Klemann:

First, the Bedouin participate as far as possible in all project activities right from planning until implementation. For example, the definition of project aims and formulation of the correspondent strategy was done in planning-by-objective conferences where the sheikhs and other leaders of the Bedouin tribes actively participated....

Second, with some very specific exceptions, we always request a target group contribution, either in cash or in kind....

By observing these two principles, we try to ensure sustainability of the executed

measures. People will care better for investments that have been made with their full consent and a significant material contribution of their own.

He further recommended the following as being critical to the success of projects among indigenous peoples:

1. Allow for more than the normal time for project appraisal. Such missions should include anthropologists, ethnologists, or sociologists.
2. Allow for flexibility to change the project strategy after a certain time when the team on the spot has gained enough experience. Somebody who has worked with indigenous groups for a couple of years knows more about the subject than the best short-term expert in an appraisal mission.
3. Involve indigenous peoples to a maximum in all aspects of project planning and implementation.
4. Respect their organizational structures and try to make the best use of them.
5. Apply careful staff selection and assure special training concerning indigenous peoples.
6. Apply close monitoring at short intervals.
7. Allow for a long lifetime for indigenous development projects.

Bedouin Women and Development

Klemann was accompanied by Dr. Salima Abd El Rehim Mohamed, a Bedouin woman who has a university degree in veterinary medicine and works as the Executive Officer of the QRDP Women Affairs Program. Conference participants were extremely interested in her comments, because it is rare for Western development specialists to have access to the views of traditional Muslim women.

Dr. Salima described the goals of the QRDP Women Affairs Program as being to "improve the living conditions of the Bedouin women." This includes five main approaches to women's activities: reduction of women's exhausting and time-consuming work loads; encouragement of women

to increase their income-generating activities; organizing women's groups for access to credit; informing women about existing governmental services; and supporting direct access to these services. She noted that much of the work of Bedouin women—such as firewood and water collection—is very tedious and time consuming; hence, women readily accept changes that lower their work loads but do not conflict with their traditional roles within the Bedouin family structure.

To get across her point to the women she has been working with, she often uses herself as an example:

I tell [them] that I went out of my house for four or five years after the discussion and consent of my family. I joined schools until I reached university stage, yet my traditions are the same. I am still adhering to my traditions. I am not Americanized, and I am not Europeanized. The respect of traditions gives me an open door of communication to these indigenous peoples who are my people.

Dr. Salima stressed that there is no inherent conflict between tradition and development, including that of religion. In response to one question concerning whether culture or poverty was the cause of Bedouin women's difficulties, she replied:

What I think and believe is that religion helps development; it's not against it. Culture is something [necessary], but if it is a closed society that has not accepted any change or revolution, how can we arrive at the best possible way of development? The most important thing and the basic ingredient in the problem is poverty.

Bedouin women live in houses in the desert without any electric power Exhausting work for women is transport of water to the houses, which is a job that has to be done three times per day. A woman might walk up to 15 kilometers daily. The amount of water she has to lift from the cistern by using a bucket is more than 300 liters which she transports home on the back of a donkey...No wife would refuse a new method of bringing water into her home. But, they have their own priorities.

These are the aspirations for the future for Bedouin women: We are seeking an improvement and development of a certain layer of the society's culture. We are trying to help women to think of educating their children, opening new horizons for them, trying to engage in certain projects which are suitable to their circumstances.

—Salima Abd El Rehim Mohamed

Matruh Resource Management Project

Based on the experience of the QRDP Project, the World Bank assisted in the preparation and financing of a follow-up project in the Matruh region that is intended to reach a much larger number of Bedouin farmers (nearly forty tribes) and promote more sustainable land use and resource management. The Matruh Resource Management Project, as it is called, originally began as a traditional range-management improvement program. However, using participatory rural appraisal techniques, it was decided to design a more comprehensive project which includes the active participation of Bedouin communities and incorporates some of their traditional land-use practices and knowledge.

Bachir Souhlal, the Task Manager for the Matruh project, described some of its critical design features. One of these is the empowerment of local Bedouin groups (the *bayt* described above) to serve as the project's major participants and beneficiaries. Each "community group" (CG) or *bayt* will be directly involved in the design, implementation, and monitoring of project activities. These groups, in turn, will select representatives to form part of a CG Council, which will be collectively responsible for all land and resource management decisions, including formulation of a Community Action Plan (CAP).

The project will also establish special Sub-Regional Support Centers (SRSCs) to provide extension services to the CGs and assist them in the preparation of the CAPs. The SRSCs will comprise specialists in such areas as field crops, horticulture, range management, and rural women's extension. There will also be Community Liaison Coordinators and Community

Extension Agents, who will be nominated by the participating tribes.

Finally, there is a research component under the project, which includes an assessment of indigenous technical knowledge on local resource use. This will include a description and elaboration of customary legal procedures for resource use, indigenous knowledge of seasonal environmental changes, local methods of livestock care, identification of local fodder sources, and local knowledge of soils and cultivation methods.

In reference to the role of traditional systems and values, Souhlal said:

An important principle underlying the design of the project has been to ensure that the approach to community planning, the selection of interventions and activities, and the delivery of services are all in harmony with the traditional systems and values of the Bedouin society. At the same time, it has been recognized that, as is the case for Egypt as a whole, the Bedouin society is changing and adapting to a variety of outside influences. The project will help the entire Bedouin community to preserve, to the extent possible, its cultural heritage and be more confident as it faces and participates in these changes. It will build on existing tribal mechanisms for community action and stimulate mobilization of households into user groups to work with the government authorities in sustainable management of natural resources.

The Matruh initiative represents a new generation of natural resource management and rural development projects in which local people actively participate in project preparation and implementation. These projects incorporate traditional knowledge and institutions in their activities and provide local people with opportunities to capture project benefits. Lessons learned from these projects are playing a fundamental role in shaping government and international donor thinking about how to promote local participation among indigenous populations living in fragile environments.

Government Policies and Traditional Knowledge

Like many other initiatives in the area of popular participation, a favorable enabling environment is necessary to promote the use of traditional institutions and knowledge. Governments can provide such an environment through the passage of legislation and adoption of policies. Some governments, such as the nation of Ghana and the Provincial government of the Northwest Territories of Canada, have highly innovative legislation and policies in the areas of traditional governance and the promotion of traditional knowledge. These policies were presented by speakers at the conference and are briefly discussed in the following pages.

Ghana's Chieftaincy Act

The West African country of Ghana provides one of the best examples of recognition of traditional authority institutions, especially for purposes of local governance and development. Ghana has a population of approximately 14 million people comprising 75 distinct languages and major ethnic groups. In 1971, just fourteen years after its independence from Britain, the Ghanaian legislature passed the Chieftaincy Act. This act constitutionally recognized and protected the local governance powers of village chiefs, granted them authority to enforce customary tribal laws, and established regional and national assemblies in which they could discuss and govern their affairs. While the state maintains responsibility for the armed forces, the judiciary, trade, the economy and other national matters, these local chiefs handle more customary concerns such as

divorces, child-custody matters, land disputes, and the maintenance of cultural heritage, practices, and ceremonies.

Under the direction of Mamadou Dia, the Capacity Building Division of the World Bank's Africa Technical Department is conducting a study of the Ghana Chieftaincy Act as part of a broader program called "Indigenous Management Practices: Lessons for Africa's Management in the 90s." This program is based on the premise that much of the "development crisis" in African countries is the result of a failure to take into account the particular values, traditions, and organizational styles of African societies. Development programs, it is hypothesized, would be more effective if they built upon African cultures and institutions, rather than imposed outside forms of organization and management. The Africa's Management in the 90s program is investigating the Ghana Chieftaincy Act as an example of new approaches to African governance whereby traditional authority institutions are adapted to modern development conditions. For example, it is examining the legitimacy and effectiveness of local decisionmaking and control by village elders or chiefs. This study, under the direction of Professor Moses Kiggundu of Carleton University, is examining the formal legal recognition and administrative uses of traditional chieftaincy by modern African nations.

The conference was fortunate to have as two of its participants and speakers Professor Kiggundu and the Honorable Nana Oduro Numapau II, current President of the National House of Chiefs of Ghana. Chief Numapau described some of the

history and problems faced by the traditional institution of chieftaincy in Ghana:

Before colonization, chieftaincy was the fulcrum of society in Ghana. It gave unity and direction to the people and mobilized them for common purposes. With the onset of colonization, the colonial administration found the institution to be so viable that, through the policy of indirect rule, it sought to make chiefs junior partners in the government.

In the long run, indirect rule had a paradoxical effect on the institution of chieftaincy. On the one hand, the institution appeared to have gained strength through its close association with the colonial government; but, on the other hand, the very fact that the colonial government had power to grant or withdraw recognition whittled away the local people's right and power to make and unmake their chiefs in accordance strictly with customary law and usage.

This paradoxical situation cast its shadow over the institution during the independence era. All of Ghana's constitutions and governments since independence have given recognition to the institution of chieftaincy. And yet the institution has not enjoyed a stable status in Ghanaian society. Instead it has experienced ups and downs, mainly as a result of the government of the day seeking to play politics with the institution.

Despite these problems, Chief Numapau noted that the Constitution of the Fourth Republic of Ghana contains provisions that have strengthened the institution of chieftaincy and protected it from intrusions by national politics. The Constitution provides that the decision on who is or is not a chief, as well as all jurisdictional matters pertaining to the role of chiefs, are the responsibility of the National House of Chiefs and not the central government. Furthermore, chiefs are prohibited by the Constitution from participating in partisan politics.

Nevertheless, there are broad areas, outside of party politics, in which chiefs (and queen mothers) do participate in national affairs and in the formu-

lation of national policies. The President of the House of Chiefs, for instance, is a member of the Council of State and counsels the Presidency and other state organs. The ten regional and one national House of Chiefs have jurisdiction over numerous customary and legal issues, including adjudication of disputes, codification and unification of customary law, and elimination of harmful cultural practices. Chief Numapau said that he was "highly optimistic that the institution of chieftaincy is poised to play an enhanced role in Ghana's development." He mentioned the following factors as reflecting the increased potential for chiefs to participate in the nation's development policies:

First, we now have highly educated chiefs who understand the ramifications of modern development and have the expertise to contribute to it in various fields.

Secondly, because chiefs are not associated with political parties, ...their advice and exhortation will henceforth carry greater moral weight across party lines.

Thirdly, it is now widely realized that traditional fora and means of communication are relevant to educating the broad masses of our people on such development-oriented issues as family planning and population control, indiscriminate sexual habits, teenage pregnancy and AIDS.

Fourthly, government-sponsored organs have not been able to supplant the chief as the medium of mobilizing the local people for communal efforts at development. And yet, it is now common knowledge that to achieve true development, the laudable efforts of the government will have to be meaningfully supplemented at the local, grass-root level through communal effort.

Chief Numapau concluded his talk by stating:

I do not wish to leave you with the impression that all is golden with the institution of chieftaincy in Ghana. It has its problems. For example, the institution is plagued with disputes and litigations over rightful occupancy of stools and skins and over land ownership. The incessant litigation over land, in particular, poses real problems to security of title to land for

building, farming, and commercial purposes, to the detriment of development. There is no doubt that [we] chiefs in Ghana will have to put our own house in order by defining more clearly the customary rules of succession and of land ownership, as the National House of Chiefs has been mandated by the Constitution to do.

In his comments on Chief Numapau's talk, Professor Kiggundu noted that party politics and various government regimes used chieftaincy for their own ends and often gave it a bad name. "Politicians," he said, "would often go to the chiefs at night and then throw stones at them during the day." However, Professor Kiggundu stated that the institution is going through a period of renewal and, with adequate protection from partisan politics, it could play a vital role in the development process, especially at the local or grassroots level.

Chieftaincy is deeply rooted in Ghanaian society. There is not a single Ghanaian who does not trace his roots to chieftaincy.... It is extremely difficult for any outside force such as government to go into a community and do anything without the full support of the people and the chief.

—Moses Kiggundu

In the area of dispute resolution, especially in terms of land conflicts, the performance of traditional chiefs is sometimes low, but public perception of the institution is high. This, Professor Kiggundu concluded, augurs well for the creation of a more efficient institution, both for mobilizing people for development and for preserving their cultural life and spiritual well-being. He and other participants argued that the institution of traditional chieftaincy had great capacity to adapt to modern circumstances and could be a positive force for African development.

Northwest Territories' Traditional Knowledge Policy

Another initiative in government recognition of traditional institutions and cultures was brought to the attention of conference participants by Cindy Gilday from the Department of Renewable

Resources, Northwest Territories (GNWT) of Canada. The GNWT has established a Traditional Knowledge Policy. Based on the report of a Working Group comprised of representatives of the territorial government, NGOs, and local community elders, the policy provides a set of guidelines for incorporating traditional knowledge in government decisionmaking and programs. The policy defines "traditional knowledge" as "knowledge and values which have been acquired through experience, observation, from the land or from spiritual teachings, and handed down from one generation to another."

The opening paragraph of the GNWT's policy states:

The Government of the Northwest Territories recognizes that the aboriginal peoples of the NWT have acquired a vast store of traditional knowledge through their experience of centuries of living in close harmony with the land. The Government recognizes that aboriginal traditional knowledge is a valid and essential source of information about the natural environment and its resources, the use of natural resources, and the relationship of people to the land and to each other, and will incorporate traditional knowledge into Government decisions and actions where appropriate.

It then provides a set of principles for implementing the government's policy:

1. The primary responsibility for the preservation and promotion of traditional knowledge lies with aboriginal people.
2. Government programs and services should be administered in a manner consistent with the beliefs, customs, knowledge, values, and languages of the people being served.
3. Traditional knowledge should be considered in the design and delivery of Government programs and services.
4. The primary focus of traditional knowledge research should be the aboriginal community.
5. Traditional knowledge is best preserved through continued use and practical application.
6. Oral traditional is a reliable source of information about traditional knowledge.

In the Northwest Territories Traditional Knowledge Policy we're working across the board on justice, wildlife, medicine, conservation—the totality of disciplines in which the world engages. We're not just looking at intellectual property in isolation. We're not looking at promoting traditional knowledge in just wildlife preservation. We're doing this institutionally as a government so the Departments of Education, Renewable Resources, Justice, and so on will all have to make traditional knowledge a priority in their work.

—Cindy Gilday

While all government agencies and departments are responsible for implementing this policy, major responsibility for coordination, implementation, and monitoring rests with the Department of Renewable Resources. A traditional knowledge coordinator has been appointed in each program department who is responsible for coordination and monitoring of

traditional knowledge activities within that department.

The Science Institute of the NWT includes the pursuit of research on traditional knowledge as part of its mission statement; and the territorial government's cross-cultural awareness training courses, which are available to all government employees, will now develop special sections on traditional knowledge.

The GNWT Traditional Knowledge Policy is extremely innovative and could provide a model for other governments that wish to conserve and promote the use of traditional knowledge in their environment, development, research, and science policies. The idea of such promotion was included in the International Convention on Biodiversity and Agenda 21 report both adopted at the 1992 Rio Earth Summit. However, no other governments have actually adopted explicit policies on the subject; hence, implementation of the GNWT policy should be looked at closely by both international agencies and other national and provincial governments.

Building a New Partnership

The central theme of the International Year of the World's Indigenous People was "Indigenous People—A New Partnership." The idea of the Year was to lay the groundwork for more open and cooperative relationships among indigenous peoples' organizations, governments, and international agencies. No one expected that the creation of such a "new partnership" would be easy, especially given the history of the relationships and paternalistic attitudes of governments and international agencies toward indigenous peoples. However, some interesting experiments are taking place, which were discussed at the conference and which potentially could provide insights for governments and international agencies that are seeking more effective ways of relating to indigenous peoples.

One program that was described in some detail is the Regional Support Program of Indigenous Peoples in the Amazon Basin of South America. This program is sponsored by the International Fund for Agricultural Development (IFAD) and Andean Development Corporation (CAF). It was conceived by IFAD economist Roberto Haudry de Soucy after long years of experience working and living with South American Indian people and, at the time of the conference, was coordinated by Brazilian Indian leader Jorge Terena.

A major innovation of the Amazon Basin Support Program is that it works in *direct partnership* with a growing network of regional Indian organizations, providing them with small grants to carry out pre-investment projects that will assist them in protecting their land rights; improving the health and education of

their members; and strengthening their capacity to maintain their traditional knowledge, cultures, and ethnic identities. As mentioned in Chapter 1, Haudry's idea is that by "investing in the culture" of indigenous peoples, through the protection of their land rights and strengthening of their own organizations, international financial institutions (IFIs) have the best chance of promoting the long-term economic development of indigenous communities.

In his presentation Jorge Terena highlighted some ideas behind the Regional Support Program, as well as some of the new thinking that he and other South American indigenous leaders are trying to introduce into the international development dialogue.

I am very glad that the speakers we heard today have been talking about their traditions, customs, and social structures. I think this is a very clear message that we are trying to give the World Bank and other financial institutions. The message is that you must respect our culture, our social structure, and our way of living before you can offer us anything else different.

It has been 500 years that colonialism has been trying to offer us something different; yet for 500 years the world still has not recognized our traditional knowledge. In these 500 years little has been learned about our cultures.

We have anthropologists, sociologists, and economists trying to resolve our

problems. They come up with words like “sustainable development.” Sustainable development, they say, is going to solve the world’s problems and society’s problems, or the poor’s problems. Yet, as we look at the history of development as a whole, it has not resolved the problems of the world. As a matter of fact, this development has become a source of poverty.

It has been about two decades since the financial institutions have been trying to start something with this sustainable development. They have not even

defined what it is yet. Now, within the last five years, the world has realized that indigenous peoples have something to give to the modern world. The world is beginning to recognize the knowledge we have accumulated over years and years. They realize that this knowledge can resolve part of the problem.

Terena then explained how the World Bank, IFAD, and other financial institutions can improve their development projects with indigenous peoples.

Indigenous People and International Financial Institutions

The requests from indigenous people that call for immediate support from the International Financial Institutions (IFIs) concern basically:

1. Demarcation of specific territories and the establishment of titles thereof
2. Strengthening indigenous organizations and their capacity to enter into dialogue
3. Support for self-managed micro-projects in health, bilingual education, and other fields wherein the “partners” are selected and contracted exclusively by the indigenous organizations and not predetermined by the donors.

It is of great importance to gear any financial aid carefully to the capacity that the respective indigenous people and their organizations possess for managing such aid. At present, the management capacity is very poor, and it would be a serious mistake to “inundate” indigenous people with money. It is essential to hand over funds in a limited, progressive fashion and to insist on a careful rendering of account.

[Therefore], any action should be conceived in terms of pre-investment, such that the indigenous people may affirm their cultural values, address their urgent needs, and prepare themselves for managing sizable funds and investment that will be sustainable in the long term. For the IFIs, action here means a learning process and no project financing (since, in official parlance a “project” has objectives, time spans, and costs that are carefully calculated), and it is here that we are largely ignorant and have to learn and accompany our partners in pursuing approaches that they have chosen.

—Roberto Haudry de Soucy

The first thing I would like to suggest is that you must consider land demarcation. I mention this because in Latin America we’re fighting to get the governments to recognize our land as our own so that on our own land we can set up any kind of program we want. If you want to talk about development that needs to come from the community, from the inside not the outside, first we must secure the land....

How are institutions going to convince the governments in Latin America that they must mark the land to strengthen the identity of our people? They do not want to, because governments and our communities are fighting for the same things—the control of the land. Historically, we have the rights to the land, but according to the laws it belongs to the government.

I believe that as long as there are indigenous peoples on the face of the earth, this battle is going to go on. But, if we want to talk about helping the indigenous peoples to get somewhere, at least help us to mark our lands.

The second thing we must change is the spokesmen for whatever these institutions want to do. The government has spokesmen telling the international financial institutions what to do with our people without asking our people. [The government] might send somebody to go and jot on a piece a paper what they *think* the indigenous peoples want to do.. Yet, when the indigenous peoples come to discuss

their own ideas with the government, that's not what the government wants.

The international financial institutions must not only hear, but support, what it is that the indigenous peoples want. That means spending time with the indigenous community. I'm glad that we have begun a process here in this meeting. But it's not because of three or four hours of meeting or three or four hours of people talking about culture and tradition that we're going to learn. The real learning is out in the field. That is where the planners and economists need to be—talking to the indigenous peoples to see what they want. The international institutions need to say to the government that this is what the [indigenous] peoples want and [this is] what we're going to support.

As a third element, Terena claimed:

We must consider the strengthening of indigenous organizations. Because colonialism has tried to destroy our system of living, our social structure, our economic structure, we were forced to organize. We had to create organizations in order to defend our rights before the governments and the institutions. That is why there are so many indigenous organizations in the world. We need spokesmen to defend our rights, our land rights, our cultural rights....

Because these organizations usually do not have the means to come to a forum like this and present their defense, what is needed is to build up and strengthen these institutions. Help build up the community organizations. We're not talking about only national organizations but organizations at the base where the needs are most felt.

The last thing that Terena mentioned as needing assistance from the international financial institutions is indigenous leadership training.

But this is just the beginning. If you really want to help indigenous peoples you must address these four considerations: land demarcation, consultation, organizational strengthening, and leadership training. Otherwise, I think the attitude will continue to be just wanting to help the indigenous peoples without giving them the means to solve their own problems. Otherwise, the exploitation of our land and our natural resources will continue. More and more we will continue to be put into the market economy that will destroy our people.

In the discussion following Jorge Terena's presentation, Maritta Koch-Weser, Chief of the Environment and Natural Resources Division in the Asia Technical Department of the World Bank, stressed the urgency of the issues raised by him and the other panelists. In large areas of the world indigenous peoples find themselves without the secure land tenure that he mentioned. Similarly, the voices of indigenous peoples are seldom heard within the halls of government or international financial institutions. Thus, development policies and projects continue to be planned without the informed participation of indigenous peoples. This in turn leads to the loss of valuable cultural knowledge and heritage, which could be the bases of sustainable development.

In his closing remarks, which appear in the following chapter, World Bank Vice President for Environmentally Sustainable Development Ismail Serageldin also stressed the urgency of the situation faced by indigenous peoples and the importance for development of respecting and supporting their cultural knowledge, heritage, and identities.

Conclusion

Friends, I am very pleased to be with you here today to share the sense of commitment to the idea that, indeed, we need to think less linearly. We have to recognize that, frequently, the linear paradigm is contributing to the destruction of a valuable patrimony, not just of our environment, our forests, our rivers, but of our heritage, our cultural dimensions.

Mamadou Dia referred to an international conference that we held here in April 1992 on culture and development. It highlighted the project philosophy that we are talking about here—that, ultimately, the whole purpose of development is to improve the well-being of people. Today, after all the efforts toward development, we have to recognize that about a billion people are still living on less than \$1 a day, that close to a billion people (mostly in Sub-Saharan Africa and South Asia but also in other parts of the world)—about one in five members of humanity—go hungry every day. We cannot accept the view that this is somehow an acceptable cost.

Neither can we turn our backs on the very real basis of solidarity that cultural identity provides, that gives people a sense of being and self-worth. We have to think about the philosophical aspects of development in terms of giving people rights. Rights to clean water, clean air, and fertile soil are one way of looking at environmental protection issues. We must not think only of protecting the natural resource base, but we must give people

these basic rights. Today these rights are being denied to many people. These rights are being denied to the 1 billion people who have no access to clean water and to the 1.7 billion who have no access to sanitation. These rights are being denied to their children, of whom 2 to 3 million die annually from causes related to this pollution. They die from eminently avoidable diseases that are associated with the lack of access to clean water and sanitation.

We have 1.3 billion people, primarily in the developing cities of the world, who are breathing air that the World Health Organization says is unfit for human beings. Seven hundred million people, mostly women and children, breathe indoor air polluted by biomass-burning stoves that is the equivalent of smoking three packs of cigarettes a day. Not to mention the hundreds of millions of farmers who are unable to maintain the fertility of the soils from which they eke out a meager living.

Against this backlog of problems, at least 90 to 100 million people a year are being added to the world's population, most of them in those very same weak states and poor countries in which the problems are the worst. The development paradigm that is being pursued by many of these governments has not been able to address these problems. It can neither respond adequately to the past stock of problems nor is it likely to meet the challenges of the future.

These remarks were given by Ismail Serageldin, Vice President for Environmentally Sustainable Development at the World Bank.

In this paradigm these governments are also ignoring the wealth that indigenous knowledge brings, the wealth of indigenous peoples and their cultures. Indeed, we have to recognize that, by and large, everywhere in the world indigenous peoples have been victimized in the name of "progress." They have been persecuted by that which should have empowered. They have been oppressed by that which should have liberated. We must recognize that the post-colonial independence of many states has not translated into respect for the individual rights of indigenous peoples or indigenous communities. For indigenous peoples, I want to speak of other rights, not just rights to clean water and clean air. I want to speak of the right of a people to be themselves, the inalienable right of each and every people to self-determination.

Here the issue of culture and cultural identity takes on a different manifestation. I speak of it not just as something interesting that might be lost, but as an inalienable right, a central core of being human, as part of human rights. We need to recognize that culture and cultural identity are not just things to be studied and written about in anthropological monographs. Cultural identity is very much the core of what makes a society tick. To understand this, we must come to the notion of *empowerment*. In answering the question that Whaimutu Dewes mentioned in his talk, "Who am I?" I think the answer comes from with whom I relate and my ability to act.

A radical, more dynamic view of cultural identity removes it from links with artifacts and objects of a past heritage, from past paintings, sculptures, and places. Such a view sees cultural identity as the ability of individuals, groups, and communities to act and, by their actions, to manifest their identities in the society of which they are a part. They must be social actors, not objectified artifacts. *In this way we find the definition of cultural identity and authenticity rooted in action.* In this way we bring cultural identity to a living people, to the meaning of well-being and development.

When we talk about unitary societies and unitary nation states, we have to understand that within these societies and nation states there must be room for diversity. Mamadou Dia just reminded us of the artificiality of certain legal constructs such as state boundaries when com-

pared to the authenticity of peoples and cultures in Africa. He reminded us of many other fallacies that we need to set aside, but the one I would like to emphasize is *the link between unity and diversity*.

As Aimé Césaire said, "The universal is enriched by all its various particularisms." Empowerment and recognition of the rights of people to be themselves do not lead to disintegration into many cultural groups. It is the denial of people to be themselves that leads to the disasters we see in the former Yugoslavia, the former Soviet Union, and parts of Somalia. It is empowerment that is needed to enable each community to define itself, not at the expense of its neighbors or even at the expense of its weaker members. It is these groups' capacity to define their destinies and themselves in concord with the broader society that allows a broader unity to be constructed. The broader society is enriched by the presence and well-being of indigenous peoples, by the traditional knowledge and the cultural variety they bring. As Jacques Cousteau said at the 1993 First Annual International Conference on Environmentally Sustainable Development:

We now have to make sure that there will be an awakening of global public opinion to save the mixed borders and the flowering profusion of our motley cultural jungle.... We have only one way to keep our proud civilization flourishing: we must protect its diversity.

To the exponents of that broader society who speak with a certain degree of arrogance of the modernism and advancement that they contribute, I think we should remind them of the precarious reality of the human condition in most of these societies, the vulnerability of unskilled labor, the soul-destroying impact of poverty and homelessness, and the ease with which the rich and powerful subvert law enforcement to their own ends.

This scenario of empowerment will be feasible if, and only if, development strategies are truly human-centered in the broadest sense. Strategies that invest in people in terms of health and education are essential. However, we must also devise strategies that recognize the importance of capacity building, governance, legitimacy, participation, priorities, and expression of

people. An enabling environment must be at the center of all development strategies.

Again, Mamadou Dia reminded us of this in terms of the crises of institutions in Africa. This takes me into the domain of human and civil rights, participation, empowerment, accountability, and decisionmaking. For these, I would advocate that all societies think in terms of creating a space of freedom in which people can express themselves, in which those who are concerned can reappropriate the formulation of their own future communities and societies. This space of freedom must not be the monopoly of certain academic scholars in Western universities. In fact, these indigenous groups must take charge of their own destinies.

It is important that we move in this direction quickly. Maritta Koch-Weser rightly reminded us of the urgency of getting things done. As difficult and complex as these issues are, I believe there is a crushing and compelling urgency manifested by the numbers I mentioned earlier in my talk. Every passing day of misguided policies contributes to the misery of millions of human beings. Every incomplete package of reforms and

projects that various donor groups agree to finance is another missed opportunity to reach out to those kindred souls.

We in the World Bank would like to work with all those dedicated to provide this better future, be they nongovernmental organizations, academics, local community groups, reformers, committed governments, intellectuals, international agencies, or national organizations. I stretch out my hand to each and every one.

We do not claim to have the answers and, indeed, we need to be humble about the scope of possible intervention that we can have. But I know that we must dare to be bold, we must dare to be imaginative. For I do believe that imagination is stronger than knowledge, that myth is more potent than history, that dreams are more powerful than facts, that hopes always triumph over experience. I think that with this kind of vision we can empower the people of the world to take charge of their own destinies. For, ultimately, real progress lies in enabling the weak and the marginalized to become the producers of their own bounty and welfare, not the beneficiaries of aid or the recipients of charity.

Post-Conference Discussion

Traditional Knowledge and Sustainable Development: A Conversation

The following is a transcript of a post-conference discussion among some of the conference participants on the subject of traditional knowledge and sustainable development. The discussion was chaired by Shelton H. Davis, Principal Sociologist, Environment Department, World Bank, and included the following participants:

- Arturo Argueta, Ethnobiologist, National Indigenist Institute, Mexico
- Emmanuel Asibey, Senior Ecologist, Agriculture and Environment Division, Southern Africa Department, World Bank
- Ntombie Gata, Deputy Director, Department of Research and Specialist Services, Ministry of Agriculture, Lands and Water Development, Zimbabwe
- Maurice Iwu, Visiting Senior Research Associate, Walter Reed Army Institute of Research, U.S.A.; and Professor of Pharmacognosy at the University of Nigeria, Nsukka, Nigeria
- Moelagi Jackson, President, Faasao Savaii Society, Western Samoa
- Jorge Terena, Director, Regional Support Program for the Indigenous Peoples of the Amazon Basin, International Fund for Agricultural Development; and Andean Development Corporation, Ecuador.

What Is the Meaning of Traditional Knowledge to Indigenous Peoples?

Davis: There has been a lot of attention recently—at the [1992 Rio] Earth Summit, in the

Agenda 21 documents of the U.N., and in the International Biodiversity Convention—on how traditional knowledge is important to sustainable development. However, what do indigenous peoples, people from the villages, mean by traditional knowledge? Why is it important for institutions like the World Bank to be concerned with this kind of issue?

Terena: Terms such as “sustainable development” and “traditional knowledge” are not known to our community or our leaders. But if you talk to indigenous people, you will find out exactly what traditional knowledge is in their world. If we study how our communities have kept this traditional knowledge for so long, we find that this knowledge was stored because of a need. The day to day need for survival.

For example, the Kayapo people in Brazil have small pastures for medicinal plants and food for animals they want to attract in order to hunt. This is done because of a necessity to live. The Kayapo are not thinking that someday outsiders are going to find out that they have good hunting in their area and that they will pay lots of money to hunt there. We don't preserve our ecosystems because we are thinking about future economic gain. We preserve them because there is a need to be met for day-to-day living.

Not only are the animals necessary, but the plants and certain kinds of fruits are essential for our cultural practices. The Xavantes, for example, need the *pequi* fruit. Why? To paint themselves for rituals. They also use the plant to feed certain

ritually important animals. The ecosystem must be preserved to preserve the cultural practices and these, in turn, preserve the ecosystem.

Everything that belongs to the ecosystem, the environment, has a strong spiritual meaning to us. Our forest is a sanctuary. It is where the spirits live. It is where the spirits that our ancestors worshiped live. Imagine if I went to Rome and set off a bomb at the Basilica, St. Peter's Church. What is going to happen to me? I'd probably be put in jail because I'm destroying something that is sacred to millions of people. So why is it that some people go out to our sanctuary, our environment, and destroy the sacred things that belong to us?

Biodiversity and the World Economy

Terena: Suddenly, the world has realized that we have preserved the ecosystem. That ecosystem brings economic gain to some people, and now they are trying to protect our biodiversity. Why? Because they have used everything they on their land and now, the only place where these things are found is on our land, on indigenous peoples' land.

This question of biodiversity is so important because 40 percent of the world's market economy comes from biological processes and products. More important, 85 to 90 percent of our community's needs are based on this biological diversity. Not only that, but millions of people in South America have their needs met by the natural materials in our ecosystem.

I am glad that the World Bank and the U.N. are introducing the vocabulary of traditional knowledge and sustainable development to our community, but, in practice, it is not a strange thing to us. I hope that the World Bank, the U.N., and other institutions will visit our communities and learn what traditional knowledge is in practice, this traditional knowledge of sustainable development.

Indigenous Peoples and Biodiversity Conservation

Davis: I wonder if we could hear a little more about biodiversity conservation. What role have indigenous peoples played in biodiversity conservation and what role can they play in the future?

Argueta: I want to mention an historical issue. Perhaps for 10,000 years in America people have

domesticated plants and animals. In Mexico we have 25,000 different species of plants. Maybe 35 percent of the species that existed in Mexico have been used and conserved by the people for 10,000 years. This is the most important test of the conservation of biodiversity.

Davis: Are you saying that we should not just make parks to protect biodiversity, but that people should be using all this species diversity?

Argueta: The areas with the greatest biodiversity in Mexico are in the cultivated lands, in the peasant and indigenous peoples' areas, not in the national parks or biosphere reserves. The most important areas of biodiversity are in the inhabited areas.

Iwu: What he says of Mexico is also true in Africa. Namely, for at least 13,000 years the people have lived alongside forests. They have managed these forests. Suddenly, around the turn of the seventeenth century, there was a complete paradigm shift that led us to the industrial revolution. We have gone so far [in using up the natural resources] and now we want to have something left behind for our children, for our children's children. The only way we can do that is to go back and learn from cultures that managed to live alongside the rivers and forests and use them sustainably. We had symbolic ways of doing that. We had shrines and taboos. The symbolism involved in this should not prevent Western science from understanding the actual significance of those protective mechanisms.

For medicinal plants particularly, it is foolish to think we can know something about a forest without asking the people who live in it. The medicinal plants in Africa can only exist where there are people who use medicines. So it is inappropriate to build parks and reservation areas without addressing the issue of the people who live alongside them. *You cannot have biodiversity protection without cultural protection.* The two go side by side.

Traditional Knowledge and Present-Day Agricultural Practices

Gata: I would like to talk about agriculture, one of the most important factors in sustainable development. Scientists have recognized from bitter experience that technology transfers from the West

such as pesticides, monocultures, and plow systems have not worked well in Africa. In the West the climate is temperate, and soils and rainfall patterns are different from ours. In most African countries we have sporadic rainfall patterns. In some countries the land is bare three-fourths of the year. The rain comes in heavy showers on bare land. The soil and the landscape is fragile.

The local farming systems that existed prior to the transfer of Western technologies evolved over a long period and were designed to cope with the local climate and landscape. Farmers used mixed cropping with a lot of ground cover. This ground cover protected the land from erosion. When monoculture, row planting, and the plow system came, these facilitated the washing away of soil.

In addition, these systems had no roots in the people so the people together with their local technology were marginalized. We pushed the people in a passive stream of development, and this did not work. Over time, there has been a lot of damage to the environment and to the biodiversity, and there's been growing poverty.

We should not have ignored the potential in the people because they are the actors in the development process. We must start now empowering them. This is what we are trying to tell the World Bank to do—to recognize and legitimize the people and their knowledge.

Wildlife Preservation and Human Usage in Africa

Davis: Another major issue in Africa is the idea of using wildlife for food and the conflict that this poses with parks where some of the large game animals are protected for tourism. What are your views on this?

Asibey: People assume that we did not have any use for animals because they were free for all. This is not true. In Ghana any hunter who kills a bush-buck or a bigger animal must give the hind leg and thigh, about one quarter of it, to the chief. That means about 25 percent of somebody's income is being taxed. So how can we say that the people place no value on the game, as if everybody can go and take it for free. This is not the case.

You have a situation where the people are dying of starvation, a situation where they could reduce the animal population to feed the people.

Bush meat has been part of their diet. Scientific analysis shows that nutritionally these animals are better than the best steak.

Some also say that the people don't appreciate the beauty of the animals. How can a hungry person appreciate beauty? Armies don't march on an empty stomach. So for people to admire beauty, they must be satisfied and have food. The people are starving. The environmentalists say that the people should leave the animals alone, because the tourist will pay a lot of money to look at the animals. These days, tourists pay everything with a credit card in America and Britain before they travel. How much money is left in the country?

In the old days we had animal sanctuaries, the places where people did not go. Then we did not need a whole army to protect the animals, because it was built into the culture and you knew you should not hunt in the sanctuaries. If you did, you would bring havoc to the whole community and be excommunicated from the society. Today, we keep a whole battalion, and we are unable to protect the animals, because the people are not convinced that it is in their interests.

You mentioned traditional knowledge. Again, we can learn from what has happened in the West. If you look at Europe and some parts of North America, where is the biodiversity of these areas? It is destroyed. The technology that was used has destroyed these places. If we want sustainable development in another country where species have been preserved and people have been living with nature, it is just common sense to ask: How have they been doing this? How do they sustain that? Rather than introducing the very technology that has destroyed the West's resources, we need to understand these peoples' knowledge. To achieve conservation without that is impossible.

Traditional Medicine and World Health

Davis: One of the issues discussed at the conference was the relationship of traditional medicine to health problems. A speaker from the floor pointed out that about 80 percent of the world's population still uses medicinal plants. It is not just something that is interesting to study or document in museums. He also pointed out that the World Bank has published a *World Development Report* on health that made only minimal mention of traditional medicine.¹ I was wondering if Maurice Iwu and

Arturo Argueta have any comments on this whole issue of health and traditional medical knowledge.

Argueta: For an estimated 4 billion people in the world, traditional health care is very important. The materials and procedures, the beliefs and ideology, the sacred places and the holy plants—the whole thing—provides health for many people. The trend is toward growth in the next decade. Maybe 5 billion people in the next century will use natural medicines. More and more people from Western societies are using non-Western medicinal plants and traditional health systems.

Iwu: The point made by Arturo is a world-wide phenomenon. The World Health Organization has indeed estimated that 80 percent of the world's population uses traditional medicine. That means that it is the majority form of health care. But how much money is spent on traditional medicine by the World Bank and other institutions? It is probably zero or something minimal.

Traditional medicine is “cost effective,” to use a World Bank term. Traditional medicine reduces hospitalizations. Using plants rather than chemicals is also a less expensive proposition.

If you are actually trying to develop drugs from plants, the very first act should be to increase the efficiency of traditional healers so that they can prepare herbal medicines. The only way you can do that is to invest in support for traditional health care practitioners. Until now, they have been working only at the local level. There was little demand for these plants, but over time people are beginning to recognize that this is a growth industry. Several billions of dollars are spent on drugs each year. The only way, our people can reap the benefits of this is to gain recognition of our traditional practices and bring them into the international marketplace.

It is estimated that about 130 pure compounds that are used as drugs in the West are derived from plants. Of those compounds, 74 percent come directly from the recommendations of traditional healers. As Jorge Terena mentioned, quinine came from traditional healers. How much money does the traditional community make from quinine? Nothing. It is the pharmaceutical companies that make money from it.

The International Intellectual Property Rights Commission and everybody else is talking about

a “trickle down” of money to the communities who have discovered these medical properties. The pharmaceutical companies should make so much money, and when they are rich enough, they should give us 1 percent of their profits. I do not think that a “trickle down” is sufficient compensation for this kind of valuable knowledge.

Consider the pharmaceutical products that we use in developing countries. The shameful part is that we get nearly 99 percent of them from the developed countries. They buy raw materials from us, modify them, and bring them back to us as finished products. We have to pay for them in their currency. We earn their currencies by cutting down forests to plant more cash crops in order to pay them for the drugs that originally came from us.

Changing Attitudes toward Traditional Medicine

Davis: Let me ask Moelagi Jackson to comment now, because it is a very different situation in the Pacific Islands and Western Samoa. What are some of your thoughts on traditional medicine?

Jackson: In the Pacific, especially in Samoa, a lot has to do with attitude. When the colonial powers came, they taught us their way of living, and our Samoan doctors, trained in the West, came home and said “This is the medicine.” So the attitude was that our traditional medicine was wrong. A lot of people believed this. But some of the old people never changed their attitude. They continued to teach and pass down their knowledge to the young people.

I have an example from my family. We've had a long line of doctors. My uncle is the medical superintendent. I can remember twenty years ago when he did not like to see a tea leaf in the house. His grandmother, whether we had a cut or headache, the first thing she would go for was the tea leaf, the *nono* leaf. So in my family, we've got our medical doctors on one side, and our traditional medicine on the other.

We have a hospital near where we live in Savaii, but the doctors are never there. So I encouraged my children to learn from my grandmother. These children are now healers. When my Western-trained relatives came, they said “What are your children doing?” “Oh,” I said,

"They are mixing medicine for so and so." The doctors were very angry. They said "How dare you? This is wrong!"

Now people are realizing that it is too costly to fully maintain our hospitals. Maybe they have the medicine, but they do not have the technology to diagnose the patient. All of a sudden, they are appreciating our local medicine. It has been proven through generations that there are leaves, roots, and juices extracted from the rainforest that can cure a simple illness, instead of going a great distance away to the hospital. Herbal doctors are very respected members of the community, and we're trying to reactivate and increase the traditional knowledge. In the Fassao Savaii Society training program, we are teaching the young people to identify medicinal plants in the rainforest. At the same time, we are trying to encourage the Western-trained doctors to work with us.

Scientific Validity of Traditional Knowledge

Davis: I would like to continue on the issue of the scientific validity of traditional knowledge, especially in the agricultural sector. I know you have some views on this, Dr. Gata.

Gata: It must be emphasized that indigenous peoples use methods similar to those of the scientific world. For example, indigenous peoples classify soils using color, texture, and structure. They use indicator plants for deciding the suitability of soils for a given cropping system. They classify plants using morphological characteristics and physiological attributes, according to their growing and reproductive habits. The fact that indigenous peoples do not use microscopes or electrophoresis equipment for finer analysis does not nullify their methods. The scientific world did not bother to study local people's science and technology but instead went about, in many instances, reinventing the wheel.

Colonial authorities castigated indigenous peoples for slovenly farming methods, for mixing their crops in an unhygienic, haphazard way. But now science has realized that mixed cropping systems are not haphazard. They were developed through long-term experimentation, resulting in an invaluable knowledge of crops that are compatible and often have symbiotic and synergistic relationships. These combinations answered the

people's needs of diversification of food types. These systems have also been found to have a lot of merit for plant protection, soil, and moisture conservation, time and labor management, and nutritional balance.

Asibey: Another scientific concept that the African farmer has worked out is that of ecological succession. In the practice of shifting cultivation, the people know that after farming one area and then leaving it, they must watch for certain species to grow again before they return to that plot. Population pressure does not always allow this cycle to be complete now. But this is the local application of the scientific notion of succession, which the illiterate African farmer worked out for himself.

Gata: African farmers have indicator plants for soil classification and land use planning. They know that a certain type of plant or tree grows in a soil that is suitable for certain crops. So they actually marry what I would call the physical properties with the biological dynamics of the ecosystem. It is time that we legitimize this knowledge and start to work together with the people who actually own it. We must start to work with grassroots farmers as partners in research and development, but not in a one-way system in which scientists drain local knowledge for their own self-improvement. The knowledge that grassroots farmers have developed thus far suggests that they can meaningfully contribute to research and development, side by side with modern scientists. After all, without people's participation, scientists have not made much headway in developing Africa.

International Agencies and Indigenous Peoples

Davis: What should be the policies of international development agencies like the World Bank for traditional knowledge and indigenous peoples? Also, what policies should we encourage on the part of the governments that these donor agencies are working with? If we were looking ahead, what should we be promoting? Maybe, Jorge, we could begin with you. At the conference, you mentioned the issue of assistance with land demarcation. Why is that so important?

Terena: *Land demarcation.* We need to know that the land is ours, that legally we can control our lands. There is a necessity to demarcate our lands and ensure that nobody is going to invade them. The world needs to understand that the things that exist in the world today, whether it is medicinal plants or biodiversity, have been preserved only in our areas. The only way that we're going to continue to have this diversity is by preserving our land. We can assure the world that we will maintain the biodiversity that people will need in the future if we're assured of our land.

Recognition of the scientific validity of indigenous knowledge. The second thing is, as Dr. Gata pointed out, the need to recognize indigenous knowledge as scientific and as an appropriate technology. If it were not scientific, we would not have preserved the ecosystems that exist on our land for thousands of years. It's still there, because there is a scientific method to it. That needs to be recognized.

Intellectual property rights. We've been talking a lot about medicinal plants. Some scientists go to our community and have our people teach them what purpose a root or a plant serves. Those scientists take that plant back to the laboratory and put chemical additives with it and come up with a pill. Then, that person patents the pill in his name or the laboratory's name. They don't give any kind of recognition to the community that knew the use of that plant in the first place. They say they "discovered" it; therefore, they patent it.

As you know, for someone to patent something, it must be new and original. How can they say it's new and original if our communities already knew about it? Why not name our community as co-inventors? I'm sure the scientific world does not want to do that, because it would have to pay royalties to our communities.

As an excuse for not recognizing us, they say everything that exists, including the ecological diversity on indigenous lands, should be used for humanity's benefit. Well, of course, yes. If, for example, Maurice Iwu patents something, it's going to be used for humanity's benefit, but he wants to get some credit for it. Therefore, one of the things the World Bank could do would be to help our communities be recognized as co-inventors of this technology.

Institutional support for indigenous organizations. Another thing I suggest is assistance with

the institution building of our own organizations and communities. I think that we are sufficiently organized now that we can become our own spokespeople. We don't need the church anymore. We don't need other NGOs to be our spokespeople. We have our own organizations and our own people who can speak for us. We have our own leaders. They can speak to the world about our needs.

However, in order to function in this world certain things are needed. Telephones and copying machines are needed. Somebody said the other day, indigenous peoples in the community don't use them. Of course, they don't use them, but the organizations in the city do. In order to make contact with this world and defend our rights before the governments, we need certain tools, and if these tools are not given to us, we cannot do it.

Jackson: Along with Jorge, I would emphasize the importance of land demarcation. How can we reactivate and reemphasize traditional knowledge if there is no land? All traditional knowledge is bound with the land. The World Bank must appreciate and support proposals and projects that have a viable and sound plan for sustainable use of the land. They must insist that an environmental plan and feasibility study be attached to any proposal. It is all very well to have a plan, but we must be sure it can be followed.

The idea of capacity building, mentioned by Jorge, is also important. For example, we have our own universities in the islands like the Universities of the South Pacific, Australia, and New Zealand. Is it possible for the World Bank to fund, through these universities, a special study of our traditional medicine within the Pacific? If the World Bank can agree to some funding attached to the institutions we've already got, it would protect the land, protect our medicine, and give the knowledge to our young people.

Cultural Preservation and the Global Environment Facility

Davis: One of the things that discussed at the conference was the rapid loss of cultural and linguistic diversity. For instance, I know a linguist at Massachusetts Institute of Technology (MIT) who is studying the situation of the world's indigenous languages. There are 6,000 languages in the

world today. Three thousand of them are threatened with disappearance because children are not being taught these languages. By the year 2020, there may be only 300 languages that are actively spoken in the world. That potential loss means that we'd better do something quickly, especially if language is related to knowledge.

Now we've created a Global Environment Facility (GEF) to deal with global problems. Should this language and cultural loss be seen as a global problem? Should cultural diversity be taken up within this framework?

Argueta: In 1992 *Time* magazine carried an article entitled, "Lost Tribes, Lost Knowledge."² This problem is a contemporary problem of the world, and I think the GEF can play a very important role in the preservation, conservation, support, and development of culture and therefore of knowledge.

I would like to make two points. First is the importance of the dissemination of information. I recommend this not only for peasants or indigenous peoples, but also for technical resource people in the governments. This is very important because government staff in many countries don't know anything about the value of traditional knowledge. I hope that the World Bank, the GEF, and other international donors will emphasize the dissemination of information about indigenous knowledge and cultures and their importance to sustainable development.

Another point is the need to support conservation of biodiversity. For nearly thirty years, in agriculture and medicinal plants researchers have been working on the conservation of seeds in genetic banks, in freezers and so on. For the past ten years, the new idea has been conservation in protected areas. Why not change? Why not put the emphasis on conservation with the people who have conserved the biodiversity every year for centuries? Why not put the investments in conservation with the people who live there and preserve the seeds *in situ*?

Iwu: I had hoped that the GEF approach would be a departure from the classical development mentality. But what GEF is doing is the same old thing. I think it is because of its association with the World Bank. You send the experts to a country, and in two weeks there is a beautiful report.

There is no way that can continue to happen if the GEF is to address the complexity of the situation.

They must not continue to develop concepts at headquarters and then push them onto the field. As Moelagi Jackson suggested, the GEF should attach itself to institutions already in place. *We need capacity strengthening, not capacity building.* Building means there is nothing there. We already have capacity. All we want to do is build a bridge between indigenous knowledge and Western science.

In Mexico an inventory of biological resources is being done. We are doing the same thing for West and Central Africa. But the GEF doesn't see any relevance for economic development in what we are doing. We don't have any baseline data of the resources we have from an ethnobiological point of view. The GEF doesn't see that this as the kind of base data we need.

The GEF should be set up not to deal with governments. The World Bank deals with governments. The GEF, because of its unique nature, should recognize and deal with the various tribes and NGOs and leave the World Bank to deal with lending to governments. Yet the structure of the GEF is that the NGOs and the tribes can get only \$50,000 for projects based in their home country. The big projects are through the governments. For instance the projects to save the forests of West Africa...why couldn't there be a commission made up of all the tribal chiefs to work with the scientists to look at the forests together?

Asibey: I think that it is possible to use indigenous knowledge in designing our projects if we say to the task managers who are designing the biodiversity programs: "Indigenous knowledge is important for the management of these resource bases." All we need to do is design our projects to include the local knowledge on whatever areas we are going to deal with.

If we are talking about biodiversity conservation in Malawi fishery resources, we can design that project to include indigenous knowledge and use indigenous peoples in the management mechanism. If we are talking about West African forests, why design as if we are looking after only the trees and exclude animals and other things which are essential to the people? We must incorporate indigenous knowledge in project documentation and indigenous peoples as participants in project design and management.

I think it is a question of reeducating ourselves. World Bank sensitivity to these issues is improving, at least in the Southern Africa Country Department. There, I am specifically asked to look at projects from the point of view of the local people. We ask the people, What do you want us to do? We try to find out what they themselves consider to be the most important project—how they want it.

If we are going to do participatory project planning, we have to convince our colleagues that the project design phase must be lengthened. It cannot move as fast as before because it involves local consultation. Projects that include participation take time. We must get to know the local people. Most Africans do not just start talking to you because they see you are nicely dressed. They take a long time to assess you. World Bank staff cannot assume that they can get the proper information in the same short time frame as before.

Gata: I would like to stress that the World Bank as well as the national governments have realized that there have been shortcomings in development efforts to date. Whatever we're going to do from now on, it must be a different approach. A different approach cannot be implemented within an existing structure. I can tell you that from my personal experience. After indepen-

dence my research institution was never overhauled like other government institutions. Because of that, we're having problems changing from the old colonial to the independent mind set. I know that creating new structures is expensive, but how long are we going to continue with things that we know very well are not meeting our needs? Are we serious about change? If it is going to be costly, so be it.

Davis: There have been many interesting ideas presented here, and I would like to thank everyone who has participated in this discussion. Hopefully, this is a beginning step for the World Bank and the various people and organizations who were represented at the conference to continue to share ideas and information. Hopefully, together, we can continue to work on these common issues, trying to convince each of our respective organizations to take into account the important contributions that traditional knowledge and indigenous peoples can make to sustainable development.

Notes

1. World Bank, *World Development Report 1993: Investing in Health* (New York: Oxford University Press, 1993).

2. Eugene Linden, "Lost Tribes, Lost Knowledge," *Time* 138 (12) (Sept. 23, 1991): 46–56.

Appendixes

Appendix 1

Program

Traditional Knowledge and Sustainable Development Conference The World Bank, Washington, D.C.

September 27, 1993

Introductory Remarks

Mohamed T. El-Ashry, Chief Environmental Adviser to the President and Director of Environment, World Bank [now Chief Executive Officer and Chairman, Global Environment Facility, U.S.A.]

The Value of Traditional Knowledge for Sustainable Development

Moderator: **Emmanuel Asibey**, Senior Ecologist, Agriculture and Environment Division, Southern Africa Country Department, World Bank
Keynote Speaker: **Dr. Ntombie R. Gata**, Deputy Director, Department of Research and Specialist Services, Ministry of Lands, Agriculture, and Water Development, Zimbabwe

Contributions of Traditional Knowledge to Health and the Environment

Moderator: **Mario Ramos**, Senior Environment Specialist, Land, Water, and Natural Habitats Division, Environment Department, World Bank [now Senior Environmental Specialist, Global Environment Facility, U.S.A.]
Speakers: **Maurice M. Iwu**, Visiting Senior Research Associate, Walter Reed Army Insti-

tute of Research, U.S.A.; Professor of Pharmacognosy, University of Nigeria, Nsukka, Nigeria

Arturo Argueta, Ethnobiologist, Advisor to General Director, National Indigenous Institute, Mexico

Moelagi Jackson, President, Faasao Savaii Society, Western Samoa

Cindy Gilday, Special Advisor, Department of Renewable Resources, Government of Northwest Territories, Canada

Discussant: **Janis Alcorn**, Program Manager for Asia/Pacific, Biodiversity Support Program, U.S.A.

Summary and Concluding Remarks

Pierre Landell-Mills, Senior Policy Adviser, Office of the Vice President, Environmentally Sustainable Development, World Bank [now Chief, Resident Mission, World Bank, Dhaka, Bangladesh]

September 28, 1993

Traditional Institutions, Participation, and Development in Africa

Moderator: **Mamadou Dia**, Chief, Capacity Building and Implementation Division, Africa Technical Department, World Bank
Speakers: **Bernard Lédéa Ouedraogo**, President, Association Internationale, (Six-"S") Se Servir de la Saison Sèche en Savane et au Sahel, Burkina Faso

Nana Odoru Numapau II, President, National House of Chiefs, Ghana

Discussants: **Moses Kiggundu**, Professor, School of Business, Carleton University, Canada

Paula Donnelly-Roark, Public Sector Management Specialist, Capacity Building and Implementation Division, Africa Technical Department, World Bank

Indigenous Development Planning

Moderator: **Maritta Koch-Weser**, Chief, Environment and Natural Resources Division, Asia Technical Department, World Bank

Speakers: **Bachir Souhail**, Task Manager, Matruh Natural Resource Management Project, Agriculture Operations Division, Middle East and North Africa Country Department, World Bank

Peter Klemann, German Team Leader, Qasr Rural Development Project, GTZ, Egypt

Salima Abd El Rehim Mohamed, Officer for the Women's Affairs Program, Qasr Rural Development Project, Egypt

Theodore Van der Pluijm, Director, Latin America and Caribbean Division, Interna-

tional Fund for Agricultural Development, Italy

Jorge Terena, Director, Regional Support Program for Indigenous Peoples of the Amazon Basin, International Fund for Agricultural Development; and Andean Development Corporation, Ecuador

Roberto Haudry, Project Official, Latin America and Caribbean Division, International Fund for Agricultural Development, Italy

Discussant: **Shelton H. Davis**, Principal Sociologist, Social Policy and Resettlement Division, Environment Department, World Bank

Summary: **Whaimutu Dewes**, Attorney, Fletcher Challenge Ltd., New Zealand

Mamadou Dia, Chief, Capacity Building and Implementation Division, Africa Technical Department, World Bank

Concluding Remarks

Ismail Serageldin, Vice President, Environmentally Sustainable Development, World Bank

Appendix 2

Participants

Invited Participants

Janis B. Alcorn
Program Manager for Asia/Pacific
Biodiversity Support Program
World Wildlife Fund
1250 24th St., N.W.
Washington, D.C. 20037, U.S.A.

Arturo Argueta
Ethnobiologist
Advisor to General Director
Instituto Nacional Indigenista
Av. Revolucion No. 1279, 2o. Piso
Col. Tlacopac
01010 Mexico 20, DF, Mexico

Whaimutu Dewes
Attorney
Fletcher Challenge, Ltd.
810 Great South Road, Penrose
Private Bag 92114
Auckland, New Zealand

Mohamed T. El-Ashry
Chief Executive Officer and Chairman
Global Environment Facility
1818 H Street, N.W.
Room G 6-005
Washington, D.C. 20433, U.S.A.

Ntombie Gata
Deputy Director
Department of Research and Specialist Services
Ministry of Lands, Agriculture and
Water Development

P.O. Box 8108 Causeway
Fifth Street Extension
Harare, Zimbabwe

Cindy Gilday
Special Adviser
Department of Renewable Resources
Government of Northwest Territories
Box 1320
Sixth Floor, Scotia Center
Yellowknife, NWT, Canada, X1A 2L9

Roberto Haudry (de Soucy)
Project Official
Latin America and Caribbean Division
International Fund for Agricultural
Development
107, Via Del Serafico
00142 Rome, Italy

Maurice Iwu
Visiting Senior Research Associate
Division of Experimental Therapeutics
Walter Reed Army Institute of Research
Washington, D.C. 20307-5100, U.S.A.; and
Professor of Pharmacognosy
Faculty of Pharmaceutical Sciences
University of Nigeria
Nsukka, Nigeria

Moelagi Jackson
President
Faasao Savaii Society
P.O. Box 5002
c/o Salelologa Post Office
Savaii, Western Samoa

Moses Kiggundu
Professor
School of Business
Carleton University
BENDAS
174 Cobourg Street
Ottawa, Ontario, Canada K1V 8H5

Peter Klemann
German Team Leader
Deutsche Gesellschaft für Technische
Zusammenarbeit (GTZ)
Qasr Rural Development Project (QRDP)
Directorate of Agriculture Bldg.
P.O. Box 18
Marsa Matruh, Egypt

Salima Abd El Rehim Mohamed
Officer for the Women Affairs Program
Qasr Rural Development Project (QRDP)
Directorate of Agriculture Bldg.
P.O. Box 18
Marsa Matruh, Egypt

Nana Oduro Numapau II
Efssumjaheme
President, National House of Chiefs
State House of Accra
P.O. Box 4148
Kumasi, Ashanti Region, Ghana

Bernard Lédéa Ouedraogo
President
Association Internationale, Six-“S”
Se Servir de la Saison Sèche en Savane et au Sahel
B.P. 100
Ouahigouya, Burkina Faso

Mario Ramos
Senior Environment Specialist
Global Environment Facility
1818 H Street, N.W.
Room G-6024
Washington, D.C. 20433, U.S.A.

Jorge Terena
Quadra 07 Conjunto “A” Casa 10
73035-070 - Sobradinho
Brasilia, D.P., Brazil

Theodore Van der Pluijm
Director
Latin America and Caribbean Division
International Fund for Agricultural Development
107 Via Del Serafico
00142 Rome, Italy

World Bank Staff Participants

Unless otherwise noted, all World Bank staff can be reached at:

1818 H. Street, N.W.
Washington, D.C., 20433, U.S.A.

Emmanuel Asibey
Senior Ecologist
Agriculture and Environment Division
Southern Africa Country Department
Room J 4-171

Shelton H. Davis
Principal Sociologist
Social Policy and Resettlement Division
Environment Department
Room S 5-033

Mamadou Dia
Chief
Capacity Building and Implementation Division
Africa Technical Department
Room J 2-131

Paula Donnelly-Roark
Public Sector Management Specialist
Capacity Building and Implementation Division
Africa Technical Department
Room J 2-151

Maritta Koch-Weser
Chief
Environment and Natural Resource Division
Asia Technical Department
Room MC 8-427

Pierre Landell-Mills
Chief
Resident Mission
World Bank

(continued)

G.P.O. 97
Dhaka, Bangladesh

Ismail Serageldin
Vice President
Environmentally Sustainable Development
Room S 7-031

Bachir Souhlal
Task Manager
Matruh Natural Management Project
Agriculture Operations Division
Middle East and North Africa Country
Department
Room H 9-013

Appendix 3

Indigenous Knowledge Resource Centers

Established Centers

Global Indigenous Knowledge Resource Centers

1. Centre for International Research and Advisory Networks (CIRAN): Drs. G. W. von Liebenstein, Director; Nuffic/CIRAN, POB 29777, 2502 LT, The Hague, The Netherlands; (Tel: 31-70-426-0321), Fax: 31-70-426-0329; EMail: Lieb@nufficcs.nl)
2. Centre for Indigenous Knowledge for Agriculture and Rural Development (CIKARD); Dr. D. Michael Warren, Director, CIKARD, 318 Curtiss Hall, Iowa State University, Ames, Iowa 50011 U.S.A. (Tel: 515-294-0938, Fax: 515-294-1708; EMail: BITNET S2.DMW@ISUMVS)
3. Leiden Ethnosystems and Development Programme (LEAD): Dr. L. Jan Slikkerveer, Director; LEAD Institute of Cultural and Social Studies, University of Leiden, POB 9555, 2300 RB Leiden, The Netherlands (Tel: 31-71-273-469, Fax: 31-71-273-619)

Regional Indigenous Knowledge Resource Centers

4. African Resource Centre for Indigenous Knowledge (ARCIK): Prof. Adedotun Phillips, Director and Dr. Tunji Titilola, Research Coordinator; ARCIK, Nigerian Institute of Social and Economic Research (NISER); PMB 5 - UI Post Office, Ibadan, Nigeria (Fax: 022-416-129 or 01-614-397)
5. Regional Program for the Promotion of Indigenous Knowledge in Asia (REPIKA): Dr. Evelyn Mathias-Mundy, Coordinator; REP-

PIKA, International Institute of Rural Reconstruction (IIRR), Silang, Cavite, Philippines (Tel: 0969-9451, Fax: 632 522-2494)

National Indigenous Knowledge Resource Centers

6. Ghana Resource Centre for Indigenous Knowledge (GHARCIK): Mensah Bonsu, Director; GHARCIK, School of Agriculture, University of Cape Coast, Cape Coast, Ghana (Tlx: 2552 UCC GH)
7. Indonesian Resource Centre for Indigenous Knowledge (INRIK): Prof. Dr. Kusnaka Adimihardja, Director; INRIK, Department of Anthropology, University of Padjadjaran, Bandung, 40132 Indonesia (Fax: 022-431-938)
8. Mexican Research, Teaching and Service Network on Indigenous Knowledge (RIDSCA - Red de Investigacion, Docencia y Servicio en Conocimientos Autoctonos): Dr. Antonio Macias-Lopez, Director; Colegio de Postgraduados, CEICADAR, Apartado Postal L 12, C.P. 72130, Col. La Libertad, Puebla, Pue., Mexico (Tel: 48-00-88, 48-09-78, 48-05-42; Fax: 22-493-995)
9. Philippine Resource Centre for Sustainable Development and Indigenous Knowledge (PhiRCSDIK): Dr. Rogelio C. Serrano, National Coordinator; Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCAARD), Los Baños, Laguna, Philippines (Fax: 63-094-50016; Tlx: 40860 PARRS PM)
10. Kenya Resource Centre for Indigenous Knowledge (KENRIK): Dr. Mohamed Isahakia, Act-

- ing Director; The National Museums of Kenya, P.O. Box 40658, Nairobi, Kenya (Tel: 254-2-742-161; Fax: 245-2-741-424)
11. Sri Lanka Resource Centre for Indigenous Knowledge (SLARCIK): Dr. Rohana Ulluwishewa, Director; Department of Geography, University of Sri Jayawardenepura, Nugegoda, Sri Lanka (Tel: 55-2695/2696/3191/3192)
 12. Venezuelan Secretariat for Indigenous Knowledge and Sustainable Development (VERSIK): Dr. Consuelo Quiroz, Coordinator; Center for Tropical Alternative Agriculture and Sustainable Development, Agrarian Science Department, Nucleo "Rafael Rangel", Universidad de los Andes, Trujillo-Estado Trujillo, Venezuela (Fax: 58-072-33667)
 13. Burkina Faso Resource Centre for Indigenous Knowledge (Centre Burkinabé de Recherche sur les Pratiques et Savoirs Paysans) (BURCIK): Dr. Bagsa E. Dialla, Director; IRSSH, B.P. 7047, Ouagadougou, Burkina Faso (Tel: 226-362835; Fax: 226-336517)
 14. South African Resource Centre for Indigenous Knowledge (SARCIK): Dr. Morris H. Cohen, Co-Director; The Institute for Indigenous Theory and Practice, 110 Long Street, 8001 Cape Town, South Africa (Tel: 27-21-242012; Fax: 27-21-262466)
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 16. Nigerian Resource Centre for Indigenous Knowledge (NIRCIK): Dr. James O. Olukosi, Coordinator; Institute for Agricultural Research, Ahmadu Bello University, PMB 1044, Zaria, Nigeria (Tel: 234-69-50571-4 Ext. 4322; Fax: 234-69-50891 or 234-69-50563; Tlx: 75248 NITEZ NG)
 17. Uruguay Resource Centre for Indigenous Knowledge (URURCIK): Pedro de Hegedus, Coordinator; Centro de Estudios para el Desarrollo-Uruguay/Centre for Development Studies-Uruguay (CEDESUR), Casilla Correo 20.201-Codigo Postal 12.900, Sayago, Montevideo, Uruguay (Tel: 5-982-350634; Fax: 5-982-913780; EMail: cedesur@csnet.chasque.apc.org)
 18. Cameroon Indigenous Knowledge Organization (CIKO): Professor C.N. Ngwasiri, Director; Private Sector Research Institution, P.O. Box 170, Buea, Southwest Province, Cameroon (Tel: 237-32-2690; Fax: 237-32-2514 or 43-0813)
 19. Madagascar Resource Centre for Indigenous Knowledge (MARCIK): Ms. Juliette Ratsimandrava, Director; Centre d'Information et de Documentation Scientifique et Technique, Ministère de la Recherche Appliquée au Développement, 21 rue Fernand Kasanga, B.P. 6224, Antananarivo 101, Madagascar

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1. Regional/Sub-Regional Centers: European Resource Centre for Indigenous Knowledge, Trans-Andean Resource Centre for Indigenous Knowledge
2. National Centers: Australia, Benin, Bolivia, Colombia, Costa Rica, India, Mali, Namibia, Nepal, Peru, Senegal, Sierra Leone, Tanzania, Viet Nam, and Zimbabwe

Appendix 4

The World Bank Operational Manual

Operational Directive (OD) 4.20: Indigenous Peoples

Introduction

1. This directive describes Bank¹ policies and processing procedures for projects that affect indigenous peoples. It sets out basic definitions, policy objectives, guidelines for the design and implementation of project provisions or components for indigenous peoples, and processing and documentation requirements.

2. The directive provides policy guidance to (a) ensure that indigenous people benefit from development projects, and (b) avoid or mitigate potentially adverse effects on indigenous people caused by Bank-assisted activities. Special action is required where Bank investments affect indigenous peoples, tribes, ethnic minorities, or other groups whose social and economic status restricts their capacity to assert their interests and rights in land and other productive resources.

Definitions

3. The terms "indigenous peoples," "indigenous ethnic minorities," "tribal groups," and "scheduled tribes" describe social groups with a social and cultural identity distinct from the dominant society that makes them vulnerable to being disadvantaged in the development process. For the purposes of this directive, "indigenous peoples" is

the term that will be used to refer to these groups.

4. Within their national constitutions, statutes, and relevant legislation, many of the Bank's borrower countries include specific definitional clauses and legal frameworks that provide a preliminary basis for identifying indigenous peoples.

5. Because of the varied and changing contexts in which indigenous peoples are found, no single definition can capture their diversity. Indigenous people are commonly among the poorest segments of a population. They engage in economic activities that range from shifting agriculture in or near forests to wage labor or even small-scale market-oriented activities. Indigenous peoples can be identified in particular geographical areas by the presence in varying degrees of the following characteristics:

- (a) a close attachment to ancestral territories and to the natural resources in these areas;
- (b) self-identification and identification by others as members of a distinct cultural group;
- (c) an indigenous language, often different from the national language;
- (d) presence of customary social and political institutions; and
- (e) primarily subsistence-oriented production.

This directive was prepared for the guidance of staff of the World Bank and is not necessarily a complete treatment of the subjects covered. [Editor's note: Issued in 1991, this directive is being revised; the revised OD 4.20 is expected by the end of 1995.]

Task managers (TMs) must exercise judgment in determining the populations to which this directive applies and should make use of specialized anthropological and sociological experts throughout the project cycle.

Objective and Policy

6. The Bank's broad objective towards indigenous people, as for all the people in its member countries, is to ensure that the development process fosters full respect for their dignity, human rights, and cultural uniqueness. More specifically, the objective at the center of this directive is to ensure that indigenous peoples do not suffer adverse effects during the development process, particularly from Bank-financed projects, and that they receive culturally compatible social and economic benefits.

7. How to approach indigenous peoples affected by development projects is a controversial issue. Debate is often phrased as a choice between two opposed positions. One pole is to insulate indigenous populations whose cultural and economic practices make it difficult for them to deal with powerful outside groups. The advantages of this approach are the special protections that are provided and the preservation of cultural distinctiveness; the costs are the benefits foregone from development programs. The other pole argues that indigenous people must be acculturated to dominant society values and economic activities so that they can participate in national development. Here the benefits can include improved social and economic opportunities, but the cost is often the gradual loss of cultural differences.

8. The Bank's policy is that the strategy for addressing the issues pertaining to indigenous peoples must be based on the *informed participation* of the indigenous people themselves. Thus, identifying local preferences through direct consultation, incorporation of indigenous knowledge into project approaches, and appropriate early use of experienced specialists are core activities for any project that affects indigenous peoples and their rights to natural and economic resources.

9. Cases will occur, especially when dealing with the most isolated groups, where adverse impacts

are unavoidable and adequate mitigation plans have not been developed. In such situations, the Bank will not appraise projects until suitable plans are developed by the borrower and reviewed by the Bank. In other cases, indigenous people may wish to be and can be incorporated into the development process. In sum, a full range of positive actions by the borrower must ensure that indigenous people benefit from development investments.

Bank Role

10. The Bank addresses issues on indigenous peoples through (a) country economic and sector work, (b) technical assistance, and (c) investment project components or provisions. Issues concerning indigenous peoples can arise in a variety of sectors that concern the Bank; those involving, for example, agriculture, road construction, forestry, hydropower, mining, tourism, education, and the environment should be carefully screened.² Issues related to indigenous peoples are commonly identified through the environmental assessment or social impact assessment processes, and appropriate measures should be taken under environmental mitigation actions (see OD 4.01, *Environmental Assessment*).

11. *Country Economic and Sector Work.* Country departments should maintain information on trends in government policies and institutions that deal with indigenous peoples. Issues concerning indigenous peoples should be addressed explicitly in sector and subsector work and brought into the Bank-country dialogue. National development policy frameworks and institutions for indigenous peoples often need to be strengthened in order to create a stronger basis for designing and processing projects with components dealing with indigenous peoples.

12. *Technical Assistance.* Technical assistance to develop the borrower's abilities to address issues on indigenous people can be provided by the Bank. Technical assistance is normally given within the context of project preparation, but technical assistance may also be needed to strengthen the relevant government institutions or to support development initiatives taken by indigenous people themselves.

13. *Investment Projects.* For an investment project that affects indigenous peoples, the borrower should prepare an indigenous peoples development plan that is consistent with the Bank's policy. Any project that affects indigenous peoples is expected to include components or provisions that incorporate such a plan. When the bulk of the direct project beneficiaries are indigenous people, the Bank's concerns would be addressed by the project itself and the provisions of this OD would thus apply to the project in its entirety.

Indigenous Peoples Development Plan³

Prerequisites

14. Prerequisites of a successful development plan for indigenous peoples are as follows:

- (a) The key step in project design is the preparation of a culturally appropriate development plan based on full consideration of the options preferred by the indigenous people affected by the project.
- (b) Studies should make all efforts to *anticipate adverse trends* likely to be induced by the project and develop the means to avoid or mitigate harm.⁴
- (c) The institutions responsible for government interaction with indigenous peoples should possess the social, technical, and legal skills needed for carrying out the proposed development activities. Implementation arrangements should be kept simple. They should normally involve appropriate existing institutions, local organizations, and nongovernmental organizations (NGOs) with expertise in matters relating to indigenous peoples.
- (d) Local patterns of social organization, religious beliefs, and resource use should be taken into account in the plan's design.
- (e) Development activities should support production systems that are well adapted to the needs and environment of indigenous peoples, and should help production systems under stress to attain sustainable levels.
- (f) The plan should avoid creating or aggravating the dependency of indigenous people on project entities. Planning should encourage early handover of project man-

agement to local people. As needed, the plan should include general education and training in management skills for indigenous people from the onset of the project.

- (g) Successful planning for indigenous peoples frequently requires long lead times, as well as arrangement for extended follow-up. Remote or neglected areas where little previous experience is available often require additional research and pilot programs to fine-tune development proposals.
- (h) Where effective programs are already functioning, Bank support can take the form of incremental funding to strengthen them rather than the development of entirely new programs.

Contents

15. The development plan should be prepared in tandem with the preparation of the main investment. In many cases, proper protection of the rights of indigenous people will require the implementation of special project components that may lie outside the primary project's objectives. These components can include activities related to health and nutrition, productive infrastructure, linguistic and cultural preservation, entitlement to natural resources, and education. The project component for indigenous peoples development should include the following elements, as needed:

- (a) *Legal Framework.* The plan should contain an assessment of (i) the legal status of the groups covered by this OD, as reflected in the country's constitution, legislation, and subsidiary legislation (regulations, administrative orders, etc.); and (ii) the ability of such groups to obtain access to and effectively use the legal system to defend their rights. Particular attention should be given to the rights of indigenous peoples to use and develop the lands that they occupy, to be protected against illegal intruders, and to have access to natural resources (such as forests, wildlife, and water) vital to their subsistence and reproduction.
- (b) *Baseline Data.* Baseline data should include (i) accurate, up-to-date maps and aerial photographs of the area of project influ-

- ence and the areas inhabited by indigenous peoples; (ii) analysis of the social structure and income sources of the population; (iii) inventories of the resources that indigenous people use and technical data on their production systems; and (iv) the relationship of indigenous peoples to other local and national groups. It is particularly important that baseline studies capture the full range of production and marketing activities in which indigenous people are engaged. Site visits by qualified social and technical experts should verify and update secondary sources.
- (c) *Land Tenure.* When local legislation needs strengthening, the Bank should offer to advise and assist the borrower in establishing legal recognition of the customary or traditional land tenure systems of indigenous peoples. Where the traditional lands of indigenous peoples have been brought by law into the domain of the state and where it is inappropriate to convert traditional rights into those of legal ownership, alternative arrangements should be implemented to grant long-term, renewable rights of custodianship and use to indigenous peoples. These steps should be taken before the initiation of other planning steps that may be contingent on recognized land titles.
- (d) *Strategy for Local Participation.* Mechanisms should be devised and maintained for participation by indigenous people in decision making throughout project planning, implementation, and evaluation. Many of the larger groups of indigenous people have their own representative organizations that provide effective channels for communicating local preferences. Traditional leaders occupy pivotal positions for mobilizing people and should be brought into the planning process, with due concern for ensuring genuine representation of the indigenous population.⁵ No foolproof methods exist, however, to guarantee full local-level participation. Sociological and technical advice provided through the Regional environment divisions (REDs) is often needed to develop mechanisms appropriate for the project area.
- (e) *Technical Identification of Development or Mitigation Activities.* Technical proposals should proceed from on-site research by qualified professionals acceptable to the Bank. Detailed descriptions should be prepared and appraised for such proposed services as education, training, health, credit, and legal assistance. Technical descriptions should be included for the planned investments in productive infrastructure. Plans that draw upon indigenous knowledge are often more successful than those introducing entirely new principles and institutions. For example, the potential contribution of traditional health providers should be considered in planning delivery systems for health care.
- (f) *Institutional Capacity.* The government institutions assigned responsibility for indigenous peoples are often weak. Assessing the track record, capabilities, and needs of those institutions is a fundamental requirement. Organizational issues that need to be addressed through Bank assistance are the (i) availability of funds for investments and field operations; (ii) adequacy of experienced professional staff; (iii) ability of indigenous peoples' own organizations, local administration authorities, and local NGOs to interact with specialized government institutions; (iv) ability of the executing agency to mobilize other agencies involved in the plan's implementation; and (v) adequacy of field presence.
- (g) *Implementation Schedule.* Components should include an implementation schedule with benchmarks by which progress can be measured at appropriate intervals. Pilot programs are often needed to provide planning information for phasing the project component for indigenous peoples with the main investment. The plan should pursue the long-term sustainability of project activities subsequent to completion of disbursement.
- (h) *Monitoring and Evaluation.*⁶ Independent monitoring capacities are usually needed when the institutions responsible for indigenous populations have weak management histories. Monitoring by representatives of indigenous peoples' own

organizations can be an efficient way for the project management to absorb the perspectives of indigenous beneficiaries and is encouraged by the Bank. Monitoring units should be staffed by experienced social science professionals, and reporting formats and schedules appropriate to the project's needs should be established. Monitoring and evaluation reports should be reviewed jointly by the senior management of the implementing agency and by the Bank. The evaluation reports should be made available to the public.

- (i) *Cost Estimates and Financing Plan.* The plan should include detailed cost estimates for planned activities and investments. The estimates should be broken down into unit costs by project year and linked to a financing plan. Such programs as revolving credit funds that provide indigenous people with investment pools should indicate their accounting procedures and mechanisms for financial transfer and replenishment. It is usually helpful to have as high a share as possible of direct financial participation by the Bank in project components dealing with indigenous peoples.

Project Processing and Documentation

Identification

16. During project identification, the borrower should be informed of the Bank's policy for indigenous peoples. The approximate number of potentially affected people and their location should be determined and shown on maps of the project area. The legal status of any affected groups should also be discussed. TMs should ascertain the relevant government agencies, and their policies, procedures, programs, and plans for indigenous peoples affected by the proposed project (see paras. 11 and 15(a)). TMs should also initiate anthropological studies necessary to identify local needs and preferences (see para. 15(b)). TMs, in consultation with the REDs, should signal indigenous peoples issues and the overall project strategy in the Initial Executive Project Summary (IEPS).

Preparation

17. If it is agreed in the IEPS meeting that special action is needed, the indigenous peoples development plan or project component should be developed during project preparation. As necessary, the Bank should assist the borrower in preparing terms of reference and should provide specialized technical assistance (see para. 12). Early involvement of anthropologists and local NGOs with expertise in matters related to indigenous peoples is a useful way to identify mechanisms for effective participation and local development opportunities. In a project that involves the land rights of indigenous peoples, the Bank should work with the borrower to clarify the steps needed for putting land tenure on a regular footing as early as possible, since land disputes frequently lead to delays in executing measures that are contingent on proper land titles (see para. 15(c)).

Appraisal

18. The plan for the development component for indigenous peoples should be submitted to the Bank along with the project's overall feasibility report, prior to project appraisal. Appraisal should assess the adequacy of the plan, the suitability of policies and legal frameworks, the capabilities of the agencies charged with implementing the plan, and the adequacy of the allocated technical, financial, and social resources. Appraisal teams should be satisfied that indigenous people have participated meaningfully in the development of the plan as described in para. 14(a) (also see para. 15(d)). It is particularly important to appraise proposals for regularizing land access and use.

Implementation and Supervision

19. Supervision planning should make provisions for including the appropriate anthropological, legal, and technical skills in Bank supervision missions during project implementation (see para. 15(g) and (h), and OD 13.05, *Project Supervision*). Site visits by TMs and specialists are essential. Midterm and final evaluations should assess progress and recommend corrective actions when necessary.

Documentation

20. The borrower's commitments for implementing the indigenous peoples development plan should be reflected in the loan documents; legal provisions should provide Bank staff with clear benchmarks that can be monitored during supervision. The Staff Appraisal Report and the Memorandum and Recommendation of the President should summarize the plan or project provisions.

Notes

1. "Bank" includes IDA, and "loans" include credits.
2. Displacement of indigenous people can be particularly damaging, and special efforts should be made to

avoid it. See OD 4.30, *Involuntary Resettlement*, for additional policy guidance on resettlement issues involving indigenous people.

3. Regionally specific technical guidelines for preparing indigenous peoples components, and case studies of best practices, are available from the [World Bank] Regional environment divisions (REDs).

4. For guidance on indigenous peoples and environmental assessment procedures, see OD 4.01, *Environmental Assessment*, and Chapter 7 of World Bank, *Environmental Assessment Sourcebook*, Technical Paper No. 139 (Washington, D.C., 1991).

5. See also "Community Involvement and the Role of Nongovernmental Organizations in Environmental Assessment" in World Bank, *Environmental [Assessment] Sourcebook*, Technical Paper No. 139 (Washington, D.C., 1991).

6. See OD 10.70, *Project Monitoring and Evaluation*.

Appendix 5

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Telephone: (202) 477-1234

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European Office

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Telephone: (1) 40.69.30.00

Facsimile: (1) 40.69.30.66

Telex: 640651

Tokyo Office

Kokusai Building

1-1, Marunouchi 3-chome

Chiyoda-ku, Tokyo 100, Japan

Telephone: (3) 3214-5001

Facsimile: (3) 3214-3657

Telex: 26838