

Native Lands and Wilderness Council

Protecting Wild Nature on Native Lands

Case Studies by Native Peoples
from around the World

Volume II



Editors

Vance G. Martin and Sharon Shay Sloan

Protecting Wild Nature on Native Lands

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from around the World

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Proceedings
2nd Native Lands and Wilderness Council

WILD9, the 9th World Wilderness Congress
Merida, Mexico • November 2009

Edited by Vance G. Martin & Sharon Shay Sloan
Translation by Andres Rojas Wainer & Sharon Shay Sloan



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Kayapo Indigenous Territories, Southern Amazon, Brazil

Back cover images: mountain gorillas—photo courtesy of Charles Tumwesigye;
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The WILD Foundation and the Native Lands and Wilderness Council
recognize the importance of and endorse the
United Nations Declaration on the Rights of Indigenous Peoples.
www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf.

Foreword

Native peoples and traditional communities are the original stewards of wild nature, and still control vast areas of wilderness in almost all regions of the world. For years they were left out of the conservation equation, much to both their detriment and that of global nature conservation. That is changing now, finally, and it needs to change even more.

The WILD Foundation has worked for almost 40 years to protect and sustain wilderness and wild places around the world. An important aspect of our work has always been a commitment to partnerships with native peoples. This began in the 1960s/70s when we started working with the Zulu peoples and others in Southern Africa, and has continued. Over many years, we've worked in numerous countries and situations to strengthen the links between indigenous and non-indigenous partners in order to create a network of people working to protect and sustain the global treasure we call wilderness—it is both our collective heritage and the key to a healthy and prosperous future for all people. This publication is one small but important part of the wide legacy of information and aspiration generated by this network. Many of the participants in this network—a growing global community—meet every three or four years at the World Wilderness Congress (WWC), which we initiated in 1977 and that is now the world's longest-running, international, public environmental process and forum.

At the 8th World Wilderness Congress (Alaska, 2005) we strengthened our commitment to the important role of indigenous peoples by co-founding—with several of our native friends and collaborators—the Native Lands and Wilderness Council (NLWC). Following the Congress, we published *Protecting Wild Nature on Native Lands: Case Studies by Native Peoples from around the World, Volume I*. The 2nd NLWC met at WILD9 (the 9th WWC) in Mexico in 2009. This book is a result of this second meeting. We're very enthused that this process continues, and that we are able to assist and participate.

The wisdom and practice of native peoples is an essential element for the world to protect and interconnect at least half of the earth's lands and seas. The Native Lands and Wilderness Council is an advocate for "Nature Needs Half," a vision and campaign that requires all of us to do what we can to help wild nature provide the life support—essential, ecosystem services—necessary for life to continue on planet earth.

Join us!

—Vance Martin

President

The WILD Foundation

Boulder, CO • October 2010

Acknowledgements

Special thanks go to the many people and organizations who helped to make possible the 2nd Native Lands and Wilderness Council (NLWC) at WILD9. Primarily, the NLWC is about the relationship between indigenous peoples and the wild nature they manage, protect and steward. Our gratitude and thanks go to all of the individuals whose commitment and dedication brought them to participate in the Council, to the people and communities whose life work is represented in this publication. And, it is necessary to name and acknowledge many who were part of the council, but do not appear in *Volume II*. To name a few: Tashka and Laura Yawanawa, Larry Mercurieff, our Convenors Julie Cajune and Terry Tanner of the Confederated Salish and Kootenai Tribes, Ramiro Batzin, Byron Mallott, Kristin Walker, Mercedes Otegui, Maru Correa, Peter Keller, Julie Randall, Samuel Gargan, Harvey Locke, Cyril Kormos, Jaime Rojo, Enriqueta Velarde, Ezequiel Ezcurra, Sharon Shay Sloan, Thor Morales Vera, Lisa Famolare, Jaime Santiago, Sandy Jones and others that will go unnamed here.

In addition, numerous people and organizations provided financial support for participants. Sincere appreciation for this very important assistance goes to Marinela Servitje, Conservation International, the Lannan Foundation, ProNatura, Flora and Fauna International and The USAID Initiative for Conservation in the Andean Amazon.

Producing *Volume II* required the dedication and generosity of many people. Special thanks go to Andres Rojas Wainer, Jenna Clancy, Emily Loose and Gabriel Hoeffler, Melanie Hill, Patty Maher, and the Elders for their vision and wisdom. Thank you for your dedication and support to the end.

A Brief History of the Native Lands and Wilderness Council

By Julie Cajune and Terry Tanner

A shared commitment to land stewardship brought Vance Martin, of the WILD Foundation, and Terry Tanner, of the Confederated Salish and Kootenai Tribes, together in a conservation dialogue. Vance's life has been defined by his deep love and understanding of the land. His years of visionary conservation service have brought thousands of people together on land and natural resource issues. Terry grew up learning about the generational responsibility of stewardship for his people's homeland. Salish and Pend d'Oreille elders have always passed on memory, knowledge, and understanding to the next generations. As an adult, Terry accepted the stewardship privilege and responsibility extended to him by his elders.

During a meeting that the two attended in Washington DC, Terry questioned the absence of indigenous people at the table. Vance expressed similar concerns, understanding the importance of including an indigenous voice in the mainstream conservation dialogue. Through this shared understanding, Terry and Vance began to envision a gathering of indigenous land managers. Their vision translated into the Native Lands and Wilderness Council (NLWC), which first convened in 2005.

The origin of the NLWC is important to document because it demonstrates what can evolve from respectful and authentic dialogue across cultural borders. The outcome of this effort is significant as it brings volumes of traditional ecological knowledge to the global environmental challenges that face us all. However, just as important is the process in which the NLWC came about. There is as much to be learned from the relationships that were established as there is from the knowledge brought forth from these relationships. There is indeed a lesson in respect and reciprocity that is witnessed in this work. These are important lessons for a world in a state of conflict and crisis.

Editor's Note

This is the second volume generated by the Native Lands and Wilderness Council, an ongoing series of meetings and presentations on how the world's indigenous people manage, care for, coexist with and defend wild nature. A major intent of the NLWC is to catalyze exchange between indigenous communities so they can mutually support each other in managing their ancestral wild lands. Capturing these stories and techniques is critical to the global conservation movement and our collective ability to work together to preserve, protect and enjoy wild nature. These stories, if not recorded now, have the potential of being lost forever, with the voracious appetite of the global political economy knocking on every remaining wild frontier. History shows us that as our indigenous people's disappear, so too does wild nature—the two go hand-in-hand.

Through the Council, among other things, participants share stories of struggle and success, of facing challenges, exchanging knowledge and building relationships of mutual support. *Volume II* contains stories of success, some of which are the result of many years of struggle and challenge, stories of peoples who, in most cases, have worked for years on end to be able to now report their victories. These case studies are a testament to what is possible, often in the face of daunting odds; they are also samples of the daunting needs and challenges that are still faced by these communities living on the front lines of the conservation movement.

A rich, vital and necessary exchange is possible when the agendas of conservation and indigenous peoples come together toward a common goal, with a common agenda, such as ours: to protect and preserve wild nature. This exchange is possible when the needs and interests of all involved are included and seen as important. The “NLWC Final Presentation” that appears at the beginning of *Volume II* was co-drafted by the Council participants and presented to the general audience at the end of WILD9 (Mexico, 2009). It represents the strong desire and call from the participants to continue with this Council and to continue to support and strengthen the meeting of these agendas.

As the editor (and one of the translators), it has been my task to keep the voice, style and story of the presentations as close to the original form as possible, while making sure that their messages are clear. *Volume II* is mostly comprised of adapted presentations that were made to the Council, plus several longer papers and related articles. Because many of the presentations are written in bullet format, I sometimes found myself wishing for more information, for more narrative. As I got deeper into the texts, I began to see these as windows, as invitations to engage and develop our understanding of the larger complexity that is represented in what is presented here. The related articles appear as they were published in their respective magazines and journals and thus appear in English only. Most of the documents were submitted in either English or Spanish and were translated to mirror their original language style and format.

It was my intention to fairly and honestly represent what was presented and submitted. I hope that you enjoy these stories as much as I did.

—Sharon Shay Sloan
Petaluma, CA • October, 2010

Table of Contents

v	Foreword by Vance G. Martin
vii	Acknowledgements by Vance G. Martin
ix	A Brief History of the Native Lands and Wilderness Council by Julie Cajune and Terry Tanner
xi	Editor's Note by Sharon Shay Sloan

Case Studies

1	Opening Comments by Julie Cajune
3	Introduction by Gabriel Hoeffler
5	Chapter 1 2nd Native Lands and Wilderness Council <i>Final Presentation</i>, November 2009; Merida, Mexico Co-authored by the NLWC Council Translated by Thor Morales Vera
8	Chapter 2 The Confederated Salish and Kootenai Tribes of the Flathead Reservation <i>Protecting and Stewarding Cultural and Natural Resources</i>; Flathead Reservation, Mission Mountains, Montana, USA By Terry Tanner
16	Chapter 3 Indigenous Peoples Initiative and Conservation in Mesoamerica Guatemala-Belize; Guatemala, Belize By Miriam Castillo, Cristina Coc and Carlos Rodriguez Olivet
27	Chapter 4 Indigenous Peoples Conservation Alliance (IPCA); Belize By Cristina Coc

- 30 Chapter 5
The Santa Clara Pueblo & Wilderness
Management and Cultural Importance of Wild Lands; Santa Clara Pueblo, Rio Arriba County, New Mexico, USA
By Joseph Guttierrez, Jeff Lyon & Bruce Bauer
- 38 Chapter 6
Environmental Services of Oaxaca; Oaxaca, Mexico
By Emma Diaz
- 46 Chapter 7
Beauty, Power and Conservation in the Southeast Amazon
How Traditional Social Organization of the Kayapo Leads to Forest Protection; Xingu River Basin, Amazon, Brazil
By Barbara Zimmerman
- 58 Chapter 8
Kayapo Wilderness Lands and Protection Strategy; Southeastern Amazon, “Ring of Fire” Frontier, Brazil
By Barbara Zimmerman
- 65 Chapter 9
Inuvialuit Observations of Climate Change; Sachs Harbor, Western Arctic, Canada
By Lawrence Amos
- 78 Chapter 10
Use and Conservation of the Comcáac Territory; Sonora, Mexico
By Mayra Estrella & Leonel Hoeffler
- 84 Chapter 11
Toda Sanctification of Freshwater Sources (Essay); Edhkwelynawd Botanical Refuge, Nilgiris, South India
By Tarun Chhabra
- 103 Chapter 12
Toda Sanctification of Freshwater Sources (Presentation); Nilgiris, South India
By Tarun Chhabra
- 111 Chapter 13
Community Management of a Buffer Zone around Bwindi Impenetrable National Park; Kanungu District, Uganda
By Charles Tumwesigye

- 116 Chapter 14
Management of the Maasai Tribal Wild Lands; Maasai Land, Kenya
 By Samson Lenjirr
- 122 Chapter 15
The Tacana People; La Paz, Bolivia
 By Felzi Gonzáles Lurici & Angel Laura Duran
- 129 Chapter 16
**Cofan Territorial Loss and Recovery—Toward Co-Management;
 Cofan Territory, Northern Ecuador**
 By Luis Narvaez Cordova, Roberto Aguinda
- 133 Chapter 17
Cofan Rangers Program
Conservation and Protection of Natural Resources; Dureno, Ecuador
 Contact: Kristen Walker (See Appendix)
- 137 Chapter 18
The Sacred Caves of The Wind and Fertility; San Luis Potosi, Mexico
 By Maria Gregoria Catarina

Related Articles

- 140 “The InterTribal Sinkyone Wilderness: Ten Tribes Reclaiming,
 Stewarding, and Restoring Ancestral Lands”; Sinkyone Wilderness,
 Northern California, USA
 By Hawk Rosales
 Original article appeared in *International Journal
 of Wilderness*, April 2010
- 148 “Mexico Welcomes Uganda to the 9th World Wilderness Congress”
 By Charles Tumwesigye, Chief Warden of Bwindi Impenetrable
 National Park
 Original article appeared in *Fauna & Flora International*, May-July 2010

Appendix

- 152 Contact List
 NLWC—2011 and Beyond
- 153 NLWC Project Description

Opening Comments

*"In a fractured age, when cynicism is god, here is a possible heresy: we live by stories, we also live in them. One way or another we are living the stories planted in us early or along the way, or we are also living the stories we planted—knowingly or unknowingly—in ourselves.
We live stories that either give our lives meaning
or negate it with meaninglessness.
If we change the stories we
live by, quite possibly we change our lives."*

—Ben Okri, Nigerian storyteller, from
The Truth About Stories, by Thomas King

This collection of case studies from around the world are stories from the land and stories of the relationship between landscapes and the indigenous people who belong to those places. These stories are essential to the conservation dialogue because they afford us a glimpse beyond the content of a case study to the spirit of the land as known and understood by the spirit of its people. Without fully realizing the fundamental truth of our relationship with the earth, I fear that our best efforts to protect her may fall short.

Planting the stories of indigenous people and their homelands in the consciousness of humanity offers alternative ways to live on and with the natural world. In a global society where nature has been commodified, down to the air—good or bad—that we breathe, the need for diverse understandings and perspectives is compelling.

While the basic principles of conservation are easy to grasp, their application becomes immediately complex within the context of economics. Herein lies the great challenge to the world. If there is money to be made, a convenience to be

enjoyed, or power to be acquired, it appears that we are more than willing to sacrifice a river, a mountain, a forest, an animal, even an ocean or a people.

This is the dominant narrative that we all hear. It speaks of a continued exploitation of the natural world as an inevitable progress that cannot be deterred. Here enter the heretics: those who are unwilling to acquiesce to the predicted ending of such a story. Many of these people shared their stories at WILD9. Indeed, all of those who participated in the Native Lands and Wilderness Council talked about the land through our relationship with it, and described a sustainable way of living with it. Some stories explained creative and thoughtful strategies of facing contemporary challenges and difficulties. All of the stories expressed a deep understanding and love of place that informed the actions of conservation.

I believe that indigenous people around the world have an enormous contribution to make to the conservation community. Their knowledge, understandings, and perspectives offer hope and encouragement to an embattled cause. Honor their stories. Seek them out. Listen to them. Plant them in your children and grandchildren.

—Julie Cajune

Citizen of the Confederated Salish and Kootenai Tribes
Co-Chair, Native Lands and Wilderness Council

Introduction

The settlements of indigenous peoples in all countries are the best preserved lands. Some people think this is true because we don't have the economic capacity to exploit our resources, unlike non-indigenous communities in which there are not only acts of exploitation, but a cultural paradigm rooted in this very concept—but this is not the reason. From my personal experience, indigenous communities make use of land and its resources but do not exploit it, and it is because of this that indigenous lands are the best preserved. But, the experiences and ways of caring for and making use of the land vary greatly between indigenous groups, and it is important that these approaches be shared among our peoples. When we meet every so often, we come together to learn how others have tackled problems in their communities and can apply our learning to overcome problems in our own. With this network of indigenous groups, sharing our learning, our problems and concerns, we form a global alliance of indigenous peoples.

Indigenous lands are held as sacred because of our long-term relationships of coexistence with the land, including the plant and animal species that make their homes on these lands which we also consider as sacred. Thanks to this way of being in relationship, we care for and protect our lands with great respect. Our way of understanding land is wholly inclusive of all life; we live together with the land and see it as a member of the great family that makes up our community. Between indigenous peoples it is understood that land must be respected and that the living beings and plants that live upon it should not be disturbed, thanks to the respect that our ancestors have taught to us. This is why we practice living in harmony with nature. If we come to lose nature itself, we also do ourselves harm like in the case of global warming; we are reaping the seeds that we have sown. The damage that we have caused is bigger than what we have done to our planet. We live a better life when there is respect for our land and its inhabitants, a life in harmony with the

natural world. For us, land includes everything that surrounds us—the sea, the earth, the sky, the air; everything is included in our understanding of land and wilderness.

—Gabriel F. Hoeffler
Governor, Comcáac Nation
Founder of Grupo Tortuguero Comcáac and the
Comcáac Environmental Study and Culture Group
Sonora, Mexico



CHAPTER 1

2nd Native Lands and Wilderness Council

Final Presentation

November 2009

Merida, Mexico

Co-authored by the NLWC Council

History suggests that if mankind is to survive, the next 500 years must be rooted in the pre-Columbian ethic of the Native American.

—Renard Strickland

Harvard Environmental Law Review

The indigenous participants of the congress extend deep appreciation to Vance Martin and the WILD Foundation for valuing the contribution that indigenous voice and story will bring to the conservation dialogue. Through their collective gathering in 2005 and 2009, participants have developed solidarity of purpose and a message to share with the larger audience here at the Congress, and throughout the world.

Following is a list of topics, ideas and suggestions for future collaboration and consideration:

- Parallel with the protection and stewardship of place, the indigenous participants put forth the need for protection of indigenous people's culture, language and knowledge, which are integrally connected to and a part of

place. Biocultural conservation is a necessary compliment to the traditional wilderness approach.

- Participants are looking for collaboration with their individual and collective efforts. Understanding the rights of indigenous people can serve as the starting place for such collaborations. Indigenous peoples have always been conservationists and we need resources to continue this effort.
- Participants recognize the potential strength of developing an international indigenous and non-indigenous conservation alliance that could strengthen and support the ability of conservation organizations and indigenous peoples to work toward their common goals.
- Participants are interested in hosting a single plenary session at the congress.
- Participants would like to design and host a session on co-management with indigenous communities, highlighting successful integration of Traditional Ecological Knowledge (TEK).
- Participants request a permanent space at the congress.
- Identify a strategy to support and facilitate a gathering of indigenous people mid-way of the next congress.
- Identify areas and strategies for indigenous people and the larger conservation community to consolidate their efforts and benefit equitably.
- Develop a process/program for indigenous youth leadership on land issues that provides opportunities within and without their communities.
- With the focus on the social dimensions of wilderness, include a session that highlights the relationship between indigenous communities and the natural world. This relationship has a significant contribution to make to mainstream knowledge.
- Participants would like to develop a “handbook” to use as a guide to support the creation of policy and ordinance for protection of their lands, which may include sacred sites and critical eco-systems.
- Participants are seeking assistance with the development of a website that can support and further a network of communication and sharing. Papers and presentations from this congress could be archived on the site, as well as the proposed handbook for designating land protection, as well as a resources section that provides practical tools and names of people such as Nyla, an environmental lawyer who has now offered her services pro bono.
- Participants will collectively discuss perspective and language relative to land, creating common language to be utilized in the discussion on “wilderness,” understanding that language is not benign or neutral and that language carries the power to shape thought and action. This language will be shared with the conservation community with the suggestion of its integration.

- Participants recognize and emphasize that there is a scientific base that affirms that indigenous peoples have been the guardians of the “wilderness,” the wild earth and waters, for time immemorial, that the land and resources that are in their care are the best conserved worldwide; that their knowledge of the natural resources of their lands is extensive and detailed. It is imperative that this knowledge is included and considered when decisions are being made about the management of land and natural resources and that indigenous representatives participate in decision-making and in the creation of management plans related to their lands.
- Indigenous people have always been conservationists and we need support and resources to continue with this struggle.
- Finally, participants challenge one another to take their experiences home to their communities to share and to utilize them.
- We conclude with a message from all of our indigenous brothers and sisters from the Americas and the world:

We want to continue to conserve and protect our lands and all of the natural resources and cultural relevance contained therein. We need to unite as human beings. We need the education that has been denied to our children because it is they that will continue this path that we have begun.

“One time, my father told me that the land is our body. The water, the seas and the rivers are the blood that runs through our veins; the wind is the spirit, the life and the heart is what coexists with nature, loving her and respecting her... And the heart is what we all are.”

—Mayra Estrella
Comcáac Nation
Sonora, Mexico

[Back to Contents](#)



CHAPTER 2

The Confederated Salish and Kootenai Tribes of the Flathead Reservation

*Protecting and Stewarding Cultural and Natural Resources;
Flathead Reservation, Mission Mountains, Montana, USA*

By Terry Tanner



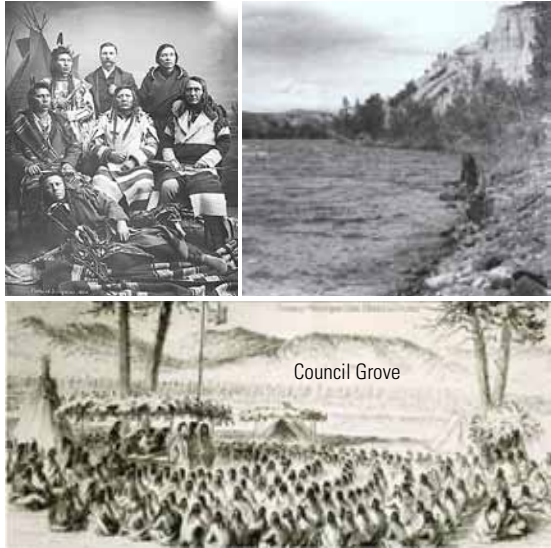
Tribal Mission

To adopt traditional principles and values into all facets of tribal operations and services. We will invest in our people in a manner that ensures our ability to become a completely self-sufficient society and economy. And we will provide sound environmental stewardship to preserve, perpetuate, protect and enhance natural resources and ecosystems.

Tribal Vision Statement

The traditional values that served our people in the past are imbedded in the many ways we serve and invest in our people and communities, in the way we have regained

and restored our homelands and natural resources, in the ways we have built a self-sufficient society and economy, in the ways we govern our Reservation and represent ourselves to the rest of the world and in the ways we continue to preserve our right to determine our own destiny.



Goals

The goals are to protect the recreational resources that are important to the sustenance, cultural enrichment, and economic support of the Tribes, and to promote the conservation, development, and utilization of the recreational resources for the maximum benefit of the Tribes and other recreational users.

Objectives

- Intensify management activities in the Mission Mountains Tribal Wilderness Area.
- Implementation of the Wilderness Buffer Zone Plan, Lower Flathead River Corridor Management Plan and Kerr Mitigation objectives.
- Monitor recreation use and develop and maintain related facilities in the Tribal primitive areas. Assist with management plan development.
- Maintain and develop existing recreation facilities and monitor recreation use Reservation wide.
- Assist in fisheries, wildlife, and other natural resource programs' studies and special projects.



Flathead Indian Reservation

Flathead Lake

- Explore and secure alternative funding and solicit volunteer work for special projects.
- Provide the Tribal Council with management guidelines for recreational resource use.
- Provide the Tribal membership and recreation permittees with a high level of program services.

Resources

- 20,000 acres of river corridor
- 22,833 acres of wilderness buffer zone
- 59,169 acres of South Fork primitive lands
- 37,020 acres of Lozeau primitive lands
- 9,757 acres of Chief Cliff management area
- 6 recreational outfitters
- 20,000 (approx.) recreation system users
- 91,778 acres of wilderness lands
- 30+ backcountry trails



The Mission Mountains have served as a guide, passage way, fortification and vision seeking grounds, as well as a place to gather medicinal herbs, roots and a place to hunt for food for the Pend d'Oreille and Salish Indians since they have lived at the foothills of the Missions

Our elders have many stories to tell about experiences in the mountains in hunting, berry picking and about Indian people seeking their powers in the mountains. They have become for us, the descendants of Indians, sacred grounds. Grounds that should not be disturbed or marred. We realize the importance of these mountains to our elders, to ourselves, and for the perpetuation of our Indian culture because of these stories. They are lands where our people walked and lived. Lands and landmarks carved through the minds of our ancestors through Coyote stories and actual experiences. Lands, landmarks, trees, mountain tops, crevices that we should look up to with respect.



Land Status – July 16, 1855



Land Status – 1908–1909



Land Status – 1910–1921



Land Status – 1922–1935



Land Status – 2004

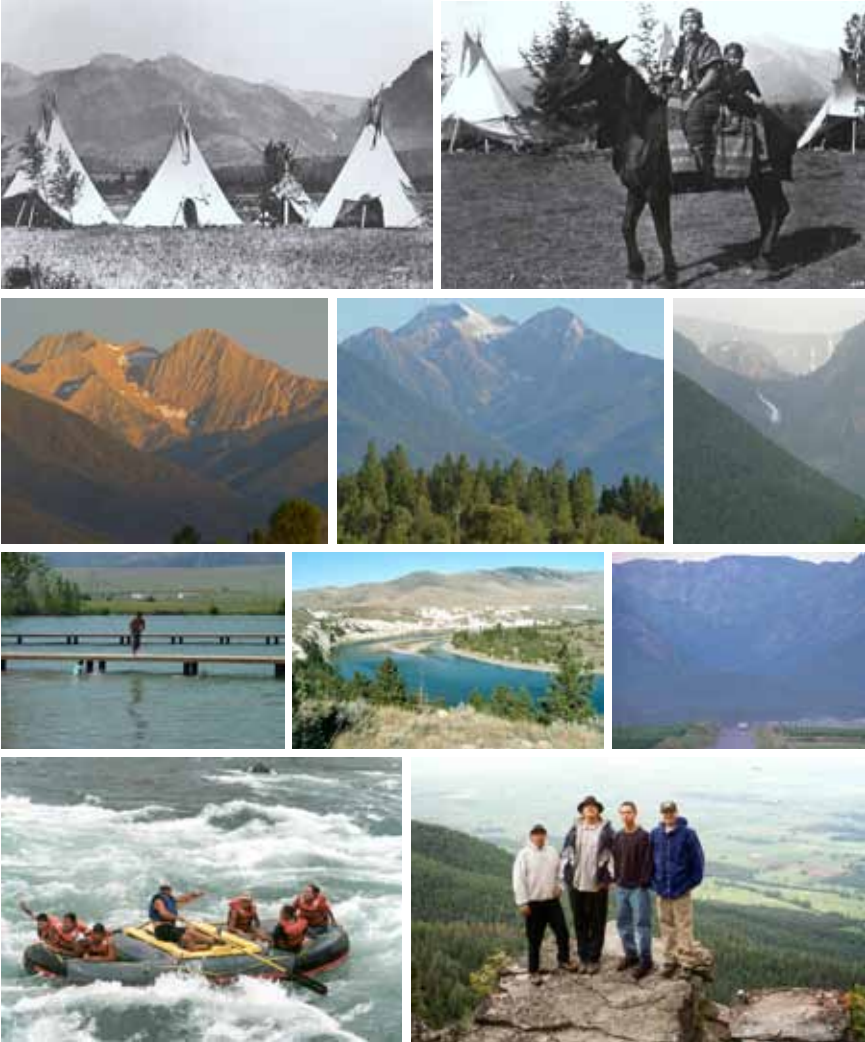
The Tribal Council continued its historical precedent by following through with specific management actions to fulfill the wilderness mandate. A Mission Mountain Grizzly Bear Management Plan was written to foster greater care of one of the wilderness's greatest resources. A Mission Mountains Tribal Wilderness Fire Management Plan was developed to facilitate reintroduction of natural fire to the wilderness ecosystem, and a Wilderness Buffer Zone Plan was created to cushion the wilderness from outside influences which may impact its integrity.

Note: Other special management direction/regulation, primarily for Non-Tribal members only.

1. Use of any Tribal lands or waters by Non-Tribal members requires the purchase of a Tribal conservation license and the appropriate activity stamp (fish, bird hunt, or camp), this is a requirement for use of wilderness lands.
2. A group size limit of 8 persons and 8 head of livestock is in place for wilderness lands.
3. Use of a campsite for longer than 3 consecutive days is prohibited.
4. It is illegal to carry or use a firearm.
5. A spring stock closure helps protect pathways from erosion.
6. A 10,000 acre grizzly bear zone is closed to all human use between July 15 to Oct. 1 of each year to protect critical grizzly bear habitat and maintain visitor safety.
7. Fisheries management is weighted to give special attention to waters containing native West Slope Cutthroat Trout and native Bull Trout.

Tribal Mission Statement

Our mission is to adopt traditional principles and values into all facets of tribal operations and service. We will invest in our people in a manner that ensures our ability to become a completely self-sufficient society and economy. And we will provide sound environmental stewardship to preserve, perpetuate, protect and enhance natural resources and ecosystems.



May 26, 1998. Moved from shelterbelts south of Ninepipe.

In a letter dated May 29, 1998, the USFWS Grizzly Bear Recovery Coordinator stated:

I believe that without the maintenance of large blocks of undeveloped land along the west slope of the Missions, the probability of maintaining a grizzly bear population in the Mission Mountains is low.

These Mountains belong to our children, and when our children grow old they will belong to their children. In this way and for this reason these mountains are sacred.



Wildlife and Cultural Protection Areas



Grizzly Bear Recovery Areas

Wildlife and Cultural Protection Areas		
	Acres	Sq. Miles
Tribal Wilderness	93,000	145.3
Buffer Zone	22,833	35.7
South Fork Primitive	59,078	92.3
Lozeau Primitive	34,901	54.5
Bear Mgmt Sit. 1	149,	33.4
Bear Mgmt Sit. 2	96,755	151.2
Grizzly Cons. Area	11,495	18.0
Ferry Basin		
Elk Cons. Area	83,385	130.3
Little Money		
Sheep Cons. Area	54,086	84.5
Bison Range	18,483	28.9

Grizzly Bear Habitat Management Areas



Bear Relocated from Shelter-Belts



160 acre patch of food & cover

Connectivity Corridors



Overpass



Bridged corridor

Wildlife



Rocky Mountain Elk



Ptarmigan



Mountain Goat



Grizzly Bear



Golden Eagle



Bald Eagle



CHAPTER 3

Indigenous Peoples Initiative and Conservation in Mesoamerica

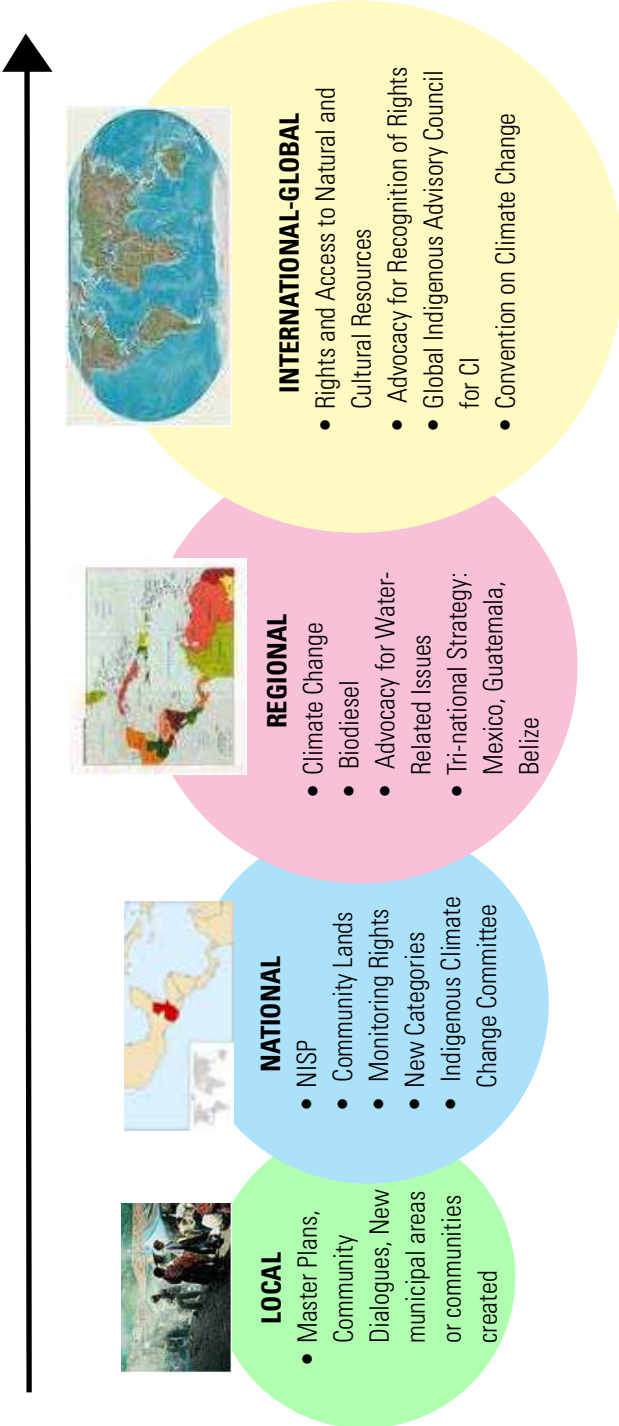
Guatemala-Belize

Guatemala-Belize

**By Miriam Castillo, Cristina Coc
and Carlos Rodriguez Olivet**

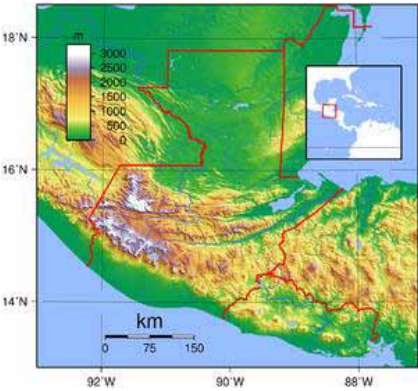


Working at Different Levels

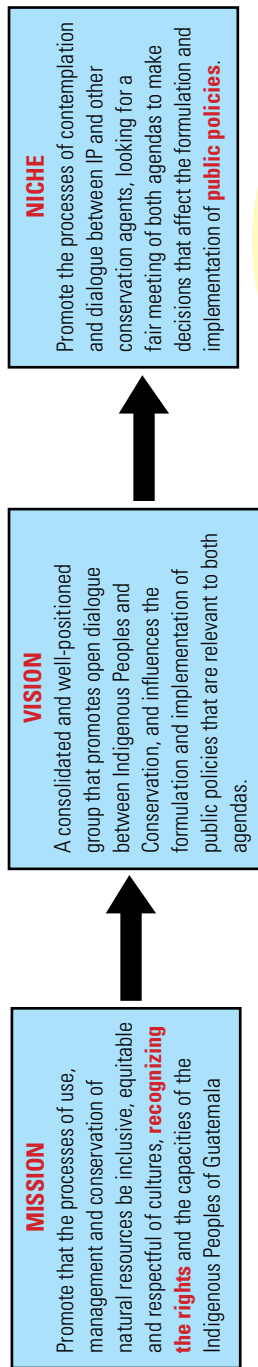


It Is Necessary To Touch On and Differentiate Between the Various Levels of Action For Indigenous Peoples And Conservation Organizations

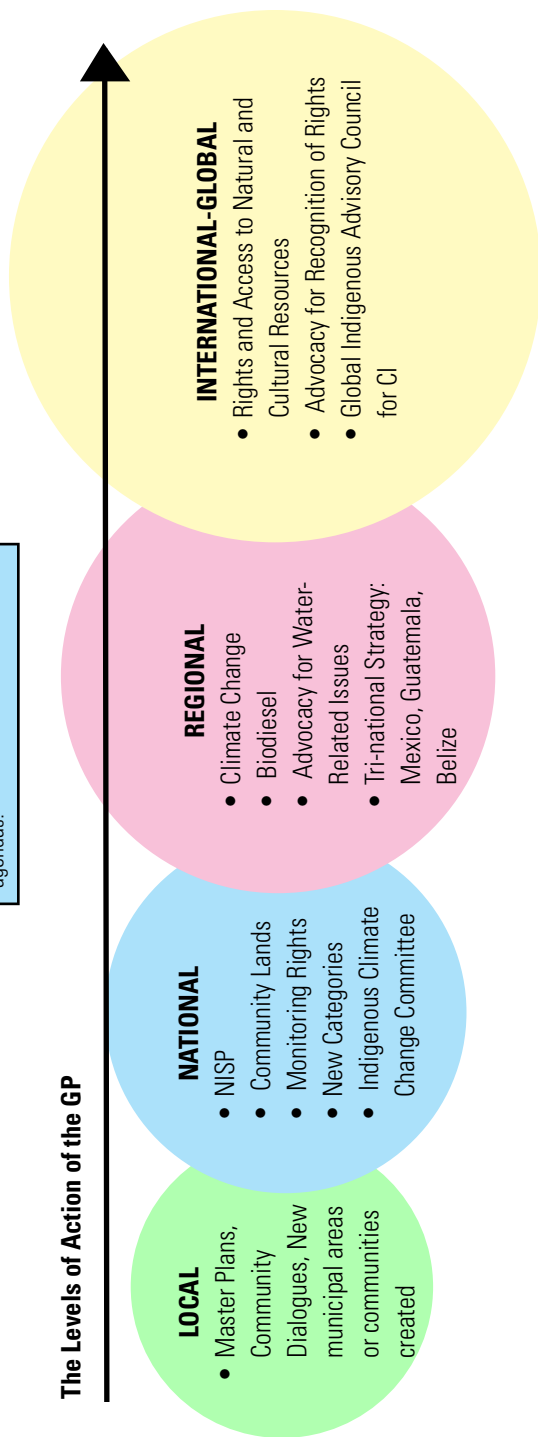
The Guatemalan Example



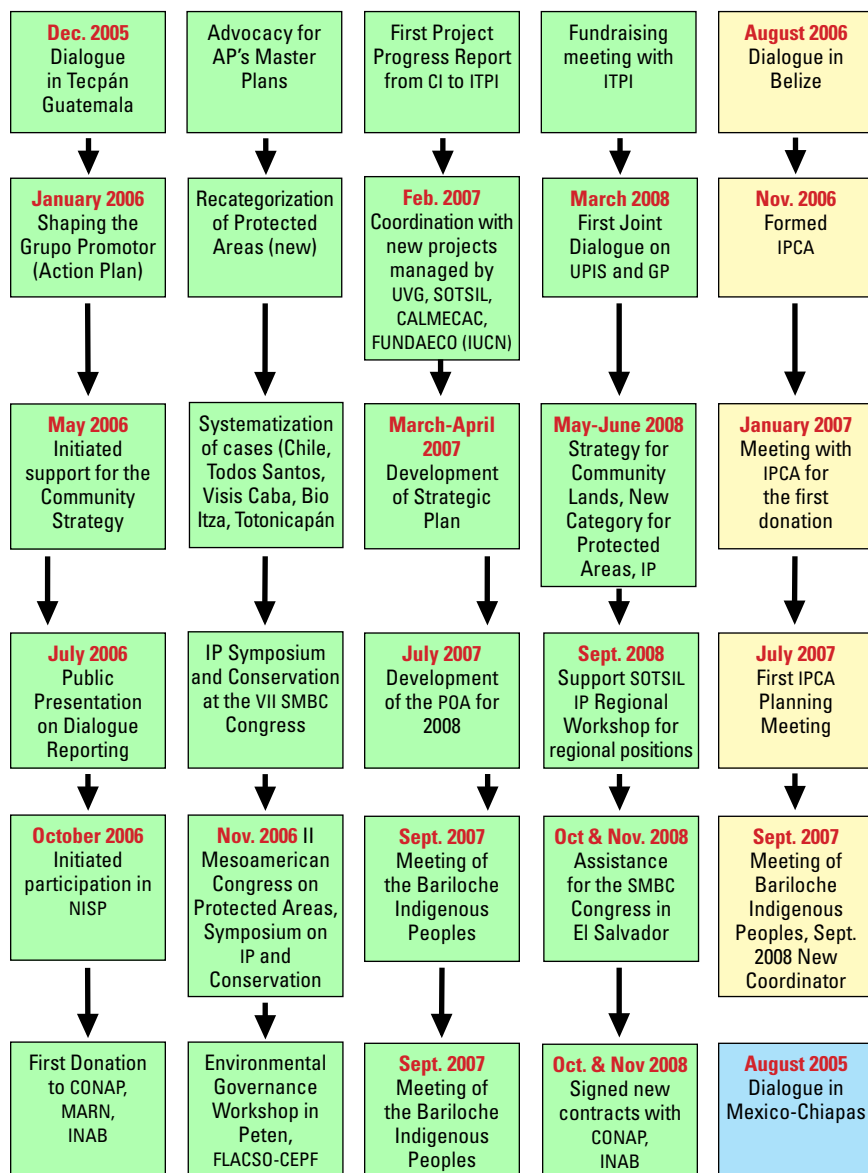
Working IP-GUATEMALA: The Mission, Vision, Niche and the Levels of Action of the GP



The Levels of Action of the GP



The Process and Its Results



CEPF Critical Ecosystem Partnership Fund
 CI Conservation International
 CONAP National Council on Protected Areas of Guatemala
 FLACSO Facultad Latinoamericana de Ciencias Sociales, or Latin American Social Science Faculty

INAB National Institute of Forestry
 NPAC National Protected Areas Commission
 PARPA Program of the Department of Agriculture
 SMBC Mesoamerican Society for Biodiversity and Conservation
 UVG University of Guatemala Valle

Our Lesson

- Political impact is a long-term process and is sometimes difficult to understand
- The government of the moment always has good will, but it is their actions that tell the real story
- The path can be very frustrating but consistency and persistence coupled with diplomacy, complaints and new proposals can make the difference
- The agendas of conservation and indigenous peoples are huge and we should learn to focus on common goals without losing our individuality and direct experience (in the field)
- Concrete results can be achieved when you choose a theme and work together
- Using money to finance these agendas is not a problem, but when it is involved be careful to focus on concrete actions that produce results not only for the donors but for the peoples and places involved. Otherwise the money is wasted.
- Lastly, the processes of advocacy on Public Policy change quickly, and we should be ready to take a stand in the public forum to propose, denounce and in some cases renounce initiatives, our own or otherwise.



Balam Juyu' Kaqchikel Community Territory Case Study

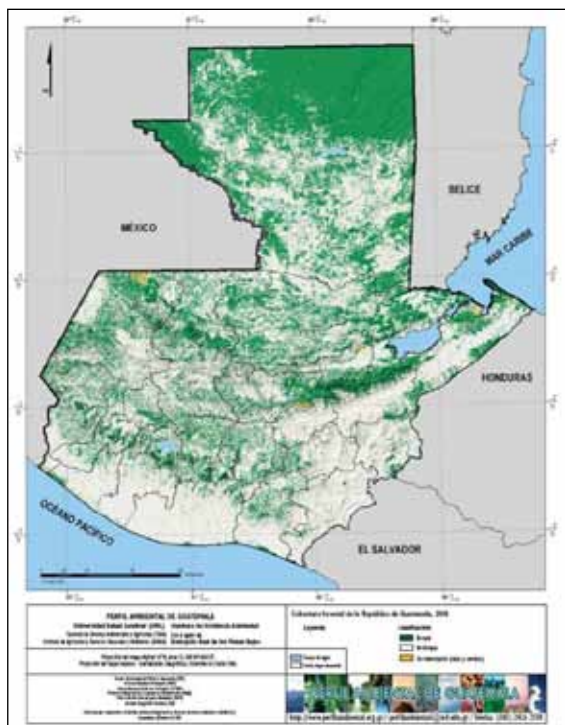
**Cadena Volcánica Central
Kaqchikel Region
Patzún, Chimaltenango
Prepared by: Carlos Chex
Presented by: Miriam Castillo**



The Importance of “Community Lands”

- Most of the forests in the highlands of Guatemala are part of indigenous peoples territories, and because of this it is impossible to separate forest management from the collective rights of indigenous peoples.

Forest Cover, Guatemala 2001



Key: Blue—Body of Water; Black Border—Department Boundaries; Classification Key: Forest Green—Forest; White—No Forest; Yellow—Unknown

Challenges with Guatemalan Community Lands

- Absence of effective institutional framework in the State for the recognition of the territorial rights of indigenous peoples.
- Current public policy has favored individual land titles, the increase of Protected Areas, and the dissolution of communal tenure.

Balam Juyu’ Astillero*

- Chimaltenango
- Post-colonial tenure structure. Exclusive Community Land Rights.
- Most *astilleros* are under municipal control; use, management and conservation of these lands is held by the community (holding possession)

*Translator’s Note: Astillero translates literally as “Shipyard.” In this text, colloquial use appears to mean a Forested Piece of Land.

- 2696 acres (1091 hectares). Several municipalitles use the area
- Biological importance
- Co-management established between the communities and the municipality
- Zoning: Sustainable Agriculture (18%), Protected Forest (82%)
- Cultural importance (95% maya, 5% mestizos)

Local Institutions that Participate in the Management of the Territory

- Chajineles or park guards
- COCODES from the Xetzitzi, Xepatán and el Sitio communities who have historically had access to this communal territory and have participated in local institutions.
- Organized group of mayan women, recently formed for accessing local plant medicines for traditional healers
- Municipality of Patzún

External Agents Participating in the Management of Resources and Planning

- State Institutions: PARPA (Program of the Department of Agriculture, INAB (National Institute of Forestry) y CONAP (National Council on Protected Areas of Guatemala)
- Land restructuring, conservation, forest restoration and declaration of municipal areas.
- Community Lands Promoter Group (national)
- Cadena Volcánica Promoter Group (regional)
- Sotz'il Association, one of the more established indigenous organizations in the region; in good standing with the municipal, community and indigenous authorities
- Collaborated in formulating the Community Management Plan (equivalent to the Area Master Plan)

Institutions and/or Management Standards

- Community government with local legitimacy for the administration of natural resources. Standards for use of forest and other resources.
- Informal government who bases decisions on customary law.
- Decisions primarily depend on collective agreements, involving the majority of the community members that make use of the communal land.

Example of the Current Standards In the Sustainable Agriculture Zone

- Cultivation is permitted with the use of conservation farming practices
- Corn and snow peas may be cultivated with a controlled application of pesticides
- No herbicides may be administered to the crops in order to protect water sources and because they damage saplings and other growing trees
- Burning of plant refuse is not permitted
- No free range or contained animal grazing allowed
- Soil conservation practices will be applied to steep slope areas
- Agricultural expansion is not permitted except with special permission from the Municipality and approval of the park guards.

The Belize Example



**Indigenous Peoples
Conservation Alliance**
Cristina Coc, Belize Central America

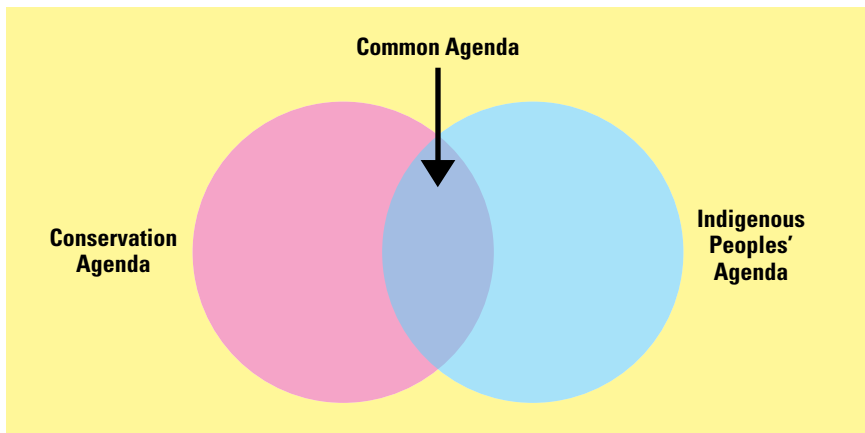


Indigenous People and Biodiversity Conservation

- Increased recognition
- Key social actors
- Powerful voice in protection of NE
- Sustainable living



The Common Agenda



IPCA—Belize Bridging The Gap...

- Incorporated—2007
- National Alliance
- 7 member executive council
- Partners—CI, PACT
- National Protected Areas Commission (NPAC).
- Indigenous NGOs
- Indigenous communities
- Conservation organizations interested in working with IP
- Government Agencies interested in learning and working with IP



The Mission Statement and Its Role

- IPCA is an alliance of indigenous peoples organizations and conservation agencies established to promote the full participation of IP in the effective

use and management of natural resources through dialogue, advocacy, capacity building and knowledge exchange.

- To strengthen and develop indigenous knowledge and world view.
- To create a space for an indigenous perspective in conservation and development.
- To strengthen the capacity of indigenous peoples to have greater control over their resources.
- To promote drawing upon indigenous perspectives for greater environmental and biodiversity protection.

Direction

- Advocate for policy framework conducive to indigenous participation and perspective
- Facilitates the building of capacity
- Provides a forum for dialogue
- Facilitates the channeling of resources
- Advocates for participation

The Future of IPCA

- Challenges



Opportunities...

- WHAT NOW?
- How do we act?

[Back to Contents](#)



CHAPTER 4

Indigenous Peoples Conservation Alliance (IPCA) Belize, Central America

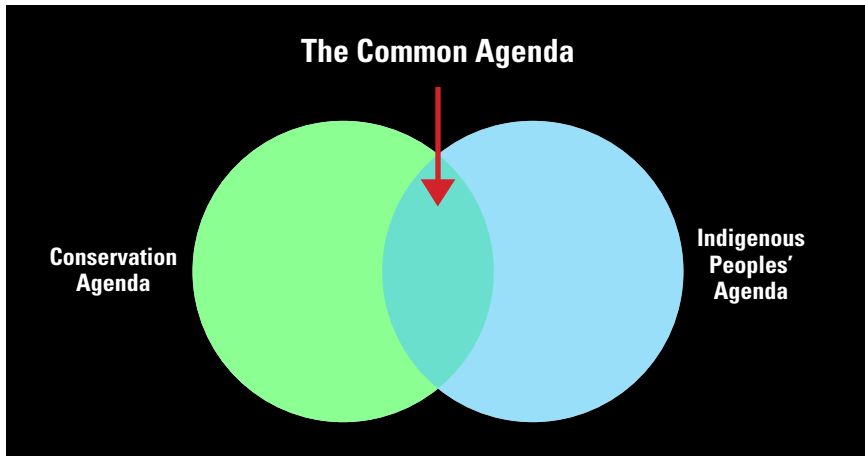
By Cristina Coc



Indigenous People (IP) and Biodiversity Conservation

- Increased recognition
- Key social actors
- Powerful voice in protection of NE
- Sustainable living





IPCA – Belize Bridging the Gap...

- Incorporated in 2007
- National Alliance
- 7 member executive council
- Collaborated with PACT and CI
- Active member of the National Protected Areas Commission (NPAC).

The Mission Statement

IPCA is an alliance of indigenous peoples organizations and conservation agencies established to promote the full participation of IP in the effective use and management of natural resources through dialogue, advocacy, capacity building and knowledge exchange.

Role of IPCA

- To strengthen and develop indigenous knowledge and world view.
- Create a space for an indigenous perspective in conservation and development.
- To strengthen the capacity of indigenous peoples to have greater control over their resources.
- To promote drawing upon indigenous perspectives for greater environmental and biodiversity protection.

Direction

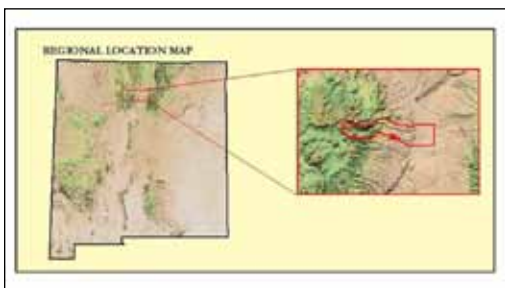
- Advocate for policy framework conducive to indigenous participation and perspective
- Facilitates the building of capacity
- Provides a forum for dialogue
- Facilitates the channeling of resources
- Advocates for participation

The Primary Customers

- Indigenous organizations
- Indigenous communities
- Conservation organizations interested in working with IP
- Government Agencies interested in learning and working with IP



[Back to Contents](#)



CHAPTER 5

The Santa Clara Pueblo & Wilderness

*Management and Cultural Importance of Wild Lands; Santa Clara Pueblo
Rio Arriba County, New Mexico, USA*

By Joseph Gutierrez, Jeff Lyon, and Bruce Bauer



Santa Clara Pueblo



Santa Clara Pueblo
Forestry Department

Santa Clara Pueblo

Kha' Po Owinge

Literally means: *Valley of Wild Roses*



Location of Santa Clara Pueblo



Santa Clara Land Base = 216 square kilometers

Santa Clara Governance and Sovereignty

Santa Clara Pueblo is a sovereign Indian Tribe and is managed by the Tribal Council under the authority of the Tribe's Constitution and Bylaws, approved in 1935. Leadership is conducted through annual elections of a Governor and five officers and eight appointed Tribal Councilors.

History of Santa Clara Pueblo

- The current village of Santa Clara Pueblo is one the oldest occupied settlements in the United States having been at its present location for over 600 years. Prior to its present location, our Santa Clara people lived in the historic village of Puye, which remains a significant cultural landmark for visitors worldwide.
- The village of Puye was carved out of soft volcanic tuft into cliff dwelling areas. The Tribe later built the adobe structures on top of this scenic mesa. Santa Clara is one of six Tewa speaking Tribes in the State of New Mexico.
- Like most other Tribes in the United States, Santa Clara has lost much of their aboriginal lands to other governments and settlements.



- Since inhabitation of our current land area we have coexisted with the rule of three countries: Spain, Mexico and the United States.
- Our cultures and traditions have strongly survived over the years and continue to be passed down from generation to generation.
- We are also well known for our pottery making ability; many of our artists are well known.
- Our culture and people are very dependent on our lands, and we use our lands for hunting, fishing, gathering food and medicinal plants, for agriculture and also for spiritual sanctuary.



The Importance of Wilderness:

The importance of wilderness to our people and culture cannot even be expressed in words. Our wilderness is everything to us and we need it to be who we are. The management and protection of these wilderness areas are of top priority for our Tribe. Our generations have always protected these areas for us and now it is our turn to protect for those who have yet to come.

A Turning Point in Time:

The past decade has been a critical time for our Tribe's wilderness areas and it all began with disaster. In 1998 we were hit with a catastrophic disaster and 10% of our precious forests were lost to a wildfire that came onto the reservation from Federal lands (Oso Complex Fire). This opened our eyes and we began to discuss how we could restore these areas and protect

other forested areas from human-caused destruction. But, before we got our act together we were hit by another forest fire that would be much more devastating than the first. The infamous Cerro Grande Fire that had burned down hundreds of houses in the nearby city of Los Alamos came onto the reservation and an additional 35% of our forests were again burned to the ground in the year 2000.



Oso Complex Fire

After the Oso Fire, Santa Clara began discussing the need to have a Tribal Forestry Program to help with burned area restoration, firefighting and forest management.



The Cerro Grande Fire

In May of 2000 the Cerro Grande Fire burned over 7,000 acres (28 square kilometers) of forested land in the Santa Clara Pueblo.



After the fire, Santa Clara began intensive restoration efforts and a tribal forestry and ecological restoration program was started.



The Road to Recovery:

After the fires and after Santa Clara created a tribally operated Forestry and Restoration Department, we began an extremely intensive effort to restore these wilderness areas that had been lost. We teamed up with many local experts that specialized in low-impact burned area restoration and started on a long journey to recovery.

Burned Area Restoration Projects

Santa Clara has since completed many restoration projects to begin restoring these burnt areas:

- Reforestation
- Stream Restoration
- Sediment Removal



Reforestation

Since the fires we have planted over 1.7 million trees



Step 1: Cone Collection



Step 2: Seed Processing and Germination



Step 3: Seedling Maintenance



Step 4: Seedling Loading



Step 5: Haul Seedlings



Step 6: Seedling Planting



Seedling Growth after Four Years

Stream Restoration

After the Cerro Grande fire over 20 kilometers of drainages effected by severe sedimentation were treated with restoration work. Increased water runoff had badly eroded many drainages and had negatively effected local fisheries.

Santa Clara used two effective treatments to stop erosion and promote healthy vegetation to stabilize burnt areas: contour tree felling and rock dams.



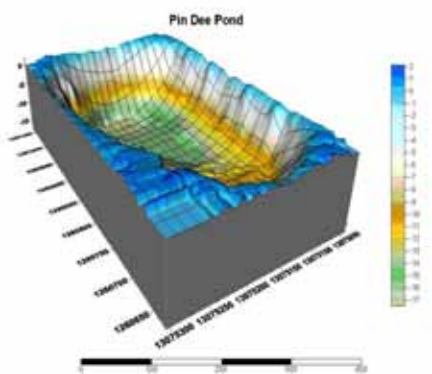
Contour Tree Felling



Rock Dams

Sediment Removal

Using computer models we were able to determine how much sediment needed to be removed from ponds and waterways. In total, over 100,000 cubic meters of sediment was removed over a three-year period.



Beyond Burned Area Restoration

Following the aftermath of the two fires and the completion of years of restoration work we began to expand our efforts to protect and restore more of Santa Clara’s wilderness areas. One area of the Tribe’s land that has suffered tremendous ecological damage is along the Rio Grande River, which is an important corridor for numerous wildlife species and many types of trees, shrubs and grasses. This riparian area has suffered large losses from human development and from the introduction of non-native tree species which have largely taken over and have out-competed the native vegetation.

Restoring the Rio Grande River

Problem: River is Down-cutting



Problem: Jetty Jacks





Santa Clara has taken a number of management actions to clean up this area and to restore it back to a wild and scenic wilderness area. Management actions have included: eradicating invasive and non-native plants and trees, excavating areas to increase wetlands and planting native plants.



We have also done a number of wildlife projects to improve habitat and increase the area's biodiversity.

[Back to Contents](#)



CHAPTER 6

Environmental Services of Oaxaca

Oaxaca, Mexico

By Emma Diaz



Background

Environmental Services of Oaxaca (Servicios Ambientales de Oaxaca (SAO AC)), is composed of the following organizations:

- CEPCO (Zapotec, Chinantec, Mixe, Mixtec)
- UCIRI (Zapotec)
- IXETO(Zapotec y chinantec)
- UZACHI (Zapotec y chinantec)
- San Juan Metaltepec (Mixe)
- Santa María Tlahuitoltepec (Mixe)

Mission

We generate community options, permitting biodiversity to sustain and develop in the territory of traditional and indigenous peoples, affording it a specific value that can be converted into goods and services that generate income for rural families.

Main Objective

To build and strengthen capacity in the rural and indigenous communities of Oaxaca for the provision of environmental services and to promote the sustainable production of goods and other services derived from these production systems and their natural resources.

Strategic Focus Areas

Environmental Services

- Sequestering Carbon
- Water catchment and storage
- Biodiversity
- Scenic beauty



Carbon Sequestration in 10 Communities

Mixe, Chinantec, Northern Zapotec & Southern Zapotec



Building Local Capacity

- Community Capacity Building and Socialization
- Community Land Use Management
- Participatory Planning Workshops



Evaluation of the Potential for Carbon Sequestration



Evaluation of the Potential for Carbon Sequestration	
Year of Study	Estimated tons of CO ₂
2002–2003	96,431 tons in 14 years
2004	33,098 tons in 5 years
2006	60,851 tons annually on 3,196.93 hectares

Reduction of Greenhouse Gas Emissions Program

- Construcion of 1500 fuel-efficient stoves
- Reducing the total consumption of wood by 60%



Production of Crops in Individual and Community Nurseries

- Training community technicians in seed saving
- Production of 250,000 annuals since 2004



Implementation of the Carbon Sequestering Project for the Mitigation of Climate Change

Focus Areas:

- Restoration of degraded forests
- Maintenance of natural regeneration areas
- Restoration of agricultural lands through planting new forests
- Enrichment of agroforestry systems

Restoration of Degraded Forests



Maintenance of Self-Regenerating Areas



Restoration of Agricultural Lands through Planting New Forests



Enrichment of Agroforestry Systems



Results

Restoration of 3,196.93 hectares (roughly 7900 acres)

- 1,002.93 hectares of temperate forest.
- 760 hectares of agroforestry systems.
- 734 hectares of cloud forest.
- 700 hectares of degraded agricultural land.



Selling Carbon Bonds on the Free Market Project



Perspectives from the Initial Carbon Capturing Project

Financing must simultaneously allow you to tend to the necessary technical elements and build an operating structure capable of meeting the requirements of the emerging carbon markets.

Market Constraints

- The Clean Development Mechanism (CDM) set in the Kyoto Protocol
- Lack of national technical and administrative capacities at the national level

Alternatives

- National market study
- 2006, Pronatura México A.C.
 - Certification of rural activities for selling carbon bonds on the free market

Buyers

- Chinoín
- Fundación Televisa
- Gamesa
- Lemons Films
- Fime
- Mas Nescafe
- Individuals



Complementary Activities to the Carbon Sequestration Project Community Micro Watershed Restoration

- In Santa María Tlahuitoltepec, San Bartolomé Loxicha and San Juan Lachao
 - Reforestation activities, maintenance of natural regeneration areas, collection of solid waste

Protection of Biodiversity

- Establish biological corridors for protecting the jaguar in the Rincón Alto communities (Sierra Norte)

- Management, protection and enhancement of areas of cicadas, palm nuts and orchids
- Community conservation area for the protection of the manita, or Mexican Hand Tree, orchids and cicadas.
- Community protection of 5000 hectares of cloud forest in San Miguel Tiltepec, Ixtlán



Community Ecosystem Protection

- Community teams for surveillance and protection of conservation areas

Other activities

- Community Environment Day
- Promotion of gender equality
- Community Environmental Training Center
- Publications

Communities in Process

- Worldview of life and nature
- Awareness of the value of natural resources
- Direct and indirect participation of indigenous women
- Ongoing community work to care for natural resources





Community of Santa Maria Zoogochi

We Contribute to the Carbon Sequestration on the Free market Project

Area total: 295 hectares

Potential capture: 14,827 tons of CO₂

“Caring for and Protecting Biodiversity is Everyone’s Business, For the Future Generations”



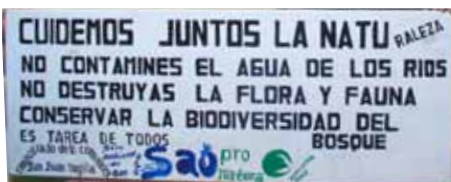
WELCOME

The Community of Santa Maria Zoogochi is part of the Free Market Carbon Sequestration Project



SAN JUAN YAGILA

Develops activities to support the Free Market Carbon Sequestration Project



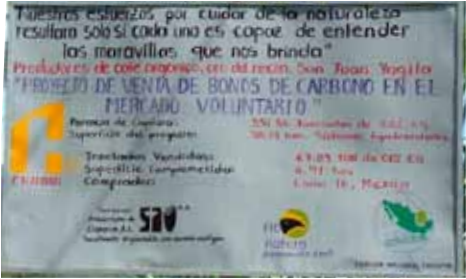
TOGETHER WE CARE FOR NATURE

Don't Contaminate the Rivers

Don't Destroy the Flora and Fauna

Conserve the Biodiversity of the Forest

This is everyone's business"



ORGANIC COFFEE PRODUCERS, ORO DEL RINCON, SAN JUAN YAGILA

Free Market Carbon Sequestration
Project

*"Our efforts to care for nature will
only yield results if we are capable of
understanding the wonders that nature
gives us."*

Potential Capture: 551.56 tons of CO₂
Project Area: 56.61 hectares of
agroforestry systems
Tons Sold: 67.84
Designated Area: 6.97 hectares
Buyer: Chino In, Mexico

Coffee Producers, Oro del Rincon, Santiago Teotlaxco

"Plant Seeds of Life for Our Children.

Clean Air is For Everyone"

We participate in selling Carbon Bonds
on the Free Market

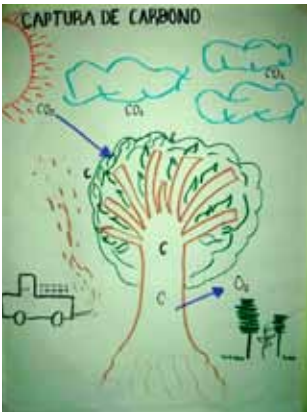
Potential Capture: 923.57 tons of CO₂

Project Area: 50.93 hectares of
agroforestry systems

Tons sold: 113.60 CO₂

Designated Area: 6.26 hectares

Buyer: Chino In, Mexico



Carbon Sequestration



CHAPTER 7

Beauty, Power and Conservation in the Southeast Amazon

*How Traditional Social Organization of the Kayapo Leads to
Forest Protection*

Xingu River Basin, Amazon, Brazil

by Barbara Zimmerman

Beginning in the 1980s, an extraordinary phenomenon could be observed from space in the southeastern Amazon of Brazil. Tentacles of the agricultural frontier were reaching into the forested region. Fifteen years later, vast areas of forest had been reduced to smoking ruins, as ranchers transformed forest into pasture in an unceasing quest to occupy land. Logging, gold mining and homesteading also formed part of the mix, but it was the insistent march of ranching that was easy to follow from space. This landscape transmogrification appeared inexorable—except where it ran into Indian territory. Remarkably, the forest clearing simply stopped at the border of Amerindian land (Figure 1). Three decades after this barrier effect was first observed, Amerindian lands of the Xingu river basin remain intact within a sea of deforestation that now almost completely surrounds them. What forces conspire to stop deforestation at these borders?

On the ground, it is well known that the southeastern Amazon region has lacked governance: violent conflict over land, illegal resource exploitation, fraud and corruption were rampant and continue largely unimpeded today. “Hired gun” is a job category, assassination being a popular method of resolving disputes on

the frontier. Flagrant abuses of the law often go unprosecuted. Therefore, the integrity of the Amerindian borders cannot be attributed merely to their protected status under the law. Of course indigenous peoples actively—even militantly—protect their land rights. But in the face of intense and powerful economic forces, lack of governance in the frontier and large numbers of settlers pouring into the region, how do relatively few Indians manage to keep the chainsaws and bulldozers at bay over a vast area of pristine forest?

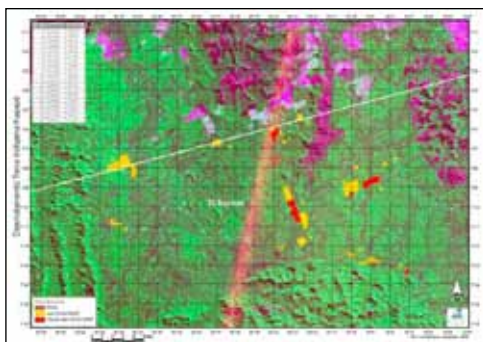


Figure 1. A July 2004 MODIS satellite image showing the burning of forest outside the (protected) Kayapo territories and Xingu Indigenous Park. From the air it is clear how the destruction of the forest stops at the Kayapo boundaries.

In this chapter, I examine the case of the Kayapo who protect the largest block of indigenous territory in the region; indeed, contiguous Kayapo territories form the largest protected tract of tropical forest anywhere in the world. I propose that the remarkable conservation success on Kayapo lands can be traced to the social organization of its inhabitants and their ability to capitalize on external resources and partner with external organizations to meet their livelihood. Furthermore, as the Kayapo example demonstrates, traditional Amerindian social organization presents unparalleled conservation opportunities in the Amazon.

Brief Recent History of the Kayapo and their Involvement in Gold Mining, Logging and the Environmental Movement

The Kayapo inhabit six legally ratified indigenous territories in the southern Para and northern Mato Grosso states. A contiguous block of five Kayapo territories totals almost 105,000 km² and the total contemporary Kayapo population there approaches 7,000 living in 18 villages.

After decades of fighting and fleeing eastward in front of the advancing frontier, leaving behind predominately savanna (*cerrado*) ecosystems and entering predominately forest ecosystems, most remaining Kayapo groups were “pacified” by government agents and missionaries in the late 1950s and 60s, although this hardly stopped the threat to Indian lands or the violence between Indians and settlers. During the first half of the 20th century, introduced diseases decimated Kayapo groups even as they warred with settlers and each other. As late as the 1960s, they were a warrior culture that practiced raiding, and boys were raised to fight.

Over the last three decades, Kayapo society has undergone many changes. During the 1970s, increasing contact with governmental agents, missionaries and an occasional anthropologist introduced superficial change as Kayapo adopted western clothes and widespread use of guns and metal tools (Verswijver 1996). More drastic change has occurred since the mid-1980s, when one after the other, Kayapo leaders succumbed to the seduction of goods and money proffered unremittingly by loggers and miners intent on extracting Kayapo gold and mahogany. During the 1970s, the Kayapo became sedentary and ceased warring except when there was a direct territorial threat.

The Kayapo struggle to have their lands demarcated did not heat up until the 1970s when the Kayapo began to patrol the disputed southeastern border of their reserve, actively protecting it from ranchers who were starting to move into the area. Similarly, the Metuktire Kayapo to the west of the Xingu River were militantly asserting their land rights in the southern Capoto/Jarina region (Verswijver, personal communication). However, the land claimed by the Kayapo continued to be increasingly invaded by ranchers, miners and loggers.

The encroachment of miners began in the late 1970s when gold was discovered on Kayapo lands around the eastern villages of Gorotire and Kikretum. The Kayapo of these communities were bitterly divided over how to deal with the gold miners, with some favoring doing business and others not. In 1980, the Kayapo forcibly removed gold-miners (*garimpeiros*) from their territory, with the Federal Police and the federal government Indian Agency (FUNAI) completing the expulsion. The *garimpeiros* soon returned, however, and in 1982 the Kikretum chief, Pombo, having second thoughts, signed an illegal contract with a gold mining company, allowing them to mine gold under the stipulation that they pay him 10% of the gold extracted. Although FUNAI and other Kayapo chiefs opposed this deal, the Kayapo of Kikretum became accustomed to western goods and began forcing the *garimpeiros* to pay even higher royalties. Today Pombo is considered by the Kayapo to have been a great chief because, in accordance with traditional values, he shared with his people all that he made from gold mining.

In 1985, after a second invasion of Kayapo land by gold miners near the community of Gorotire, three Kayapo chiefs took over the Cumaru gold mines by closing the airstrip and holding several thousand *garimpeiros* hostage before expelling them. The Kayapo demanded 10% royalties on gold extracted, including back-pay, and further demanded a ransom for the 789 hydraulic mining units and 47 mechanical crushers that had been seized (Schmink and Wood 1992). The Kayapo realized that the gold mining crisis was their best bet for resolving their land claim and stated they would only reopen the gold mines after their claim was settled. The government, under pressure from the Kayapo and gold miners, agreed to demarcate a 3,262,960-hectare reserve named the *Terra Indigena Kayapo*.

Similar incursions of gold-mining occurred in western Kayapo lands, first in 1993 on land west of the Xingu River which was not ratified as an Indian reserve at the time, although the Kayapo considered it to be theirs. Kayapo expelled the *garimpeiros*. In 1990 gold was again discovered in the southwest before the western Kayapo reserves of Bau and Mekranoti had been recognized. Although there was much opposition, a few chiefs followed the example of Kikretum and allowed gold mining in exchange for royalties. By the early 1990s, however, gold mining was becoming less profitable with a decline in gold prices, increasing demands by the Indians, and the depletion of gold reserves at the major mines in the east. It is widely acknowledged, however, that in their struggles with the gold miners, the Kayapo developed skills for dealing with Brazilian society and ultimately, for successfully resolving the land question in Para (Schmink and Wood 1992).

Party Time

As gold mining was decreasing in the early 1990s, the mahogany loggers became major players on the scene. Two villages located closest to the frontier and, not coincidentally, those that had first sold gold mining concessions, Gorotire and Kikretum, entered into agreements to sell mahogany logs in the late 1980s. By 1992, mahogany logging was widespread across Kayapo territories and ran rampant until the government finally stopped it in 2002. Driven by an export market, mahogany is one of the world's most valuable timber species, commanding a price that is an order of magnitude higher than the next most valuable species in the area. Mahogany was the only timber ever extracted on a wide scale on Kayapo land, due to high transportation costs over trackless wilderness [Zimmerman et al. 2001]).

The involvement of the Kayapo in mahogany logging unfolded in the same manner in all communities. During the late fall, loggers seeking concessions wine and dined Kayapo chiefs accompanied by their younger, Portuguese-speaking mediators in the frontier logging centres. Contracts typically promised the Kayapo community about US\$50/m³ of mahogany harvested in exchange for exclusive harvest rights. Depending on log quality, mahogany was worth US\$ 250–650/ m³ to the logger at the local mill. It was up to the Kayapo to monitor the log volumes extracted on their territories. Of course the largely illiterate Kayapo were regularly cheated but they did manage to control access to their territory and extract large payments from loggers. Throughout the Kayapo territories of Mekranoti and Bau alone, it is estimated that 500,000 m³ of mahogany was extracted over 10 years.

With no levies or forest management fees to pay, poorly paid workers without recourse to labour rights, a highly lucrative timber species to high-grade and inexperienced Indian landowners, the loggers made fortunes. Why, however, did the Kayapo become involved in an illegal predatory activity on their land only to end up weakened by infighting and to lose forever a valuable, potentially

renewable resource (Zimmerman *et al.* 2001)? Most Kayapo realized that the loggers were not invaders: they did not stay, and they would do almost anything to obtain permission to remove trees of a species with no cultural value from a landscape of trees numbering many millions. The logger's insatiable thirst for mahogany made them easy targets to exploit—an attitude that had been practiced for centuries in raids against their neighbours (Turner 2000). From the Kayapo point of view, it was time to party!

Unsurprisingly, the Kayapo were exceedingly ingenuous as far as what they gained from loggers and at what price. Most were and still are, to large degree, illiterate and monolingual; most had no experience with money and little at all with outside society at the time. Mahogany paid for a bonanza of travel, transport, tools, radios, boats, fuel, clothes, coffee, sugar, tobacco and beads. Chiefs felt pressure to bring goods into their communities—a traditional function of a chief—in the same manner that other chiefs were able to do in communities that allowed gold mining and/or logging. Their lack of experience in a capitalist world meant that money was not invested in anything durable and ran through their hands like water.

After logging ended, the Kayapo realized that they had gained neither development nor capacity outside society from the millions of dollars they received from loggers. Worse, Kayapo society was disrupted by the perverse incentives introduced by loggers such as obtaining goods under a regime of aggressive badgering and benefits accruing to elites only. The Kayapo had developed a need for manufactured goods but no ability to obtain those goods other than selling off irreplaceable resources in Faustian deals made at great cost to their society and natural environment. By 2000, mahogany throughout millions of hectares in of Kayapo territories was rare and communities and loggers were fighting among each other over remnant patches of small trees. In 2002, under international pressure, the federal government put an end to this embarrassing abuse of the law in the Xingu and mahogany logging was stopped. The party was over.

The Kayapo and the Environmental Movement

The Kayapo became famous in the late 1980s when they mobilized to protest construction of a World Bank-backed mega-dam project on the Xingu River—a dam that would have flooded parts of their territory and disrupted fish ecology. The Kayapo-led protest at Altamira in 1989 galvanized support from international environmental NGOs and media. After this event and the international press coverage it received, the World Bank dropped their loan for dam construction and environmentalists elevated the Kayapo to hero status.

It was around the time of Altamira that environmentalists were discovering a common cause with indigenous peoples of the Amazon. Whereas before pro-Indian advocacy had argued from a stance of human rights and cultural

preservation, the language of the environmental movement offered Indians a way to communicate and legitimize native claims to land and resources in a manner that outsiders could comprehend (Conklin and Graham 1995). Amazonian Indians had gained powerful allies that forced the state to pay attention to their minority rights. Environmental activists, on the other hand, benefited from the evocative symbolism of “moral and political legitimacy” that Indians provoke in western society (Conklin and Graham 1995).

Kayapo leaders quickly learned to translate Amerindian cultural values into western terms using the language of environmentalism. Turner (2000) describes how Kayapo leaders organized the protest at Altamira on their New Corn ceremony—a ceremony that expresses the Kayapo conception of the interdependence of society and nature. By using the New Corn ceremony, Kayapo leaders implicitly communicated to their people what they were asking them to defend and what was threatened by the dam. They built a camp at Altamira that was a total Kayapo community with families pursuing domestic activities, and, thereby, presented themselves to the outside world as a vital human society under imminent threat (Turner 2000).

The Altamira meeting in 1989 was a high point in the emerging alliance among Kayapo, environmentalists and public opinion. The honeymoon ended when it became known that behind the scenes the Kayapo were profiting from illegal mining and logging and that some leaders were using this money to live lavish and dissolute lifestyles in frontier towns. Conklin and Graham (1995) observed that in Amazonian eco-politics, the political power of indigenous people “exists only so long as the Indian’s political identities resonate with western ideas and symbols.” By allowing mining and logging, the Kayapo had violated the Indian-as-one-with-nature symbolism, so cherished by the west, and the environmental movement largely, but not totally, abandoned them.

Beauty, Power and Conservation in the Amazon

Satellite images of the Xingu region are striking. Kayapo lands and the contiguous Xingu Indigenous Park to the south (home to 14 indigenous ethnicities) form a 14 million hectare forest island within a spreading sea of agriculture. No matter what criticisms are leveled at relationships between Indians and environmentalists, the fact remains that a tract of forest larger than many small countries has for 30 years withstood a crushing wave of destruction that is the Amazonian frontier. This landscape phenomenon owes its existence to the traditional organization of Amerindian society and, in the 21st century, also to alliances of indigenous peoples with environmental organizations.

The great Kayapo land gains of the 1980s and 90s can be traced to strong leaders who led their warriors to protest, pressure and kill when necessary: Kanok,

Toto-i, Paiakan, Ropni and Megaron to name a few of the most prominent, but many were involved. That the Kayapo were able to coordinate this campaign with such remarkable effect reflects warrior tradition certainly, but also the foundation of a well developed communal society, one predicated upon complex ceremony and symbolism.

Kayapo chiefs lead by consensus and until very recently, had to undergo decades of training to learn the many chants and recitations that constitute essential parts of major ceremonies. The public performance of these was one of the basic ritual functions of a chief (Verswijver 1996). Even today, aspiring chiefs can use the power of speech-making only when they reach a certain age—age grades being another important facet of Kayapo social organization. Chief candidates are evaluated on exemplary conduct, knowledge of culture, combative spirit, solidarity and generosity (Verswijver 1996). “For the Kayapo, the moral force of social solidarity or the power of strong leaders to compel consent and obedience is created and conveyed by symbolic performances such as communal ceremonies or chiefly oratory and imbued in the symbolic acts, images and verbal [expressions] of which they are constructed.” (Turner 2003)

The particular social organization of the Kayapo is, then, a cauldron that forged great leaders who have achieved more for the conservation of the southeastern Amazon than all governments, scientists and NGOs together. Today, as overt warrior culture recedes into history, traditional ritual organization of the Kayapo remains vital and continues to be a wellspring of Kayapo strength into the 21st century.

In contrast to Western society, which is concerned with the production of commodities for exchange and the individual accumulation of monetary wealth, Kayapo society is concerned above all with the production of social persons and the social values attached to them (Turner 2003). The main categories of social value among the Kayapo are “power” and “beauty.” These are the qualities by which the relative worth of persons, their role in the community, their relative prestige and influence and their capacity for leadership and political effectiveness are judged. These values are realized in the public domain of ritual, political activity and collective action (Turner 2003). What this means is that a Kayapo strives in his or her life not for production and accumulation of material surplus, but rather to attain social values of “beauty” and “power” that can be bestowed only through properly orchestrated ritual enacted by the community to which the person belongs and plays an integral role.

In Kayapo society, rituals constitute the fundamental expression of concepts and truths for the group (Fisher 2003). The production of personal identity is accomplished through the transference to the child of names and ceremonial wealth (rights to specific forms of ornamentation) in collectively choreographed ceremonies. These names and wealth are said to be “powerful” and “beautiful”

(Turner 2003, Fisher 2003). Kayapo villages are circular with dwellings built around a large open central plaza where the communal ceremonies take place (Figure 2). Fisher (2003) points out that while names bestowed in the great name-giving ceremonies do accord social prestige, the interest of the participants lies in their own experience of ritual and the feelings of longing, happiness and harmony that are attributed both to relations within



Figure 2. Kayapo village from the air. Kayapo villages are built around a central communal space used for rituals.

an extended family and to a performing community as a whole. This harmony grows into “beauty” that results from the choreography of singers, dancers and food providers and from viewing the ceremonial ornaments of all legitimate inheritors disposed in their correct places around the village plaza during the ritual climax (Figure 3). As persons progress from stage to stage of the life cycle, they thereby acquire the right to growing deference from the young, public recognition of their increasing beauty and become able to exercise a greater measure of leadership and control in the social and political life of their communities (Turner 2003). “These, rather than a few scraps of material subsistence production, are goals worthy of a life project which can manage to make even growing old seem worthwhile.” (Turner 2003)

The result of such societal organization is to reinforce solidarity and bind individuals into a network of social obligations and roles such that a single community, rather than individuals, controls actions in the great common property forests. The profound implication for conservation is that across huge areas of Amazon forest under the control of Kayapo communities, conservationists deal with a single entity pursuing a single agenda—rather than facing the complicated situation on non-indigenous lands where many stakeholders hold differing agendas.

Conservation Opportunity with Indigenous Peoples of the Xingu

The environmental movement can make huge gains in the Amazon by empowering indigenous peoples to control access to their territories and manage their resources sustainably; thereby, preserving their cultural



Figure 3. Kayapo dancing in a name-giving ceremony at A'Ukre village.

essences—the very cultures that have protected forest landscapes in the highly threatened southeastern Amazon. At the beginning of the 21st century, the Kayapo and other indigenous peoples of the Xingu river basin find themselves almost completely surrounded by an insatiable capitalist society fed by the burning of forests. Twenty years ago, for example, the Kayapo had to defend a few hundred kilometers of border in the east; today they must monitor more than 2,000 kilometers in all directions. Infrastructure development and increasing economic activity coupled with weak governance in the region (Nepstad et al. 2001; Laurance et al. 2004) overwhelms the capacity of indigenous peoples to monitor and control their borders on their own. Therefore, the first strategic area where NGOs can promote conservation is to help indigenous peoples uphold their constitutional right to maintain the integrity of their borders.

Sustainable economic autonomy for indigenous communities is a second strategic area for investment by environmental organizations. Although tenure security is necessary for indigenous peoples, it is not tantamount to sustainable management. Amazonian Indians generally see animals, plants, rivers and forests as the basis for reproduction of their societies, but they may have no cultural restriction against resource extraction—at times to the point of exhaustion of a particular resource (Turner 2000). When they lack alternative sources of income, indigenous peoples are as vulnerable as any to offers of material wealth by third parties coveting their natural resources—as was demonstrated amply by the Kayapo during the 1980s and 90s. Controlling access to resources is the *sine qua non* of any strategy for sustainability in large tropical landscapes, and Amerindian peoples have largely achieved this thus far (Schwartzman and Zimmerman 2005). For the long-term preservation of forest ecosystems, Amerindian communities need economic alternatives—congruent with their cultural norms—that they can control.

As exemplified by the Kayapo, Amerindian societies generally conform to the criteria that sociologists have identified as requisite for successful common-property resource management regimes (Ostrom 1990, Becker & Ostrom 1995, Morrow & Hull 1996, Gibson *et al.* 2000): (1) clear definition of the resource and its users and the ability of users to sustain legal claims to or effectively defend the resource from outsiders; (2) clear criteria for membership as an eligible user; (3) rapid access to low-cost, internally adaptive mechanisms of conflict resolution; (4) fair decision-making rights and use rights among users; (5) no challenge to or undermining of institutions created and defined by users by any other authorities; and (6) user communities are accustomed to negotiating and cooperating with each other. In essence, this means that conservation and development enterprises tailored to fit Amerindian culture have a high chance of resulting in sustainable management of common property resources and the conservation of biodiversity.

Conservation and development projects with Amerindian communities must be designed around aboriginal values of equity, cooperation and reciprocity that are expressed in terms of local authority. These are achieved by consensus and common-property access, rather than by western values of competition, exclusive rights to resources and centralized management authority (Chapeskie 1995). In other words, by supporting the development of economic enterprises that satisfy cultural values and benefit all members of a community, conservation organizations will win out over loggers and miners every time, no matter what seductive short-term profits the latter offer because: i) Logging and mining violates egalitarian principles and benefit elites only; ii) Predatory activities will end a conservation and development enterprise that benefits all, and iii) The community, not individuals, controls decisions on common property territory. Individuals find themselves unable to make private deals with loggers because their community will not tolerate activities that threaten sources of equitably shared benefits. The deal between the community and the conservation organization is explicit: the NGO will invest in sustainable development as long as the community does not engage in illegal activity. Such investment by conservation NGOs in traditional Amerindian societies remains a largely unexploited but immense opportunity for long-term conservation of Amazonian ecosystems as two environmental NGO's are proving in the Xingu region of Brazil.

Two environmental NGOs have made long-term commitments to indigenous peoples of the Xingu. *Instituto Socio-ambiental* (ISA), an environmental and indigenous rights NGO in Brazil, has worked for more than 15 years with 14 indigenous groups in the 2.8-million-hectare Xingu Indigenous Park located next to Kayapo lands in the south, as well as with the Panara people who occupy a 500,000 ha territory on the southwestern border of Kayapo lands. ISA helped the Xingu peoples organize the Xingu Lands Indigenous Association (ATIX) in an effort to achieve greater political and economic autonomy. ISA and ATIX monitor the territorial control projects as well as support development of economic alternatives and resource management by communities. Similarly, for more than 15 years Conservation International-Brazil, (CI) has invested in programs of territorial control, economic alternatives and local indigenous associations with the Kayapo. Both ISA and CI implement territorial surveillance and conservation and development projects in collaboration with FUNAI (The National Indian Agency). Because FUNAI receives inadequate government funding to fulfill its constitutional obligation of protecting indigenous peoples and their lands, NGOs can help fill this gap under the partnership models used by CI, ISA and their local indigenous partner organizations. The bottom-line to these alliances is that there are no invasions or illegal activities on lands controlled by those communities in the Xingu Indigenous Park, Panara or Kayapo Indigenous Territories where ISA and CI have been able to support combined programs of territorial control and sustainable development.

Conclusion

No mechanism in western society has approached the success of the Kayapo at protecting tropical forest. Although the Kayapo example is particularly striking because of its area size and location in a frontier zone, similar Amerindian landscape-scale conservation effects occur in many other places in Brazil and the neotropics (Stocks et al. 2007, Nepstad *et al.* 2006). It follows that conservation organizations working in the Amazon where indigenous peoples hold legal tenure over 100 million hectares must prioritize the preservation of indigenous cultures and their sustainable transition to the 21st century. Investments in territorial control and economic alternatives for Amerindian peoples form the basis of long-term conservationist and indigenous alliances that can affect frontier expansion and forest protection at a significant scale. The challenge is to devise long-term investment strategies that remunerate indigenous peoples for the ecosystem services of the lands they protect, directly linking development benefits with conservation.

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[Back to Contents](#)



CHAPTER 8

Kayapo Wilderness Lands and Protection Strategy

Southeastern Amazon, “Ring of Fire”

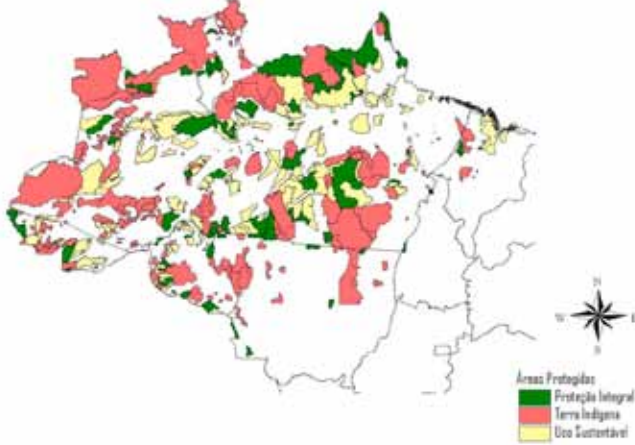
Fronteir, Brazil

By Barbara Zimmerman



**100 Million Hectares Designated as
Indigenous Territory in the Brazilian Amazon**

Protected Areas



In the southeastern Amazon along the “arc of fire” frontier, indigenous lands are forested whereas land outside is logged and cleared for ranching.

The 1960s to Present: History of Intensifying Threat to Indigenous Lands Located in the Southeastern Amazon “Arc of Fire” Frontier Zone

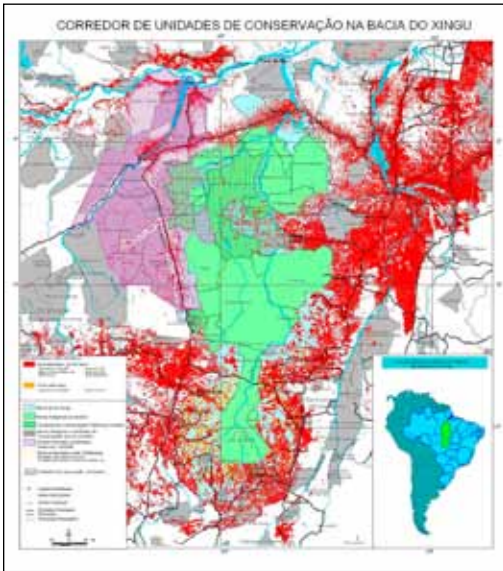
- Government plan for territorial occupation
- Trans-Amazon highways Belém-Brasília e PA-150
- Fiscal incentives for ranching
- Discovery of valuable minerals
- Tucuruí hydroelectric dam
- Expansion of road network supports spread of ranching and logging
- Persistent lack of governance in frontier region of violent conflict over land and resources

1960–1995

The Kayapo successfully translate traditional warrior culture and political organization into official recognition of rights and control over the largest single protected block of tropical forest in the world.



Corredor of Conservation Units in the Xingu Basin



Key, From top to Bottom:

- Red–Deforestation;
- Orange–Altered Areas;
- Light Blue–Xingu River Basin; Green– Indigenous Territories (corredor);
- Green with Stripes–Federal Conservation Units (corredor);
- Grey–Indigenous Territories and Conservation Units outside of the Corredor;
- Purple with stripes–Sustained Forest District, created 2/13/06;
- Yellow outline–Intended Areas, per the CR Almeida;
- White with green horizontal stripes– Conservation Units under Study;
- Circle with dot–State Capitals;
- Black dot–Municipal Headquarters;
- Thin grey line–State Border;
- Thick black line–Main Roads;
- Medium black line with dashes–Existing Railways;
- Thin grey line with dashed–Planned Railways

Subsistence

Swidden Garden, Hunting, Fishing, Gathering

The Correlation of Forest Persistence with Presence of Amerindians Reflects Traditional Culture:

- 1) Subsistence lifestyle based on the forest and lack of capitalist monetary economy
- 2) Collectively organized societies based on common property and egalitarian principles
- 3) Political organization
 - Traditional Collective Society Based on Principles of Egalitarianism and Common Property
 - Outright Invasion by Ranchers and Colonists
 - Pressure to Sell Timber



1995–present

The Kayapo form alliances with conservation NGO's to strengthen capacity for territorial control and resource management as outside pressure on their lands and culture continues to mount

Allies: Conservation International (Brazil), Environmental Defense Fund (USA), International Conservation Fund of Canada, WILD Foundation (USA)

Conservation alliances with the Kayapo present an extraordinary opportunity to develop a model of sustainable development for forested landscapes and indigenous owners

Challenges

- Growing outside pressure on Kayapo lands for timber, minerals and pasture
- Cultural change (sedentarism, new technologies) and need for manufactured goods and services (education, healthcare) from outside society



Objective

Contribute to empowerment of Kayapo communities for territorial control, sustainable management and preservation of the great forests on which their culture, livelihood and future is based



Strategy

Support Kayapo communities to strengthen capacity in the 21st century for:

- Territorial protection
- Sustainable economic development
- New political institutions (NGO's)

Territorial Control

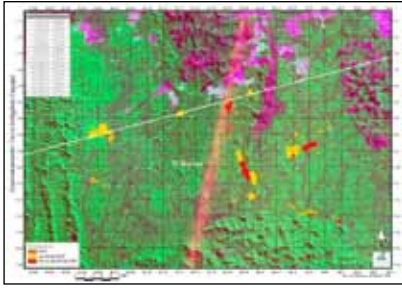
- Training in surveillance techniques
- Equipment, fuel and supplies for patrol expeditions
- Sustainable Economic Alternatives for Kayapo Communities Based on Non Timber Forest Products
- Implementation of Conservation and Development Projects with Amerindian Communities



Keys to Success

- Benefits must be tied directly to conservation and accrue to all members of the community;
- The conservation and development initiative must be tailored to local capacity and not rely heavily on hierarchical authority structure that is outside the





GIS/Remote Analysis



Overflight Verification

experience of egalitarian cultures such as the Kayapo;

- Outside agencies must subsidize long-term technical and administrative support.

Income Generation Program Results

The equitable distribution of income generated from conservation enterprises empowers communities to resist seductive offers made by loggers, gold miners and fishermen seeking predatory exploitation of the rich resources on Kayapo lands



Institutional Strengthening

NGO's work with local Kayapo NGO's to build capacity for administration and program implementation

Overall Program Results

Where communities have the opportunity to implement the full program of territorial control and income generation in conjunction with institutional strengthening, no invasions or illegal activities occur.







CHAPTER 9

Inuvialuit Observations of Climate Change

**Sachs Harbor, Western Arctic
Canada**

By Lawrence Amos



My name is Lawrence Amos, and I come from Sachs Harbour, a small community of about 100 people in Canada's Western Arctic.

I am an active harvester and a Director on the Inuvialuit Game Council, a regional body that represents the interests of the Inuvialuit people with respect to wildlife and the environment.

I am also the current President of the Hunters and Trappers Committee in my community.

I am glad to be able to come speak to you today about the very serious issue of climate change that is already affecting my homeland.

Just before I begin I'd like to introduce you to the area I come from. For those of you with us today that do not know where the Inuvialuit Settlement Region—or ISR—is, the map on the left shows its location in relation to North America.

The ISR is in the northern part of the Northwest Territories in Canada.

As you can see, the Inuvialuit Settlement Region covers a large area, most of which is the Beaufort Sea, about one million square kilometers in all (nearly the size of Alaska).

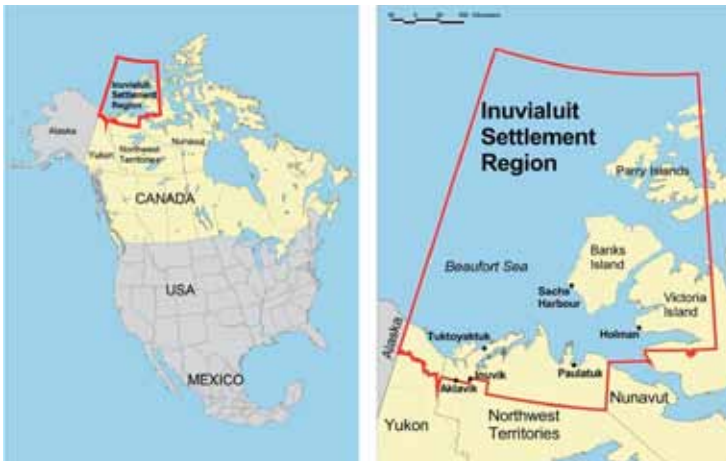
The map on the right shows a close-up of the region. There are six communities in the ISR. My home community of Sachs Harbour is the northernmost community.

Inuvialuit Final Agreement (IFA)

- Aboriginal land claim settlement between the Inuvialuit and Government of Canada
- Signed in June 1984
- Given effect and declared valid by the Western Arctic (Inuvialuit) Claims Settlement Act
- IFA takes precedence over all existing and future legislation to the extent of any inconsistency

As some additional background, I would like to point out that the Inuvialuit signed their land claim agreement with Canada in June of 1984 in Tuktoyaktuk. This was the first comprehensive land claim agreement in the country.

The land claim was given effect by the Western Arctic (Inuvialuit) Claims Settlement Act passed by the Canadian Parliament. The land claim document is more commonly referred to as the Inuvialuit Final Agreement (or IFA).



The IFA is constitutionally protected and it states that the provisions of the land claim take precedence over all existing and future legislation passed by the Federal and Territorial governments to the extent of any inconsistencies.

Goals of the IFA

- To preserve Inuvialuit cultural identity and values within a changing northern society
- To enable Inuvialuit to be equal and meaningful participants in the northern and national economies and society
- To protect and preserve the arctic wildlife, environment, and biological productivity

There are three principles, or goals, of the IFA right at the beginning of Section 1. The first is to preserve Inuvialuit cultural identity and values within a changing northern society. The second is to enable the Inuvialuit to be equal and meaningful participants in the northern and national economies and society. The third goal of the IFA is to protect and preserve the arctic wildlife, environment and biological productivity. This third goal is where the Inuvialuit Game Council, the local Hunters and Trappers Committees in the communities and the regional wildlife co-management boards established under the land claim play a key role.



Climate Change Reality

- Many climate models predict increasing temperatures in the arctic—especially in the western arctic
- Major implications for the Inuvialuit
- The warming trend has already begun

There have been many climate models over the past decade or so, and many are indicating a warming trend. Several of these models have predicted dramatic temperature increases for the Canadian Western Arctic; with an increase as high

as six degrees Celsius over time in some cases. A temperature increase of this magnitude would have very serious implications for the Inuvialuit people. As I will outline in my presentation, the effects of a warming climate are already being felt by my people in many ways.

Climate change is real, and it has already begun.

Traditional Knowledge (TK)

- Inuvialuit already observing impacts of climate change
- Even people in their 30s and 40s are seeing changes within their lifetimes



As mentioned, the Inuvialuit are already experiencing the effects of climatic changes.

Observations of the changes are not limited to our Elders, who have already seen so many changes in their lifetimes as we have moved from being a nomadic people to settling into communities, and seeing the development of resources, such as oil and gas, happening in the ISR in the 60s and 70s.

If you talk with many middle-aged people in their 30s, 40s and 50s you will hear many examples of the differences in their experiences with the land from the time they were younger.

The pace of climate change in the Inuvialuit region is rapid, relatively speaking.

- The changing climate poses challenges for Inuvialuit TK and its ability to reliably predict environmental conditions
 - Source of anxiety for Inuvialuit
 - Leads to safety risks (e.g. adverse weather conditions)
 - Harvesters exposed to greater risk of injury and/or death

This rapid change has led to some challenges in the application of Traditional Knowledge handed down from the Elders to the younger generations.

What was once predictable about the environment has become less so due to climate change. This is also compounded by the fact that many Inuvialuit are not spending as much time on the land in today's world.

The fact that Inuvialuit Traditional Knowledge is facing these challenges for reasons outside of our control is a cause for great concern for us.

This ancient practice of passing along a life's worth of experience to the next generation is being threatened because it is becoming less reliable, and that poses serious safety risks when carrying out traditional practices in a harsh environment.

Sea Ice

- Important part of the ecosystem – used for hunting and traveling
- Ice is rougher and not as thick as in the past, as observed in seal breathing holes
- Ice is melting faster
 - e.g. Observed in Ulukhaktok (Holman) that ice now melts in May instead of June
 - Less multi-year ice; ice is thinner and weather not as cold in the winter
 - Used to be able to travel on ice as late as July

Sea ice is one of the things that will be significantly affected by climate change. Sea ice plays an important part of the northern ecosystem and acts as a transportation corridor for harvesting and traveling.

Many people going out on the ice have noticed that it is becoming rougher than in the past. Observations of seal breathing holes shows us that the ice isn't as thick as it used to be.

A common observation among the coastal communities in the ISR is that the ice melts much quicker than it did in the past.

For example, in Ulukhaktok the ice melts as much as one month earlier than it did several decades ago. Another example is harvesters in Sachs Harbour used to be able to travel on the ice near the community as late as July most years, but this is now much less common.

It is thought that this is due to several factors, including there being less multi-year ice in the area so the younger ice is thinner. With winters not being as cold the young ice is not growing as thick also.

- More frequent easterly winds clear the ice out of Amundsen Gulf and surrounding area
- Early break-ups along with late freeze-ups significantly impact traditional activities
 - No landfast ice in the ISR in December 1998 (usually some by November)

In the last few years there have been periods of open water late into the winter season. An important consideration for this is the observation of more frequent and stronger easterly winds that can move the ice out of Amundsen Gulf and the surrounding area.

These open water periods, along with earlier spring break-ups and later winter freeze-ups of the ice, can restrict the ability of harvesters to access traditional hunting areas and travel corridors. This affects how much time they have to use those areas, impacting harvest success.

As one extreme example, in 1998 there was no landfast ice in the Inuvialuit Settlement Region in December. The landfast ice typically starts forming by November. This posed a lot of difficulties for people in the region that year.

- Must travel late in the season with caution as TK is not as reliable as in the past for predicting safe conditions
 - e.g. Must travel further north to cross the Prince of Wales Strait between Banks Island and Victoria Island

The declines in sea ice conditions have led people to take extra precautions when traveling. As an example back home, people are now traveling much further north to cross from Banks Island



to Victoria Island across the Prince of Wales Strait. Travel across used to start near the southeastern tip of Banks Island (?), but now happens further north on the strait. This is to make sure that the ice is safe enough to cross without unnecessary risks of falling through into the freezing waters.

Landfast Ice

- Taking longer to form
- Melts more quickly
- Near the mainland the extent of the landfast ice seems the same



Another key observation is that landfast ice is taking longer to form and is melting more quickly. However, the extent of the landfast ice near the mainland still seems about the same as in the past, but up in the islands there is less landfast ice these days.

Snow Cover and Weather

- Weather is not as cold as it used to be
 - Precipitation changing
 - Western ISR reports less rain
 - Eastern ISR reports more rain
- All communities report less snow than in the past



Talking to anyone in the region that has been there for a while you will find out from them that the average temperatures we experience today are not as cold, and it is not cold for as long as it was just a couple decades ago. And these are not just the kind of stories that begin with “When I was your age...” Precipitation is also noticeably different, but with different changes being reported by the communities in the western part of the Inuvialuit Settlement Region than the eastern part. In the west they are reporting less rain than in previous years, compared to more rain being reported in the east. All communities, however, are reporting less snow now than they have typically had in the past.

Snow Cover and Weather

- Less snow creates difficult travel conditions
- More wear and tear on skidoos and sleds
- Snowfall starts later and some people say that snowflakes are smaller now
- Severe weather events becoming more frequent
 - e.g. Freezing rain, thunderstorms
 - e.g. Major musk-ox die-off in 2005 due to freezing rain covering vegetation with layer of ice

The fact that the communities are getting less snow is another source of difficulty for traveling on the land. The use of snowmobiles can be severely limited for long periods in recent years as the people are waiting for more snow to arrive in order to go traveling.

The arrival of snow, especially enough for it to stay on the ground and not melt, is happening weeks later than the past. Some people even suggest that the snowflakes are smaller. Of growing concern in the region are severe weather events. These are becoming more frequent in the region and are having some major impacts on the wildlife. A very good example of this happened in 2005 when it rained in the early winter on Banks Island after there was a layer of snow already on the ground. The rain caused a thick layer of ice to form over the vegetation. This prevented the musk ox from being able to get at their food and many starved and died. In the spring there were hundreds of carcasses that could be seen all over the Island.

Transportation / Navigation

- Uncertainty and unpredictability about travel conditions is a significant source of anxiety for Inuvialuit
- Poor travel conditions often result in shorter hunting trips (e.g. spring goose hunt), and increase chances of getting stranded on the land (e.g. wrong side of rivers during flash flood)

- Ice road season is shortening
 - Cost of goods is higher for longer periods

As mentioned earlier, the unpredictability about travel conditions is a source of serious concern for the Inuvialuit people. The concerns have a real impact on people's everyday lives by affecting the ability to harvest and provide for your families. Shorter hunting trips can lead to a reduction in the amount of food that is gathered during important harvesting periods, such as the annual spring goose hunt and beluga whale harvests. Severe weather events have also led to incidents of people becoming stranded on the land.

- Fall and spring travel more dangerous due to unpredictable ice
- Less ice on the oceans causing more waves during open water
 - More waves are reaching the beach in winter on Banks Island



With more ice melting there is a lot more open water that is causing more, and higher, wave action in the Beaufort Sea. This is observed on Banks Island by seeing more waves reaching the beaches during the winter.

- Reduced extent of sea ice causing concerns about the future of the Beaufort Sea
 - International shipping
 - Potential for fuel/oil spills and accidents
 - Regulation and control over access to the Northwest Passage
 - Increased tourism activity
 - Potential impacts on harvesting and compensation for loss of harvest
 - Development activity in the high arctic islands

The current reduced extent of sea ice, and expected further reduction in the future is causing concern among the Inuvialuit and other arctic peoples for several reasons. These include the potential to see increased shipping activities in the arctic and the risks that come with that for fuel and oil spills, or accidents. Control over access to the Northwest Passage is very serious issue for people in the communities along the route. There are currently more tourists starting to show up in the ISR in cruise ships, some of which have shown up unannounced and were not known

to be coming into the region. The Inuvialuit have concerns about the development of non-renewable resources in the high arctic islands with the significant gaps in knowledge of these areas and the operating risks that companies may face.

Industry

- More seismic exploration activity in recent years
 - Speculative work into the high arctic islands (e.g. 2D seismic and aeromagnetic surveys up to Melville Island)
 - Nearly \$2 billion in lease sales in the Beaufort Sea in 2007 and 2008
- More tourist vessels coming into the Beaufort Sea (i.e. cruise ships)
- Sports hunting affected

With more access to the deeper offshore areas from less seasonal ice there is a move by industry into those areas for exploratory activity, which may lead to future development of these resources. In the last three years there has been extensive 2D exploratory seismic work being done in the Canadian Beaufort Sea during the open water seasons. This has led to offshore lease bids by industry totaling nearly \$2 billion in the last two years.

Last summer there was also an aeromagnetic survey conducted along the west side of Banks Island all the way up to Melville Island. Climate change is also negatively affecting the sports hunt industry in light of the recent decision by the United States to list polar bears as “threatened” under their Endangered Species Act due to predicted impacts of climate change on sea ice.

In Canada, the Committee On the Status of Endangered Wildlife in Canada (or COSEWIC) recently recommended to maintain the listing of polar bears as a species of “Special Concern,” one step lower than “Threatened.”

Permafrost

Erosion

Next up I will talk about some of the issues we face with relation to climate change impacts on permafrost. Permafrost is a unique feature of the arctic where the ground is permanently frozen. Here you can see an example of the coastline from Banks Island



where the ocean is under-cutting the shore, which eventually leads to large chunks of the land breaking off and getting washed away by the water. Coastal erosion poses threats to two communities in particular: Sachs Harbour and Tuktoyaktuk, where some buildings have already needed to be moved due to loss of land along

the coast. If things get worse in the future we may be facing something as serious as relocating large parts of the community further inland.

- Instances of rapid lake drainage on Banks Island
- Shifting buildings – doors can't open/close in houses during different seasons
- Erosion of shorelines putting houses and other infrastructure at risk

Erosion on Banks Island and some parts of the mainland have led to rapid lake drainages. Once a small channel appears along the edge of a lake from melting permafrost it can quickly expand and cause most, if not all of the water to drain out. An entire lake can be drained in a matter of hours as has been witnessed by people on the land.

Temperature changes to the permafrost are causing buildings in the communities—which are built on pilings in many cases—to shift and can cause doors to not be able to open or close (a very serious concern in the winter time!). This problem can shift from one side of a house to the other with the change in seasons.

As mentioned on the previous slide, shoreline erosion is putting houses and other infrastructure at risk in some of the communities. For example, the Old Folks Home and the graveyard in Tuktoyaktuk may see water from the Beaufort Sea encroaching on them in the next few decades.



Here you can see an example of an ice lens, which is similar to permafrost, but has no dirt mixed in with it.



This is called “slumping.” It happens when the permafrost underneath the surface melts and it gets muddy and just slides right off in big sections. This exposes more permafrost, as you can see, and makes the newly exposed permafrost and ice thaw more quickly.



In this slide you can see a very visible example of the impacts of degrading permafrost. In this instance a well established community trail on Banks Island has had to be moved due to erosion of the shoreline of a lake. As you can see, in a few more years the trail may have to be moved again.

Adaptive Measure in Tuktoyaktuk:

Rocks Placed Along Shoreline

This is an example of some of the measures the community of Tuktoyaktuk has taken to try and prevent further erosion of the shoreline along the west side of the community facing the Beaufort Sea. This is an older picture and there is a wider band of rocks in place now. This was a very costly thing for the community to undertake, and it still may not be able to fully stop the erosion that is going on.



To try and prevent further erosion of the shoreline a wide band of rocks had been put in place.

Fishing and Harvesting

- Changes being observed and attributed to environmental changes (including climate change)
 - Quality of fish meat is declining (fish are “soft”)
 - Difficult to completely dry the fish by smoking
 - Tuktoyaktuk reports catching fewer herring
 - Paulatuk reports arctic char meat is pale
 - Species of salmon starting to be caught



While not all these impacts are thought to be necessarily only due to climate change, it is felt that climate change plays a significant role in what is happening in the region. This has led to difficulty in the preparation of the meat, particularly drying or smoking the fish. Communities are reporting that the quantity of fish they are catching is decreasing.

They have also started to catch different species, such as a few types of salmon, that have not been observed in the Inuvialuit Settlement Region until very recently.

- Less ice thought to be affecting seals; pups not being nursed as much by mothers



- Seals are skinnier and quality of pelts is declining
- Poor conditions of seals may affect polar bears

Less ice in the Beaufort in the summers is thought to be affecting the ability of seals to nurse their young as there are fewer platforms for them to do this on. People have also been noticing the seals getting skinnier with poorer quality pelts. This decline in seal health is considered to be one factor that could affect polar bears in the region as well.

- Beluga harvesting being affected
 - People waiting for cooler weather to harvest
 - Hot weather spoils the muktuk (a traditional food made from whale) faster
 - Less success because of shorter time frame for harvesting



Beluga whales are an important cultural source of traditional country food for the Inuvialuit. On the mainland we are seeing beluga harvesting being affected, especially in the last few years. Temperatures over 25° Celsius are causing people to wait for cooler weather in order to do their hunting. This hot weather can cause the muktuk to spoil more quickly, even while it is being prepared shortly after the harvest when the temperatures are above 30°. This more frequent hot weather is causing a reduction in the amount of hunting time the Inuvialuit have, and that is leading to declines in harvesting success. This puts hardship on the people as they lose a major source of food.

- More frequent windy conditions in recent years have kept people from being able to harvest as often as in the past

Another factor that is impacting harvesting success is more frequent stormy weather. As an example of decreased beluga harvesting success, the community of Aklavik has



harvested an average of less than 10 beluga whales in the last 10 years (with only two being harvested in 2008), when data shows the average annual harvest for that community in the late 1970s and early 80s had been over 20 whales.

Forcing Cultural Change

- The Inuvialuit cannot carry out traditional practices as has been passed down to them from their Elders
- The Inuvialuit are being forced to find new ways to make a living
 - Wage economy
 - “Weekend hunters”

In conclusion, the Inuvialuit way of life is changing significantly, and not entirely by choice. Greater unpredictability in the environment is affecting the reliability of our Traditional Knowledge in this changing world around us. Making the problem worse is the fact that Inuvialuit are having to leave a more traditional lifestyle and enter into the wage economy in order to be able to support their ability to continue to carry out traditional activities on the land. This makes the situation worse as now fewer people are spending less time on the land to monitor the changes happening to the land and the animals due to climate change. Less time on the land also means that Inuvialuit have to supplement their diets with expensive store bought foods, placing a further burden on them to get jobs and earn money. With so many in the workforce a lot of Inuvialuit are becoming “weekend hunters” who can only go out on their time off of work.

I am here today to let you know that climate change is real, and we as Inuvialuit people are already being significantly affected by it. It is only a matter of time before the impacts move their way south into the more populated areas of the world.

[Back to Contents](#)



CHAPTER 10

Use and Conservation in the Comcáac Territory

*Efforts to protect cultural and environmental resources
of the Comcáac community
Sonora, Mexico*

By Mayra Estrella & Leonel Hoeffler







Comcáac women in traditional dress and face painting



Roberto Molina, Traditional Singer



Traditional Dance of the Comcáac community



Use and Conservation of the Comcáac Territory

Today, the Comcáac work in environmental groups focused on conserving the wildlife, endangered species, and natural and cultural resources of the Comcáac community



**Sierra Bacha Expert Team
Big Horn Sheep Conservation**



Protection of Birds



Music with Wings, Traditional Comcaac (Seri) Songs about birds



Monitoring Migratory Birds



Biocultural Conservation

Grupo Tortuguero Comcáac—Sea Turtle Conservation



Turtle Species





CHAPTER 11

Toda Sanctification of Freshwater Sources¹

(Essay)

Edhkwehlynawd Botanical Refuge, Nilgiris, South India

By Tarun Chhabra

*Tarun is a dentist and Founder of Edhkwehlynawd Botanical Refuge
Ootacamund, Nilgiris, South India.*

Abstract—Through sanctification of freshwater sources—be they rivers or waterfalls considered as deities, or streams segregated only for temple-associated activities, to those connected with mythical times—the Todas have provided protection to their water catchments. This aspect (not realised by present-day administrators) has contributed in no small measure to the miniscule Toda heartland contributing a major share of Tamil-Nadu State's (India) hydroelectric energy requirements.

The Toda Homeland

Above 1600 metres (and up to 2600) the Upper Nilgiri Plateau in southern India is dominated by *shola*-grassland. Stunted evergreen montane forests, or shola, nestle in the moist hollows between folds of the otherwise grass-covered hills, where they are protected from wind and fire. Unfortunately the environment has

¹ In: Watson, Alan; Murrieta-Saldivar, Joaquin, comps. 2009. Science and Stewardship to Protect and Sustain Wilderness Values: 9th World Wilderness Congress symposium; 2009, 6-13 November; Mérida, Mexico. Proceedings RMRS-P-000. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

changed considerably, with once vast areas of grassland now planted with exotic trees like eucalyptus, black-wattle and pines to supply raw material to the industries in the plains. Large areas have also been inundated by reservoirs to meet the hydroelectric power requirements of Tamil-Nadu, while much of the remaining area is under tea and potato cultivation. The Nilgiris is now a major tourist destination and has all the trappings of a modern Indian hill-station. There are, however, two National Parks: Mukurti (dominated by *shola*-grassland) and Mudumalai (characterised by deciduous forests). These two areas form the core of the Nilgiri Biosphere Reserve, the first as such in India. This reserve extends over an area of 5500 square kilometres and includes the famous Silent Valley National Park.



The Todas are the oldest still-existent inhabitants of the Upper Nilgiris having dwelled here since ancient times. With their quaint barrel-vaulted structures, their embroidered cloaks and their ferocious looking long-horned buffaloes, the Todas have fascinated the world ever since “civilization” stepped into the Nilgiris over 180 years ago. Both the Todas and their beloved breed of buffaloes are restricted to the Nilgiris. Their culture revolves around these herds, with each of the six grades of temple-dairies having a corresponding herd of sacred buffaloes. Only a man who has become a priest after undergoing the elaborate ordination ceremonies specific to each grade, can then milk the corresponding grade of sacred buffaloes and ritually process it into butter, buttermilk, curd and clarified-butter. Indeed, the rituals that go into this sacred dairying process are so elaborate that a few volumes would be required to describe the same procedures for all the grades of temple-dairies.

Sacred Rivers

Two major rivers originate in Upper Nilgiri catchments. The most sacred river to the Todas is the Mukurti-Pykara system. This river has different names at specific places, but is generally called Kawlykeen. Its sanctity is enhanced by the fact that there is a deity waterfall on the middle-reaches of this river, called Awllvoy. This waterfall is comparable to the deity peaks where the other Toda gods and goddesses are believed to dwell. The myth that tells of the creation of this river underscores the sanctity of such water systems for the Todas. This sacred river has

² A *tee* is the most sacred of dairy-temple institutions.

its source in the Mukurti region, a high rainfall area known to receive over 10,000 millimetres (394 inches) of rainfall annually.

In ancient times, there was a priest who was serving at Mojaadr tee² near Kaadry Hill in the Mukurti area. One day, in the dry season the priest and his assistant went to gather honey, taking different routes. The priest walked towards Tehhdhykeihhn Hill. Here, inside a dense shola, he found a *pehhr* (tree-hive) brimming with honey. The priest, wanting to hide his discovery, did not harvest any of his honey, nor did he inform his assistant about it. Meanwhile, the boy-assistant had located a new tree-hive that contained only a small quantity of honey on the way to the escarpment called Pōnaarr. He collected this in a leaf-vessel taking particular care to observe all the rules for gathering honey. The priest's assistant now delivered the honey he had just collected to the priest.

The next day the priest, sending his assistant away, set out to collect the honey he had discovered earlier. His plan was to quietly harvest it and send some back to his hamlet. Soon he had filled a *pehn* (bamboo-container) with delicious honey. He cut some lengths of *kwehdry* creeper and fabricated a sling and handle to carry the *pehn* on his back. He began to descend out of this shola, situated on the slope of Tehhdhykeihhn Hill. Unfortunately, he had traveled only a short distance, when, due to his haste in securing the *pehn*, it fell to the ground and broke open. On breaking, the bamboo-vessel full of honey turned into a snake. The honey that started to leak out and flow downwards later became a stream of water also following the same course. The snake looked menacingly at the priest who, terrified, began to run away. The snake gave chase over a distance of more than a kilometre. Just then the priest noticed a *mhee(r)sh* (Black-naped Hare) crossing his path; instinctively, he threw his *thinny* (black loincloth) over the hare. The snake, assuming the cloth-covered hare to be the priest, chased after it over a distance. The hare proved to be too fast for the snake, and the route taken by the snake as it had chased the priest and, subsequently, the cloth-covered hare, turned into the course of the Mukurti-Pykara River. It is believed that the stream that flowed from the spilled honey became the source of the Mukurti-Pykara River and, if one visits the same shola on the slopes of the Tehhdhykeihhn hill, there indeed lies the source of this sacred river.

Traditionally, the Kawlykeen was so sacred to the Todas that it could not be crossed by people suffering from *ichehl* (ritual impurity). Such impurity is incurred



most commonly through close association with death and childbirth as well as with impure persons and objects. Those that crossed the river also had to observe certain rules. For example, it was forbidden to cross the river on certain days of the week, and while crossing, one had to observe *kefehnaarr*, that is, having

one's right shoulder uncovered. There is a well-known song, composed in the 19th century, at the funeral of a man named Marvoy who, after engaging in coitus, crossed this sacred river while on his way to gather honey on Mount Mudhmarr. He thus violated both the sanctity of the river and the ritual prerequisites for honey gathering. Only after a few days had passed, and Marvoy failed to return home, and vultures were seen hovering on the opposite side of the river, did his relatives set out in search of him. They discovered his body nearby a steep rock where he had been looking for honey. He had been killed and mauled by a tiger. His death was attributed to his breaking of sacred rules for crossing the river and honey gathering.

There were certain specified crossing-points at which the people could cross the sacred river, but they differed for laypeople and priests; there were specified days on which one might use particular crossing-points and others were exclusively for the use of tee-dairy priests. The principal crossing-points of the Kawlykeen from its source to end were:

- a) *Koylkwehhdr-pahh*³. The origin of the river, on the slopes of Tehhdhykeihhn Hill. This name comes from the bamboo vessel that fell from the priest's back.
- b) *Kawtty-pahh*
- c) *Tattollb-pahh*
- d) *Nelkawttehrr-pahh*
- e) *Izhtal-pahh*
- f) *Kob-pahh*
- g) *Pa_-pahh*
- h) *Kawttyarr-pahh*
- i) *Kol(d)zerr-pahh*
- j) *Peshaw-olln-pahh*
- k) *Nodr-pahh*
- l) *Ma(r)shnovoy*
- m) *P-hill(zh)-pahh*
- n) *Korrkwehdd-pahh*
- o) *Kiddyk(k)al-pahh*. Located below the Pykara rapids.
- p) *Muteezh-pahh*. Located midway between the Pykara rapids and the final waterfall.
- q) *Kadrta(r)sh-pahh*. Just before the river hurtles down the northwestern Nilgiri escarpment in the form of an awesome waterfall. This is the point up to which the mythical hare is said to have been chased by the snake—thus also marking the complete course of the newly created river.



³ *Pahh* is the generic name for a river or large stream in Toda (Pronounced with the letter “a” here as in “another” [British]).



The above-listed sacred crossing-points no longer have much relevance for the daily lives of modern day Todas. This is because the waters of the Pykara and Mukurti hydroelectric reservoirs have submerged most of them (now visible only during the dry season). The damming of this sacred river system has also obliterated many

hamlets and temples. Several migratory buffalo paths have also been submerged, which has, in turn led to the abandonment of the associated dry-season hamlets and contributed to the termination of the tee-dairy institutions.

Like the Kawlykeen, the second major river of the western Nilgiri Plateau, Kinatthill(zh)y (the Avalanche River), is associated with honey. In ancient times, a Kurumba (another Nilgiri indigenous group) couple that was roaming in this area happened upon a tree-cavity hive located on the middle heights of Peell(zh)n Hill. The Kurumba man said to his wife, “Let us first have coitus before harvesting that honey.” This they did, going later to collect the honey, some of which they ate; the rest they wrapped in a leaf container, to take back to Pawny, their hamlet. Their behaviour represented the most serious transgression of sacred honey-hunting rules. As a result, while they were exiting the shola, a tiger suddenly pounced on the Kurumba man and took him away. Justice had been meted out. The Kurumba’s wife at first was paralysed with fear, but soon ran away. In her haste, she left behind at the foot of the tree-hive some betel leaves (*pakh-e(r)sh* in Toda) and nuts that she had been chewing. After some time, at the very place where she had left the nuts, a unique tree species rose from the ground. Todas call this tree “*pakh-meihhnn*,” literally, “betel tree” (although unrelated to the betel). Subsequently, this species spread to adjacent *sholas* and today is found in many of these Nilgiri woodlands. Many years later, the legend tells, water started to spring from nearby the first *pakh-meihhnn*. Later on, this water supplemented by other streams, became a major river, which Todas named Kinatthill(zh)y. Like the Kawlykeen, the Kinatthill(zh)y also may be crossed only at certain places and on certain days, and, necessarily, in a condition of ritual purity. The principal crossing-points of the Kinatthill(zh)y from source to end were:

- a) *Pehnon-pakh*⁴. This place, near the river’s source means, “the river arises from the pakh tree.”
- b) *Kaihhn-pahh*. This large stream is near the erstwhile hamlet, Kwehdrawdr, at the foot of Mudryn Hill. The names of the first three crossing-points

⁴ This is often *pehnon bakh* (b and p are interchangeable); similarly, *pahh* is often *vahh* or *bahh*

here are mentioned in the Kwehdrawdr prayer (see table below).

- c) *Taihhbwa(r)shy-pahh*. This awesome waterfall is situated just across from the Avalanche hydroelectric powerhouse, but has now been submerged (visible during the dry months).
- d) *Peneihh(r)sh-pahh*
- e) *Awrrdawll(zh)-pahh*
- f) *Narymaa(r)sh-pahh*
- g) *Pakh-pahh*. The name derives from the origin of the river as described in the legend.
- h) *Kozhkpaihrr-pahh*
- i) *Kwehlf-warrykh-pahh*. This name means “the point where Kotas watched the river sleep”; located beyond Podhmaa(r)sh hamlet. It is derived from an old story that tells of the foolishness of some Kotas (the other indigenous people living alongside the Toda) who once tried to cross this mighty river.
- j) *Pehrrl-pahh*
- k) *Kwarrmehdr-pahh*
- l) *P-heedhykudry-pahh*
- m) *Eihhrrnkarr-pahh*
- n) *Keekhwehhdhy-pahh*. A large stream that flows into the Kundah Reservoir near the dam. It is also the point at which the river begins to descend the southern Nilgiri slopes.

The Todas regard the two major rivers that we have discussed thus far, as being so sacred as to be divine. Thus the Kawllykeen and the Kinatthill(zh)y are not only rivers, but also gods.

In the west of the Upper Nilgiris, there are other smaller rivers which the Todas regard as sacred. Many of these have also been dammed in recent times. These include: Kwehllkal-pahh (Upper Bhavani), Arrg-pahh (part of the Awllvoy deity waterfall), Pufehr-keen (crossed by departing spirits), Kudrsawll-pahh and Kaihhkwehhdr (Kamaraj Sagar), Taihh-pahh (Parson's Valley; literally, “river of the gods”), Toddkal-pahh (Emerald Valley) and Kedhehrr-pahh (Porthimund).

There are stories concerning the power of specific river deities. One such is remembered by Toda elders with mixed feelings. This relates to the construction of the Mukurti Dam across the sacred river over 40 years ago. Predictably, the Toda people were aghast at the obliteration of the





sacred crossing-points as well as the migratory pathways leading to the tee temple-complexes. They consulted a Toda oracle, who, after going into a trance, stated that although the dam was almost built, there was hope provided their people remained united. It is said that the Todas held a prayer ceremony, a few months after which,

the newly constructed dam (not functional then) mysteriously developed a large crack. However, the government went ahead, successfully repairing the defect, and this dam has been functional ever since. Todas believe that the government's will prevailed over theirs with the authorities conspiring to ensure that the Todas have remained disunited thenceforth.

Sacred Streams

Every Toda hamlet that has a dairy-temple will have at least one sacred stream, besides its non-sacred stream for domestic use. The segregation of sacred and domestic streams is marked and often a dairyman-priest who is relinquishing office touches the domestic stream so as to reduce his ritual status to that of a layperson. Some hamlets have separate streams for ordination rituals and for drawing water for use at the dairy-temple. Otherwise, ordination rites are held upstream, while water is drawn for the temple lower down. The generic name for a dairy-temple stream is *poll(zh)y-neepahh*, but each individual stream has its own *kwa(r)shm* (sacred name), which is used by the priest when he recites the prayer for the associated temple.

In case a hamlet has two or even three temples, there may either be a stream for each temple, or two of the temples will share the same stream, but with the higher-grade institution using the upstream portion and the lower-grade one, the downstream. No person other than the officiating dairyman-priest, or a male undergoing ordination for priesthood, is permitted to touch the sacred water of these streams. When a dairy-temple is reopened after a lengthy interval during which the waters of the associated stream may have been defiled by a layperson's touch, or when it is positively known that such pollution has occurred, the dairyman-priest must purify the water with *tehhdr* bark (*Meliosma simplicifolia* ssp. *pungens*) It is noteworthy that there are some special ceremonies where the priest is required to use several materials—of which dairy-temple stream water is central—to restore sanctity to either a sacred object or to a temple and hamlet.

Besides the *poll(zh)y-neepahh*, most hamlets have another stream that provides the water to fill the salt pits from which buffaloes drink several times a year. Only

a priest may draw water from such streams for this purpose. Some dairy-temples of exceptional sanctity—such as the conical Konawsh *p_w*—have another stream which is reserved for the purificatory bathing by laymen approaching the sacred edifice. At some hamlets like Teihhfakh, there is a stream meant for cooking festive fare.

All these sacred streams must flow throughout the year, as dairy-temple operations and salt-giving rites occur during the dry season as well as during other times of the year. Todas most commonly attribute the drying up of their sacred water sources to disturbances in the ecosystem, for example, constructing reservoirs, establishing plantation trees and crops and climatic changes, but they also point to priestly transgressions of sacred rules or ritual pollution by outsiders.

It might be worthwhile to quote one example firsthand. At the now-abandoned hamlet of Kashwehh, the sacred dairy spring is called Ooneer. Since ancient times, only the priest has drawn water from this pool. Now that the hamlet is unoccupied, other people may occasionally use this water with utmost reverence. For several years, I have been visiting this hamlet simply to observe periods of solitude in the wilderness. This sacred spring has always had water flowing, even during the driest months. Only twice was it observed to have run dry, and both times during the monsoon season. Once, this anomaly was traced to a non-Toda buffalo herder whose daughter had apparently drawn water from there during menstruation. This man immediately understood the reason and performed some rituals, and the water came back.

In certain instances, I have noted some remarkable adaptations by the Toda of yore. For example, there is the site of an abandoned migratory hamlet called Eelgwehhdr, where the sacred stream flows in a circular fashion around the buffalo pen. In this case, instead of the circular stone wall that usually encloses buffalo pens, the stream forms most of the pen, with the stone wall component restricted to just one portion. Presumably the Todas either diverted a stream to take a circular course, or else took advantage of a water body that followed a unique orientation.

Todas venerate several swamps that are designated by specific prayer names. These wetlands have been profoundly changed in recent times, inevitably for the worse. Vast areas extremely rich in biological diversity were destroyed by the damming of the sacred rivers. These swamps have also been destroyed or altered due to: agriculture, planting of exotic trees, overgrazing, lack of burning—especially by the Todas (this ritualised form of ecosystem management performed by the priest, using fire sticks, is now forbidden) and climatic changes affecting the Southwest Monsoon.



One way in which Todas manage their ecosystem is by ensuring that sholas and grasslands around sacred water sources are undisturbed. They are aware of specific water-conserving plant species and take special care to see that such plants flourish around water sources. Most of these species have a complex subterranean sponge-like effect, but a few like *poll(zh)-awll(zh)-e(r)sh* (*Pleiocraterium verticillaris*), hold “jugs” of water in the midst of a rosette of large vertical leaves. It is due to such plants that the western area of the Upper Nilgiris has the distinction of being one of the few ecosystems where precipitation and ground water runoff levels are similar.⁵

They have also indirectly managed their ecosystem by the performance of certain rituals such as giving salt water to buffaloes during different periods of the year. This activity, besides its utilitarian purpose of providing salt for their buffalo herds—the Upper Nilgiris is almost devoid of available natural salt—is also a ritual plea for an abundance of rain—which, in turn, will provide succulent pasture for the buffaloes, who will thus provide an abundance of milk—and other natural resources including replenishment of sacred water sources. There is an annual ceremony where Todas gather on the summit of Paw(r)sh Hill, to pray to the Pykara River deity for substantial rainfall and the resultant good health of their ecosystem.



Kaa(r)shgol (Nilgiri Peak) is one of the most important of the Todas' deity peaks and the abode of a god of the same name. In Toda thinking, this hill is related to the onset of the southwesterly monsoon. Todas say that the first mists of the Southwest Monsoon swirl around this deity hill (like people perambulating a

temple building) before moving to the distant deity hill Kawnttaihh where the mist similarly encircles the summit, after which, the monsoon rains will begin. Three conical projections may be seen on the rocky face of Kawnttaihh Hill. The Todas have a *kwa(r)shm* for each one: *Keezhkymehn*, *Kwaw(r)shy-v_w* and *Tee(r)shymudry*. It is said that these three conical projections store the mist, wind and rain respectively.

The Todas also recognize a number of indicator flowers. For example, the flowering of the *kwaadr-kol-poof* (*Anemone rivularis*), or “monsoon-season flower”, indicates that the Southwest Monsoon has reached its peak. The flowering in early September of the Nilgiri lily indicates the last phase of this monsoon. The Todas predict the impending end of the southwesterly monsoon by the

⁵ Lengerke 1977: 239

mass flowering of *maw(r)sh* trees (*Michelia nilagirica*) in the sholas. By mid-September, there is a profusion of these large, beautiful and fragrant cream-coloured flowers. The accuracy with which such indicator species flower provides information on ecosystem health, including water sources, since the monsoon controls their status.



There is a singular example of a waterfall site, Awllvoy, with its associated deity as mentioned earlier. Other categories of sacred waters are connected with certain important Toda-related mythical events of the past; some are mentioned in the prayers of nearby hamlets. For example, the pool Nehrykaihhrr at which the goddess Taihhki(r)shy is believed to have created the buffaloes, is mentioned in the prayer at the conical temple at nearby Paw(r)shaihh. Similarly, the stream Naihrrot-kwehhdr where the god Kwattaihhow is said to have tied down the reflection of the sun, turning daylight into darkness, is mentioned in the prayer of the conical temple, Konawsh.

It is said that, after he had moved to rule the afterworld, the god Aihhn so missed his favourite son Pyoof that he decided to fetch him closer. Once, when Pyoof was serving as the priest at a temple-dairy at Kehhwehder, he went to draw water from the sacred stream, *Ki(r)shneer*. He had forgotten that the churning stick had not been removed from the very sacred *pawtatt*-grade vessel inside the temple. This constituted a transgression of dairy rules. When he saw his silver ring reflected in the water, he thought it had fallen into the stream and so tried to reach for it. At that moment, a *kaarpill(zh)c*, or male Pied Bushchat (*Saxicola caprata nilghiriensis*), who was observing the scene from a tree above, tried to caution Pyoof of the danger facing him by fluttering in front of him. But the birds' warning was to no avail and Pyoof fell into the water and was drowned. Such is the power of the dairy-temple and associated stream.

According to Toda belief, at one time there was free movement between the peoples of the afterworld and this realm. This came to an end, after a man named Ponehtteihhn and his friend went to spend a few days in the afterworld. While there, his companion stealthily returned to Imunawdr (this world), where he informed the relatives there that Ponehtteihhn had decided to stay permanently at Amunawdr (the afterworld). Consequently, Ponehtteihhn's clansmen performed his funeral rites, using a length of wood covered with an embroidered cloak to represent his body. Then they sacrificed 30 buffaloes. As Ponehtteihhn was making his way home from Amunawdr to Imunawdr, he met the sacrificed buffaloes traveling in the opposite direction. Ehnmon, the lead buffalo, explained to Ponehtteihhn that his funeral rites had already been performed, after which

man and buffalo put their heads together and wept in the manner that the Todas still do at funeral ceremonies—this incident having initiated the curious ritual. The copious tears of Ponehtteihhn and his buffaloes formed a large pool called *keneer-kaihhrr* (literally: “tears’ pool”). This is now called Marlimund Lake, one of the sources of modern Ootacamund’s drinking water.

During the “dreamtime,” it is said that a man with supernatural powers called Kwattaihhhow used to infuriate the gods in different ways. Exasperated, the gods met in council, and challenged Kwattaihhhow, saying that if he could make Ofoykwehhdr, the nearby stream, flow backwards and turn daylight into darkness, then they would accept him as one of their own. Unperturbed by these seemingly impossible tasks, Kwattaihhhow went and found an enormous cylindrical stone, which Todas now call Kwattaihhhow-ka(r)sh, or “Kwattaihhhow’s stone.” He took this stone, which can still be seen today, using it to dam the waters of this steep stream. Soon, the water began to flow upstream.

The legend goes on to tell how Kwattaihhhow accomplished the next assigned task by “tying down” the sun’s rays into a still-visible circular pit within a stream called Naihhrot-kwehhdr, thus creating a momentary state of darkness. As a result of these stupendous tasks the gods gave in and admitted him as one of their own.

A second major deity, Kwatteihhn, is similarly remembered. Towards the end of his life, Kwatteihhn and his inseparable friend, Errtn, were returning home from the village called Peihhtt, in Kerala state, with salt (then a most precious commodity). When they crossed the river Pölpahh, Kwatteihhn saw a hair entwined around his foot. On lifting it up, he was astonished to see that it had an unusual golden hue and was almost as tall as he was. He asked Errtn to wait while he went upstream in search of the person to whom this exquisite hair belonged. Errtn had a foreboding of what might happen to his friend and tried to dissuade him from going. But Kwatteihhn would not relent. The story goes that he soon came upon a group of divine female figures playing naked in an incredibly beautiful pool of water, with their capes placed on a nearby rock. On spotting him, they quickly gathered up their clothing and ran away leaving only one of them behind. Kwatteihhn, realizing that the remaining figure was none other than the goddess Teihhkosh, sat atop her clothing until she agreed to marry him. Finally, much against her wishes, she acquiesced although Kwatteihhn soon had to pay the price. Sure enough, the next morning Kwatteihhn was missing.

I was able to undertake a memorable journey down the Nilgiri slopes, to the Kurumba village, Pawny. Finally I found a Kurumba man who was able to take us to the circular pool where Goddess Teihhkosh and her companions had bathed. It is an exceedingly beautiful pool, where one may feel engulfed in divine vibrations. There are even indentations on the rocks of bracelets and footprints, where the goddess is said to have placed her clothing.

Legend has it that Kwatteihhn subsequently took residence in an outstandingly peaked hill in the Attapadi area to the southwest of the Nilgiris.⁶ He took with him Goddess Teihhkosh, who occupied the adjacent hill and his friend Errtn, who took residence in a third, smaller hill. The Kurumbas undertake



an annual pilgrimage to Kwatteihhn Peak along with the odd Toda who might be willing to come along. On the morning of their descent, they dig up some rare herbs reportedly found only near the summit. These are soaked in bamboo vessels filled with holy stream water that would be given to hundreds of expectant pilgrims at the foothill. This is a living example of sanctification of water from a deity hilltop.

Even in the mundane rites of passage, waters do play a role. One of the first sights that a male baby is shown by his grandfather during the naming ceremony, is the sacred waters of his hamlet. At the birth and pregnancy ceremonies, water has to be collected from a non-regular source, i.e. neither sacred nor domestic, which means that most hamlets require yet another freshwater source in the vicinity. The ritual involves collecting this water in a special bamboo reed, and then proceeding to pour it into another similar reed over the back of a calf. This reed is placed into an imitation dairy-temple built from branches of a specified tree. The pregnant or newly delivered lady then has to perform a ritual where she drinks this water ceremonially from special leaf cups. Although the water has been drawn from a different, non-sacred source, it is deemed to have acquired sanctity by the process of pouring over the calf and by placement within an imitation dairy-temple. At the culmination of funeral rites, after the corpse is ignited, a lock of hair wrapped in a *pell(zh)kodd.c-mhill(zh)y* (*Rubus ellipticus*) leaf is thrown into the pyre and soon after, a pot full of water (from a non-regular source) is dropped and broken on a stone.

Finally, there are waters related with the journey to the afterworld. The first to be crossed by a departing spirit is the Kinatthill(zh)y River. The spirit trudges along to reach the landmark Kojkawcn-behll(zh) where some of the food that was placed within the cloak-pocket at the funeral is to be cooked using water from the adjacent stream. The spirits then descend downstream to reach a spot called Wa(r)shkonnc-kwehhdr where a pit closely resembling a mortar can be seen in

⁶ For a description of this hill, I quote the words of the sportsman-naturalist R.W. Burton (1940 *Journal of the Bombay Natural History Society* 41: 69-75): "Within the angle above mentioned is the conspicuous hill named Malleswara (5458 ft.), with its remarkable pinnacle having a 400 ft. perpendicular scarp, which dominates the whole valley and can be seen stabbing the sky from Mettupalayam. It is said that no man has ever set foot on the top of the pinnacle..."

the rocky stream bed. Here, the female spirit is supposed to pound grain using the pestle (*wa(r)shk*), both of which were offered to her at the funeral rites. Further along, the Upper Bhavani River (Kwehllkal-pahh) is crossed before reaching a hill called Pehshaa(r)sh on the other bank.

The spirit goes down and then over another hill to descend towards a stream called Pufehr-keen or Bhavanipuzha. Here the spirit has to cross a thread-bridge connected horizontally to two rocks on either side of the stream. The thread-bridge of course, is invisible to mortal eyes, but the two similar looking vertical rocks are present on either aspect. As the spirit crosses this bridge, if when a mortal it had breached certain taboos, then it would fall into this stream where it is bitten by leeches and all sorts of creeping creatures. He is finally relieved of this punishment when the spirit of the sacrificed buffalo, having already crossed this stream, gives him its horns and pulls him over to the other side. However, if the spirit has lived a good life, he or she will cross the thread-bridge safely and with ease.

Perhaps the spirit shudders now and descends to soon reach a stream with some pointed rocks standing on one bank. Behind one of these rocks lurks a large dog called *pehhreht-nawy*. The *amutawll(zh)*, or the people who are already living in the afterworld, are sitting and watching from the summit of a hillock just ahead. When the spirit reaches this spot, it must run rapidly across the stream ahead to reach the Padrmakh-tehrr wetland which is the next landmark lest the dog that is now chasing him is able to catch up with the spirit.

Conclusions

Maintaining the Sanctity of Water

It is important to document the sacred waters of the Todas before knowledge of them is lost. Prior to damming, the sanctity of rivers was maintained, primarily, by adhering to rules and regulations related to their crossing and human purity—both of the priests and lay Todas. Chanting sacred prayer words while crossing these rivers also added to their holiness.

But the holy waters physically used by the priests for various activities maintain their sacredness through certain direct and indirect measures—the most important of these being the segregation of such waters for specified uses, followed by the fact that these are to be used only by the ordinand or the priest. This ensures that they do not usually get defiled by laypeople. However, the priest continually purifies the sacred waters with *tehhdr* bark (*Meliosma simplicifolia*) to restore any possible lowering of sanctity.

In addition to this, waters, like those of an ordination stream, are purified by coming into contact with the leaves of several thorny plant species, or *tehhdr*. Similarly, the waters associated with the dairy-temple and salt-giving rites are deemed to be additionally purified by contacting with various sacred vessels and

the focus of divinity within the temple. And as these categories of sacred waters have their own *kwa(r)shm*, or sacred words, that are chanted in the prayer by the priest, an element of sanctity is frequently reinforced. From these prayers that are recited at the dairy-temples and major hamlets we can discover the *kwa(r)shm* of the most important sacred streams, pools, rivers, waterfalls, wetlands and springs. Close to 150 such sacred names are listed in Table 1 below.⁷

Finally, it is the people in general who periodically pray for the wellbeing of the sacred water sources. For instance, on the migration day to Konawsh, the people present pray not only for the general wellbeing—especially of the priest—but also specifically for the sacred waters. This portion of the prayer may go like this: *kirsneer pehdry maww*, or, “May the waters of the dairy stream gush forth.” Similarly, on the migration day, when the men link hands and sing the *konn ezht* composition, the sentence relating to the sacred waters could be: *atwaa(r)sh vehll(zh) nehddanawdr / apahh koott.zh nehddanawdr // Sacred hamlet that is situated at the pathway to a shola / Sacred hamlet that is located near a sacred stream//*.

Conclusion

As the urban population the world over becomes more and more used to water that flows through pipes and out of faucets, they need to understand and learn from the sacrosanct relationship that indigenous people have had and still have with their surrounding water bodies.

Partly due to the fact that many of the major as well as smaller river systems that originate in and around the Toda heartland in the Upper Nilgiri Plateau have been venerated by Toda people as deities, and thus accorded a great degree of protection, this area has been the principal freshwater source for the surrounding plains and hills located in three Indian states, since ancient times. This has made several key advancements possible:

1. By according sacred status to several hundreds of smaller freshwater sources situated in the vicinity of each hamlet, and whose waters are associated with their dairy-temples and rituals, the Toda people have simultaneously ensured that the surrounding ecosystems, including the hydrology conserving species of plants, are also preserved in addition to all these local, sacred waters.
2. By according sanctity and importance to numerous freshwater sources—both large and small—that are mentioned in the Toda mythical and cultural heritage, the Toda people have ensured their protection over the centuries.

⁷ In addition, there are numerous less-sacred waters that have *kwa(r)shm* that are not mentioned in the prayers. These are omitted in Table 1.

3. By according sacred status to several wetlands from where they also harvest culturally important plant species, the Toda people have traditionally managed these swamps brilliantly, by combining ritual with practicality.
4. By protecting the plentiful freshwater sources that are reserved only for domestic purposes, these people have ensured that all such waters flow perennially.

As a consequence of all the above, the Toda people have ensured (until they were allowed to manage their habitat) that the Nilgiris became one of the most important water-catchment areas in this part of the Western Ghats. It is thus no coincidence that this area went on to become the core of the very first biosphere reserve in India, the Nilgiri Biosphere Reserve.

References

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Table 1—Sacred waters listed according to division, patriclan and hamlet associations. An asterisk indicates that the sacred water has been mentioned earlier in this paper. Kwa(r)shm means “prayer word.”

Division	Patriclan	Hamlet	<i>Kwa(r)shm</i> of Sacred Waters [*]
Tawrrta(r)sh	Nawsh	Paw(r)shaihh	1) Oof kaihhrr/ Ehroof// 2) Nehry kaihhrr/ Ehhnehry// 3) aihhvett.neer/ Taihhpell(zh)koty// 4) Kaayi-kwehhdr/ Kaayi-neer// 5) Kawllykeen/ Kavozherry// 6) Kaarmaa(r)sh/ Kaihhkwehhdr//
Tawrrta(r)sh	Nawsh	Awdr	1) Kaihhkaa(r)sh/ Kaihhneer//
Tawrrta(r)sh	Nawsh	Kawzhtee	1) Pupa(d)z-kwehhdr/ Pehdhyof kwehhdr// Puzhaw-kwehhdr//
Tawrrta(r)sh	Nawsh	Kwehdrnnawkhm	1) Twehharr-kwehhdr/ Tezhk-neeroddy// 2) Izhtal-pahh*

^{*} The kwa(r)shm contain generic names for bodies of water, viz. kaihhrr (pool), neer (stream/pool/spring), kwehhdr or gwehhdr (stream), pahh or vahh (large stream or river), tehrr or dehrr (wetland with stream).

Division	Patriclan	Hamlet	<i>Kwa(r)shm of Sacred Waters</i>
Tawrrta(r)sh	Nawsh	Pehhtt.awll(zh)	1) <i>Kinpehhtt.awll(zh)/ Keenarr-kwehhdr//</i> 2) <i>Kadrta(r)sh-vahh/* Kaankwehhtt-aarr//</i> 3) <i>Muteezh-pahh/* Kiddy(k)al-pahh//*</i>
Tawrrta(r)sh	Nawsh	Kurrvaw(r)sh	1) <i>Awtt.kurrvaw(r)sh/ Awzh-kaihhrr//</i> 2) <i>Taihh-vahh*/ Arrg-vahh//*</i>
Tawrrta(r)sh	Nawsh	Penevaw(r)sh	1) <i>Kwehhdrehn-kaihhrr</i> 2) <i>Kaihhzh-tehrr/ Kaihh-neer//</i>
Tawrrta(r)sh	Nawsh	Aihhnttaihow	1) <i>Kwoyneer</i> 2) <i>Awllvoy*</i>
Tawrrta(r)sh	Nawsh	Mawdr	1) <i>Kawllly-gwehhdr*</i> 2) <i>Kwoyneer</i>
Tawrrta(r)sh	Nawsh	Mojaadr	1) <i>Kawlllykeen/ Kavozherry//*</i> 2) <i>Neerkwoyneer</i>
Tawrrta(r)sh	Kaa(r)sh	Eezhkity	1) <i>Neereneer⁹/ Kaa(r)shykwehhdr-neer//</i> 2) <i>Neereneer/ Kawllvehll(zh)-neer//</i> 3) <i>Ta(r)shaarkwehhdr</i> 4) <i>Oskaarr-kwehhdr</i> 5) <i>Mut-kwehhdr</i>
Tawrrta(r)sh	Kaa(r)sh	Nae(r)shminawdr	1) <i>Nae(r)shmee/ Awneer//</i> 2) <i>Karr-kwehhdr/ Oty-kwehhdr//</i> 3) <i>Taw(r)shy-kwehhdr/ Paw(r)sh-aarr//</i> 4) <i>Paa(r)shaarr/ Nehllitody-kaihhrr//</i> 5) <i>Naa(r)shmikaihhrr</i>
Tawrrta(r)sh	Kaa(r)sh	Khizhu	1) <i>Neereneer/ Neerki(r)shneer//</i> 2) <i>Sinawn-gwehhdr/ Pehnawn-gwehhdr//</i>
Tawrrta(r)sh	Kaa(r)sh	Kizhkerr	1) <i>Kyood-neh(r)sh/ Kyood-neer//</i>
Tawrrta(r)sh	Kaa(r)sh	Pakhalkwehhdr	1) <i>Pakhal-kwehhdr/ Panmonkaihhrr//</i>
Tawrrta(r)sh	Kaa(r)sh	Pell(zh)ettkwarr	1) <i>Kaihhrr-vaa(r)sh/ Kaihhrr-vaapehhty//</i>
Tawrrta(r)sh	Kaa(r)sh	Tawrrawdrkho(r)shy	1) <i>Paa(r)shy-kaihhrr/ Kehrawn-pall(zh)//</i>
Tawrrta(r)sh	Maihdr	Kwehh(r)shy	1) <i>Taihhneerawddy</i>
Tawrrta(r)sh	Maihdr	Pan	1) <i>Neerkazhkneer</i> 2) <i>Taihh-vettneer/ Taihh-pell(zh)koty//</i> 3) <i>Pehnawn-gwehhdr</i>
Tawrrta(r)sh	Maihdr	Ta(r)shawdr	1) <i>Kwehhdr-tawpehll(zh)</i>
Tawrrta(r)sh	Maihdr	Peh(r)shkodykaihhrr	1) <i>Pehnbeh(r)sh-koddy/ Peh(r)shkody-kaihhrr//</i>
Tawrrta(r)sh	Maihdr	Peihhrg	1) <i>Pölpeihhrg/ Pölmeihhnn-gwehhdr//</i> 2) <i>Pakhpahh*</i>
Tawrrta(r)sh	Tawrrawdr	Tawrrawdr	1) <i>Tehhkeef(r)shy-kaihhrr</i> 2) <i>Kejaihrry-neer</i>

⁹ The central 'e' in *neereneer* and other similar *kwa(r)shm* is to be pronounced as in the single letter 'a' of the English word "apricot."

Division	Patriclan	Hamlet	<i>Kwa(r)sh</i> of Sacred Waters
Tawrrta(r)sh	Tawrrawdr	Kwehdrmaa(r)sh	1) Kawdh-kaihhrr 2) Myoof-kaihhrr 3) Maw(r)sh-kaihhrr 4) Peihhn-kaihhrr 5) Pupo(d)z-kaihhrr 6) Pehdhyof-kwehhdr 7) Tawkk-kaihhrr 8) Pehshaw-olln-pahh *
Tawrrta(r)sh	Tawrrawdr	Karko(r)sh	1) Taihhkwehhdrrvall(zh)/ Taihhkwehhdr-neer//
Tawrrta(r)sh	Tawrrawdr	Pazhtaarr	1) Pölpazhtaarr/ Paw(r)shneer// 2) Ta(r)shkwehrrgaar/ Ta(r)shkwehy-neer// 3) Powvett.vehl(zh)/ Taihhvett-neer// 4) Karrgölgaar/ Kwehhdrrveh(r)shneer// 5) Neerdaa(r)shneer/ Kwehhdrrvaa(r)shneer// 6) Aihhvehl(zh)-neer
Tawrrta(r)sh	Tawrrawdr	Teihhlgwehhdr	1) Powteihhl-gwehhdr 2) Awllvoy*
Tawrrta(r)sh	Tawrrawdr	Pehlkehhdr	1) Awkhwehl(zh)n/ Awneer//
Tawrrta(r)sh	Kaihhrrawdr	Toofehlgon	1) Peihh(r)shy-kwehhdr 2) P-hill(zh)-pahh* 3) Korrkwehdd-pahh*
Tawrrta(r)sh	Kerrir	Konawsh	1) Kaihhrrneihhrr-voy/ Ehneihhrrvoy// 2) Ki(r)shneer/ Pe(r)shneer// 3) Kyoozh-vahh 4) Peetty-kaihhrr 5) Möfkaihhrrroddy
Tawrrta(r)sh	Kerrir	Kashwehh	1) Ooneer/ Awneer// 2) Maw(r)shy-kaihhrr 3) Algaihhrr
Tawrrta(r)sh	Kerrir	Naihhrrawn	1) Naihhrrrot-kwehhdr 2) Pehnawn-gwehhdr 3) Kog-vahh
Tawrrta(r)sh	Kerrir	Pizhkwasht	1) Kwehllyn-kaihhrr 2) Taihhd-neer 3) Ofoy-kwehhdr
Tawrrta(r)sh	Kerrir	Tokninn	1) Tokninn-karrkh/ Kwehdrawdr-neer// 2) Kwehdmehll-gwehhdr
Tawrrta(r)sh	Kerrir	Tawrrawdr and Awrrawdr	1) Kaihddwehh/ Kaihhneer// 2) Pottawkehhdr
Tawrrta(r)sh	Pehrgawdr	Kwaadrhinny	1) Neerki(r)shneer/ Awkhzhneer// 2) Kinozkwehhdr
Tawrrta(r)sh	Pehrgawdr	Awdr	1) Awneer
Tawrrta(r)sh	Pehrgawdr	A(r)shoy	1) Pabka(r)sh/ Kwehyneer//

Division	Patriclan	Hamlet	<i>Kwa(r)sh</i> m of Sacred Waters
Tawrrta(r)sh	Nehdry	Nehdry, Kavadehrr and Aaki(r)shykawd-ry	1) <i>Kaihhrr-kovoy</i> 2) <i>Kovekaihhrr/ Kōrena(r)shdh¹⁰//</i> 3) <i>Kavadehrr/ Kaihhrrrena(r)shdh//</i> 4) <i>Kookh ehrvan/ Kwehshh-kaihhrr-mekh//</i> 5) <i>Kaihhrr-mōngwehlInn/ Neer-mawneer//</i> 6) <i>Mook-kwehhdvzhky/ Nehpkwehhdvann//</i>
Tawrrta(r)sh	Innkity	Peihhm and Innkity	1) <i>Awnnkwehhdr</i> 2) <i>Pawttezh-kwehhdr</i> 3) <i>Kaihhneer/ Kaihhtkarrkh//</i> 4) <i>Pupo(d)z-kwehhdr/ Kab-kwehhdr//</i> 5) <i>Neerkwehneer</i>
Tawrrta(r)sh	Melgaa(r)sh	Pawsh	1) <i>Peezhtykaihhrr</i> 2) <i>Kwarrmehdr-pahh*</i>
Tawrrta(r)sh	Melgaa(r)sh	Melgaa(r)sh	1) <i>Arrvōlpahh/ Ehhvōlpahh//</i> 2) <i>Neerki(r)shneer/ Ehhki(r)shof//</i> 3) <i>Neereneer/ Taihhvett.neer//</i> 4) <i>Kaayikwehhdr/ Kavaneer//</i> 5) <i>Agyawfmukheihhm/ Kwehhdr-tawkh-kwehhdr//</i> 6) <i>Taihhneer-mehl(zh)/ Taihhbwa(r)shy-edd.t*//</i> 7) <i>Kaihhrrmeihhnikaihhrr/ Ehhmonnypoo//</i> 8) <i>Poofkaihhrr</i>
Tawrrta(r)sh	Melgaa(r)sh	Ki(r)sha(r)sh	1) <i>Kawdrawf-kwehhdr/ Kawdrawf-neer//</i> <i>Kawdrawf-dhawllnn//</i> 2) <i>Oof-kwehhdr/ Oof-neer// Oof-dhawllnn//</i>
Tawrrta(r)sh	Melgaa(r)sh	Nhyoollnn	1) <i>Neerkirsneer/ Neerkirsof//</i> 2) <i>Kwehhdr-vidhyof/ Ehh-vidhyof//</i> 3) <i>Kwehhdr-pupo(d)z/ Ehh-vupo(d)z//</i>
Taihhfill(zh)y	Kehhwehder	Kehhwehder	1) <i>Keihhka(r)sh/ Kaihhneer//</i> 2) <i>Neerki(r)shneer/ Neerki(r)shawkh//</i> 3) <i>Kudrsawll-pahh*</i>
Taihhfill(zh)y	Kehhwehder	Kyoodr	1) <i>Arrmōnkwehhdr</i> 2) <i>Neerdawkh/ Neerdizhky//</i> 3) <i>Neerkirsneer/ Neerkaihhrrro//</i> 4) <i>Keihh-kwehhdr/ Parrva-kwehhdr//</i>
Taihhfill(zh)y	Kehhwehder	Mheeny	1) <i>Puki(r)shy-kaihhrr/ Pōlov-kaihhrr//</i> 2) <i>Pehnehh(r)sh-kaihhrr/ Peneh(r)sy-kaihhrr//</i>
Taihhfill(zh)y	Kehhwehder	P-hi(r)shush	1) <i>Neerdizhky/ Neerdawkh//</i>
Taihhfill(zh)y	Teihhfakh	Teihhfakh	1) <i>Kepkwehhdr/ Neervaneer//</i> 2) <i>Keihhneer/ Mōf- kwehhdr//</i> 3) <i>Kaihh-kwehhdr/ Kaihhty-kwehhdr//</i> 4) <i>Peihhkhwehhdr/ Peihhtykwehhdr//</i> 5) <i>Neerki(r)s-neer/ Neer-ki(r)sof//</i> 6) <i>Taihh-neer</i>

¹⁰ The central 'e' is to be pronounced as the letter 'a' in the English word "apricot."

Division	Patriclan	Hamlet	<i>Kwa(r)sh</i>m of Sacred Waters
Taihhfill(zh)y	Omgaa(r)sh	Omgaa(r)sh	1) <i>Neerki(r)shneer/ Neerkiryof//</i> 2) <i>Kamehny-kaihrr/ Kamehnawkh//</i> 3) <i>Kwehhdrehn-kaihrr/ Kwehhdrehnawkh//</i>
Taihhfill(zh)y	Kaihhdr	Morrtkaihhdr	1) <i>Neerdaihhm/ Arrdaihhm//</i> 2) <i>Parrc-kwehhdr</i> 3) <i>Tebkwehhdr</i>
Taihhfill(zh)y	Kaihhdr	Kwehdrawdr	1) <i>ArrnehlIn-kwehhdr</i> 2) <i>Keihhnmy-kwehhdr (Kaihn-pahh)*</i> 3) <i>Taihhbwa(r)shy-pahh*</i> 4) <i>Mupawn-kaihrr/ Mupawnawkh//</i> 5) <i>Nalpaan-kaihrr/ Nalpaanawkh//</i> 6) <i>Arrawn-kaihrr/ Arrawnawkh//</i> 7) <i>Pehl(zh)ymon-kaihrr/ Pehl(zh)ymonawkh//</i> 8) <i>Pehnmon-kaihrr/ Pehnmonawkh//</i> 9) <i>Kinatthill(zh)y/* Thill(zh)yna(r)shdh//</i> 10) <i>Pehnonbakh/* Pakhyna(r)shdh//</i> 11) <i>Teihhkhall-neer/ Neertawkwehhdr//</i> 12) <i>Peneihh(r)sh-pahh*</i>
Taihhfill(zh)y	Paihhdrka(r)sh	Paihhdrka(r)sh	1) <i>Neerki(r)shneer</i>

[Back to Contents](#)



CHAPTER 12

Toda Sanctification of Freshwater Sources

(Presentation)

Nilgiris, South India

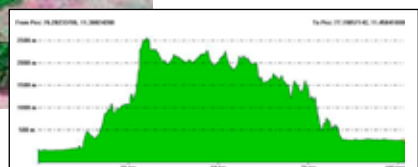
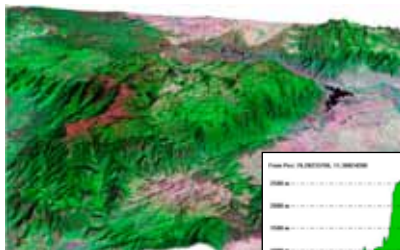
By Tarun Chhabra



Climax Ecosystem

Stunted evergreen montane forests (shola) nestle in the moist hollows between folds of the otherwise grass-covered hills, where they are protected from wind and fire.

Southwestern Ghats



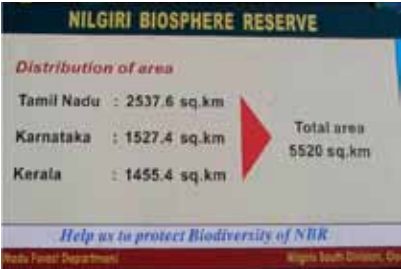
The Nilgiri Biosphere Reserve (NBR)

The Nilgiris in the Western Ghats, lends its name to the First Designated Biosphere Reserve in India (1986 UNESCO)



Covers only 0.15% of India’s land area

- Has 20% of all India’s angiosperms
- Has 15% of all India’s butterflies
- Has 23% of all India’s vertebrates
- Has 63% of all India’s evergreen woody plants



The Todas are the oldest inhabitants of the Upper Nilgiris



Todas have quaint barrel-vaulted structures, embroidered cloaks and ferocious-looking long-horned buffaloes.



Each of the six grades of temple-dairies has a corresponding herd of sacred buffaloes.



The most sacred river to the Todas is the Mukurti-Pykara system

This river has different names at specific places, but is generally called *Kawillykeen*.



There were certain specified crossing-points at which the people could cross the sacred river, but they differed for laypeople and priests.



Kadrta(r)sh-pahh
As the river
flows away
from the Nilgiris
it loses its
sanctity.



The second major river of the Nilgiris, *Kinatthill(zh)y* (the Avalanche River). The *Kinatthill(zh)y* also may be crossed only at certain places and on certain days, and necessarily, in a condition of ritual purity.



The *Kawlykeen* and the *Kinatthill(zh)y* are not only rivers, but also gods.

Toda Hamlet's Freshwater Sources

These are reserved for:

- Dairy-temple use
- Ordination rites of priests
- Approaching Toda guests to bathe
- Domestic use
- Rites of passage
- Cooking at festivities
- Sacred waters mentioned in prayers



Examples of Sacred Waters for Ordination



Many hamlets have separate streams for ordination rituals of a priest and for drawing water for use at the dairy-temple.

The elaboration of the ordination rites varies according to the sanctity of the temples.



Sacred Waters of the Dairy-Temple

- Each individual stream has its own *kwa(r)shm* (sacred name), which is used by the priest when he recites the prayer for the associated temple.
- No person other than the priest is permitted to touch the sacred water of these streams.
- In case a hamlet has two or even three temples, there may be a stream for each temple.



Preparations from Sacred Dairy-Temple Waters



Dairy-Temple Waters

When a form of pollution occurs, the priest must purify the water with *tehhdr* bark (*Meliosma simplicifolia*).



Relinquishing Sanctity

The segregation of sacred and domestic waters is marked. A priest relinquishing office touches the domestic stream so as to reduce his ritual status to that of a layperson.



Restoring Sanctity

There are some special ceremonies where the priest is required to use several materials — of which dairy-temple stream water is central to restore sanctity to either a sacred object or to a temple and hamlet.



Restoring Sanctity

There is another stream that provides water to fill the salt pits from which buffaloes drink ceremonially.



Waters for Specialized Uses

Uses:

- Purificatory bathing by laymen approaching a sacred edifice
- Festive cooking



Living Examples of Sanctity

At the hamlet Kashwehh, the sacred dairy spring, Ooneer, is perennial, but dries up instantly upon contact with polluting elements.



Sacred Temple Complexes

Entire sholas—grasslands around the temple along with water sources—are treated as inviolate.



Management of Freshwater Sources



Ritualized Burning of Wetlands

Saltwater Rites

This is a ritual plea for an abundance of rain and other natural resources including replenishment of sacred water sources.



Special Prayer Ceremonies

Todas gather on the summit of Paw(r)sh) Hill, to pray to the Pykara River deity.



Sanctification of Waters in Rites of Passage Birth and Pregnancy Ceremonies



Waters in Rites of Passage Funerals



Ecosystem Management Practices

Todas gather annually on Kawnttaihh Peak, along with the priest, to pray for the well being of their environment.



Indicator Plants



Peak monsoon



Final phase



End of monsoon



Post monsoon

Sacred Waters Related to the Dream Time

The stream Naihrrot-kwehhdr where God Kwattaihhow tied down the reflection of the sun, turning daylight into darkness is mentioned in the prayer of the conical temple, Konawsh.



The pool Pōlpahh, where God Kwatteihhn came across Goddess Teihhkosh bathing.



The copious tears of Ponehtteihhn and his buffaloes formed a large pool called *keneer-kaihhrr* (“Tears’ Pool”). This is now called Marlimund Lake.



Waters Along the Journey to the Afterworld



Natural stone steps



Defiling of Sacred Waters

Effluent



Tree plantations



Hydroelectric Reservoirs



[Back to Contents](#)



CHAPTER 13

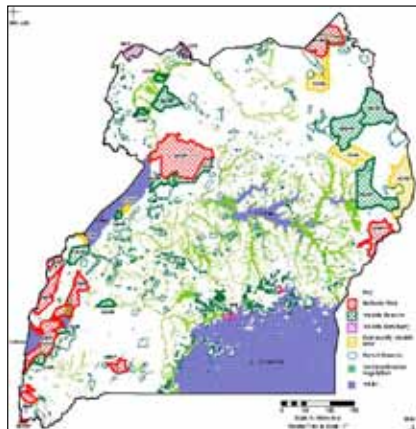
Community Management of a Buffer Zone around Bwindi Impenetrable National Park Kanungu District, Uganda

By Charles Tumwesigye



Introduction

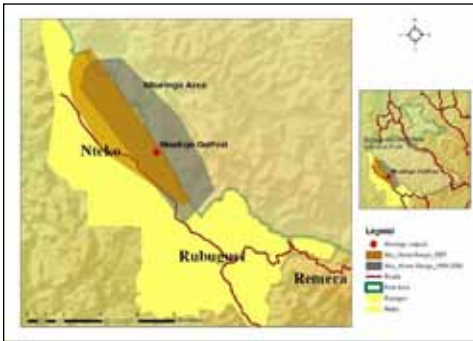
- BINP is located in the south-western part of Uganda.
- The park was made official in 1991 mainly to protect the endangered mountain gorillas.
- Declared a World Heritage Site by UNESCO in 1994.





Communities around Bwindi

- The park is surrounded by communities who used to access it for resources, but this stopped when it was made a National Park.
- The communities own pieces of land around the park either individually or communally and mainly use it for subsistence crop farming.
- This land use often caused a conflict.

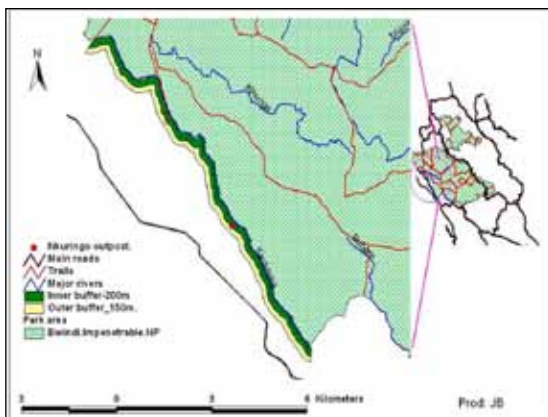


Establishment of a Buffer Zone

- Provision in the BINP Management Plan 1992-1997
- Habituation of Gorillas 1997-1999
- Increased Gorilla excursion into community land, up to about 60%, leading to disease potential, crop destruction, poor visitor experience
- Consultations with community
- Land purchase



Nkuringo Buffer Zone



Management of the Buffer Zone

- Buffer zone extends by 12Km X 350M along the park boundary.
- Buffer zone co-managed by both the National Park authority and Nkuringo community under their umbrella organization Nkuringo Development Conservation Foundation (NCDF).
- A new Management Plan (2007 – 2012) has been prepared for the buffer zone.

Management Plan

Buffer Zone has two main subzones.

- Actively managed inner subzone
 - Community exclusive use subzone
- (photo: cover of management plan has 1 photo and lots of sponsor logos)

Actively managed inner subzone

- 12km by 200m
- Deliberate manipulation of the ecosystem
- Problem animal control
- Research and monitoring
- Gorilla tracking
- Resource harvesting of selected products

Community exclusive use subzone

- 12km by 150m
- co-owned, managed by NCDF and UWA
- Problem animal control interventions

- Research and monitoring
- community conservation education
- community livelihood improvement to enhance Problem Animal Control

Core Purpose

The Core Purpose behind establishing the Nkuringo Buffer Zone was:

*To address the conflict between the local communities
and the problem animals.*

The Buffer zone Management Goal for 2007-2012 is:

*Reducing Human-wildlife conflict while protecting the critically endangered
mountain gorilla and contributing to improved community livelihoods.*

Management programs

1. Problem Animal Control Program
2. Mountain Gorilla Protection Program
3. Community Livelihood Program
4. Community Participation Program
5. M&E

Buffer Zone (BZ) Management Administrative Structure

- Joint Management Board—Policy and overall guidance, decision making
- Management Committee—Actual BZ mgmt, ensure objectives are met, give technical input into plan implementation
- Habitat and Gorilla Health Committee—Technical input into devt PAC strategies, Mgmt of the inner zone, addressing disease threat to the gorillas.
- Community Participation and Livelihoods Sub—Committee-strategies to improve HH income, increase community interest in Mgmt of BZ and wildlife conservation
- M&E Committee—Monitor whether the desired conditions defined in the BZ mgmt plan are being achieved within the estimated time and budgeted resources

Benefits of Buffer Zone So Far



Year of the Gorilla (YoG)

- 2009 was declared by UNEP as the “Year of the Gorilla.”
- The YoG is aimed at uniting countries, the UN, NGOs, local communities and individuals in their endeavor to support the conservation of the gorillas.
- Visit www.friendagorilla.org to support Uganda’s initiative towards mountain gorilla conservation.



Conserving for Generations



[Back to Contents](#)



CHAPTER 14

Management of the Maasai Tribal Wild Lands

Mara Triangle-Masai Mara National Reserve (MMNR)

Massai Land, Kenya

By Samson Lenjirr



Introduction

- Maasai As A People
- Social System—Characteristic & Tribal Organisation
- Ilayok-Ilmuran—Military Organisation
- Medicine Men—Laibon
- Maasai Originally Consisted of Both Pastoral & Agricultural Sections

- Muran—Military Sections
Divided into Companies, or
Sirito: 600–700 Fighting Men
Living in Different Villages
- Murans Main Work is to Carry
Out Raids, Preserve the Armed
Prestige of the Tribe, Defend
Territorial Sovereignty
- Maasai Never Founded a State/
Polity Analogous to Kingdoms
Like in Uganda. Main Reason—
Centre of Political Gravity Was
Not With Elders or Chiefs, But
With a Republic of Young Men,
Governed by Ideas of Military
Comradship and Desirous of
Military Glory
- Chiefs Would Arrange Details of Raids,
but their Power to Compel Warriors to
Do Anything They Did Not Wish Was
Very Slight
- Medicine Men—Connected to
Divination of Future Events,
Administration of Drugs & Practice of
Witch Craft
- Laibon—Chief Medicine Men of the
Tribe
- Cattle (Livestock)—Maasai
Conservatism is Shown by their
Reluctance to Sell Their Livestock
- No Serious Attempt to Accept
Assistance of Science in Improving the
Grazing Conditions of their Country
- Maasai Respect for their Native
Administration—Council of Elders—
Borne of their Native Customs
- Serious crime was rare in Maasai
Reserve because of the strong culture/customs
- To punish them, British used Collective Punishment Ordinance of 1909—
No Betrayal



Maasai Land in Kenya & Tanzania



Maasai Tribal Lands—Boundaries

- In 1904, Southern Maasai Reserve included Kaputei, Matapato, Illodokilani & Sigarari—South of Ngongo and Kiserian Stream
- 11Th Feb, 1905—Proclamation signed to define Maasai district of Ukamba Province, declaring it be divided into two: Kikuyu & South Maasai Districts
- South Maasai District: land Btw Athi River & Nairobi Stream—entire Kajiado District
- 18th June, 1906—Proclamation Signed Declaring Sothern Maasai Reserve Closed District Under Outlying Ordinance: Narok, Kilgoris & Naivasha
- Maasai Reserve Includes Areas Btw-Uaso Ngiro-Mara River-Transmara/Olorukoti-Ngongo Hills To Kilimanjaro

Traditional Maasai Land Management

- Land For Grazing During Wet & Dry Seasons (Modern Paddocking)—Mainly for Cattle, Sheep & Goats.
- Grazing & Settlement Land Was Determined By Council of Elders of a Particular Area
- Freedom of Movement with Livestock for New Pastures was Universal

Land Tenure System in Kenya

- Independent Kenya Is A Capitalist System With Individual Land Ownership & Communal
- Land is Owned Individually by Title Deeds
- Maasai Live in Communal Land Systems Called “Group Ranches” Now Under Going Demarcation
- Currently Most Land Is Being Privatized; Future Of Pastoralism Is Bleak

The Greater Mara Ecosystem—Wildlife, Tourism & Pastoralism

- Masai Mara National Reserve—Established in 1948—Mara Triangle—520 sq km
- 1961—Masai Mara Was Gazetted As A Protected Area Under The District Council of Narok to Cover 1,831 Sqkm
- 1963, Kenya Became Independent—Mara Came Under the African District Council
- 1984—Some Excision Done-105 Sqkm to Allow Maasai Access to Water & Salt Licks for their Livestock
- Masai Mara National Reserve Present Size is 1510 Sqkm
- 1994—Transmara District was created, taking 520sqkm under her jurisdiction
- 2001 Transmara Subcontracted her portion of the Reserve to a Limited Company to Manage: Mara Conservancy

- Masai Mara current beds available is slightly over 4,000
- Both Councils—Narok & Transmara—Manage the Reserve in the Trust of the Maasai People
- Both Councils Share 19% Revenues with Surrounding Group Ranches/Appreciating People and Wildlife Co-Existence
- Immediate Group Ranches/Communal Lands that act as Buffer Zones Pay the Ultimate Price For Wildlife—Human—Livestock Conflicts



Maasai Group Ranches

- Masai Mara National Reserve Present Size Is 1510 Sqkm
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Challenges/Problems of Current Land Management

- Human Population(Ilri)—1950: <1pp Per Km Sq In Group Ranches; 1999: 10pp Per Kmsq, 2003: Increased By 37% To 14pp Per Kmsq
- Increased Human And Decreased Animal Numbers And Land/Natural Resources Are Shrinking Day By Day
- Over/Unplanned Tourist Development—Critical Wildlife Habitats Lost
- Mass Tourism—Premium Destinations- Land Lost For Livestock—Unregulated Numbers


Factors Limiting Development of Community Based Wildlife Management—Mara

- With Human Population Growth, There is Less Land for Wildlife Management (Mgmt) & Conservation
- Inequitable Distribution Of Benefits Within Communities
- Fragmentation of Land Leading to Land-Use Change

- Failure To Implement Legislation
- Lack of Expertise In Managing Wildlife and Tourism



Lessons Learnt—Future

- Curtail Mismanagement of Revenue Returns From Wildlife Tourism to Pastoral Communities
 - Manage Numbers and Location of Pastoral Settlement in the Mara Ecosystem
 - Implement Effective Mgmt Practices in the Mmnr & Surrounding Wildlife Areas—Security, Resource Protection Etc.
 - Provide Incentives For Pastoral Communities To Maintain Cultural & Traditional Lifestyles Compatible With Wildlife Tourism Economy
 - Current Mgmt Plan—Awf, Ncc, Tcc & Cdc
- 



Critical Policy Matters

- Government Wildlife & Environmental Agencies Have Little Control Over Land Use in Pastoral Areas Such As The Mara Tourism Development; Conversion of Land To Large & Small Scale Cultivation Has Been Uncoordinated & Unplanned
 - Classic Approaches To “Community Based Wildlife Mgmt” Involving Sharing Of Tourism Revenues Amongst Pastoralists With Communal Land Use Tenure Have Largely Failed In The Mara (Ilri)
 - With Proper Mgmt, Wildlife In The Mara Rangelands Will Have A Chance; It Is Essential That Adequate Benefits From Tourism Reach Individual Land Owners, In Order To Forestall Cultivation & Other Incompatible Land-Uses
- 



Conclusions

- Traditional (Tribal) Mgmt Was Beneficial to Almost All i Resource Utilization—Wildlife Benefits Have Not Been Equitably Distributed. Small Minority In Power Has Benefited Considerably, While Main Costs Of Keeping Land Open For Wildlife Were Borne By Ordinary Maasai Who Benefited Little
- In The Absence Of Correct Policy Driven Incentives, Current Land Privatization Could Result In Increased Cultivation & Fencing, Resulting In A Decline In Wildlife & Thus Tourism As A Revenue Generator
- Wildlife Populations Are Predicted To Fall By 40% (Ilri) as a Result of Permanent Maasai Bomas Approaching Density. Pastoral/Wildlife System Will Collapse
- As A Result Of The Lack Of Properly Planned Conservation & Tourism Development, The Underlying Quality Of Tourism Products Have Become Compromised For The Region
- A Combination Of Both Traditional & Modern Mgmt Of Pastoral Lands Requires An Elaborate Land Policy With The Mandates, Wishes & Aspiration Of The People. This Will Considerably Improve The Quality Of Pastoral Ways Of Life & Maintain Strong Traditional & Cultural Practices, In Tandem With Improved Pastoralism To Match The Competing Modern Lifestyles



Maasai Leadership

- Government Was Based on Personality of a Leader
- To Quote Frank Herbert, “Good Government Never Depends Upon Laws, But Upon The Personal Qualities Of Those Who Govern. The Machinery Of Government Is Always Subordinate To The Will Of Those Who Administer That Machinery. The Most Important Element Of Government, Therefore, Is The Method Of Choosing A Leader.”

[Back to Contents](#)



CHAPTER 15

The Tacana People La Paz, Bolivia

By Felzi Gonzáles Lurici & Angel Laura Duran



CIPTA

CONSEJO INDIGENA DEL PUEBLO TACANA

“We don’t want tierra to work, we want territory so we can live.”

LAND (TIERRA)	TERRITORY	
	Before:	Now:
It's where we live, cultivate, work the land so we can sustain our families.	It was a space under the dominion of one or various indigenous peoples, but the limits of this were understood	It is a space of dominion demanded by a people and recognized by the State. In addition to providing resources, the land is where our guides dwell, according to our beliefs, and it is home to our sacred sites. It is the place where we can live free according to self-determination.

Self-Determination

The freedom to decide our own destiny as indigenous people.

Autonomy

State Recognition when making decisions on internal affairs that fall under State Law.

My people

- Historically, we have occupied the Beni, Madre de Dios, Madidi and Tuichi Rivers, including territory from present day Peru, Brazil and primarily Bolivia.
- Today, we are dispersed between the Pando, Beni and La Paz Departments. Most of the Tacana population is found in the north of La Paz.
- In this region, the notable ecosystems are the mountains, foothills and plains.
- We share the area with the National Park and Madidi Integrated Management Natural Area (Parque Nacional y Área Natural de Manejo Integrado Madidi)
- In this context, the Tacana Indigenous Lands I, II and communities are found in the Abel Iturralde Province of La Paz.

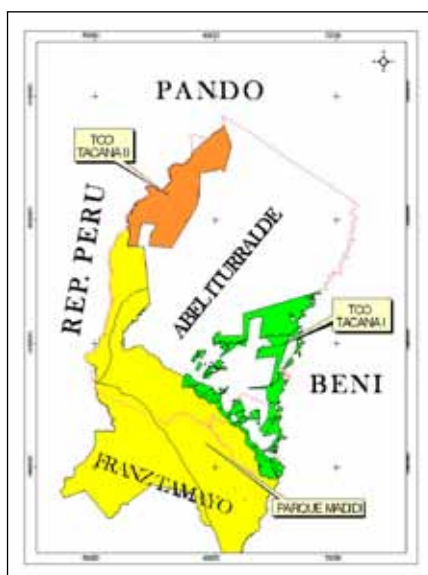


Population and communities

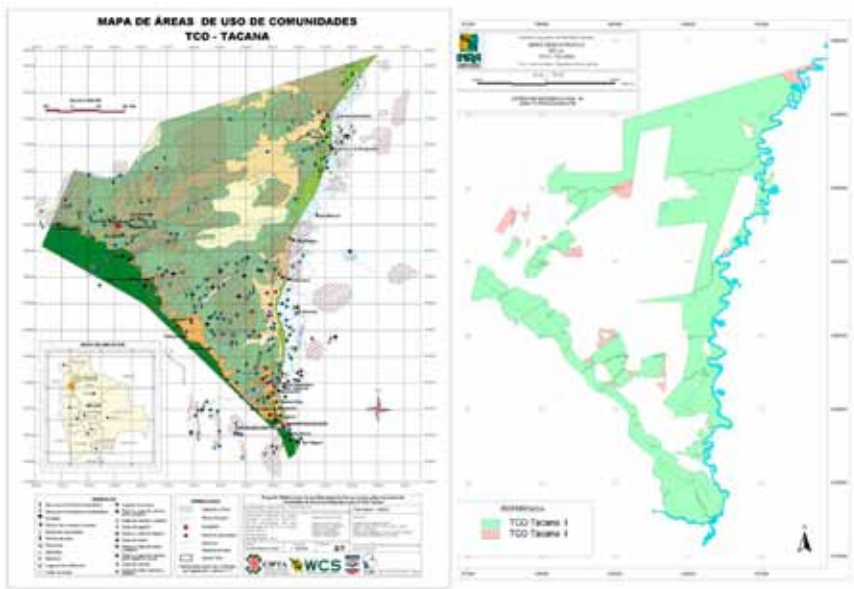
According to the first rural indigenous census of the Lowlands and Amazon (1994), in Bolivia we are 5058 inhabitants disbursed in three Departments, 3109 in La Paz, 1469 in Beni, 480 in Pando.

In the census made by the National Institute of Population and Housing 2001, all of the cultural diversity in the population is included in the category "other."

The Indigenous Peoples Council of the Tacana was founded in 1993 in response to the indiscriminate logging of trees and destruction of wildlife by third parties.



Tacana Community Use Map

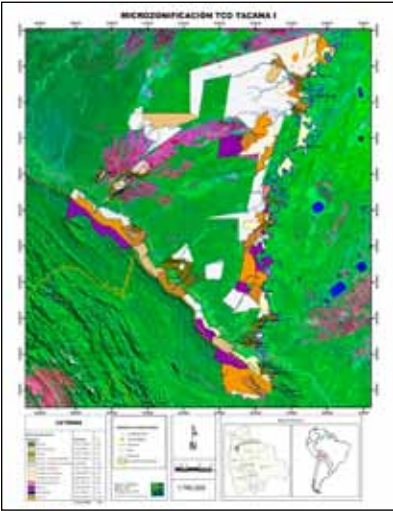


Consolidation

TCO Tacana I			TCO Tacana II		
Requested Area	769,892.8338	1997	Requested Area	454,469.2200	2001
Conceded Area	549,464.8338	1998	Designated Area	104,679.8729	2004
EINE Area	405,665	2000	Designated Georeferencing Area	349,790.3471	2006
Titled Area	325,327.2625	2003	Conceded Area	349,790.3471	2008
Titled Compensation Area	46,606.0760	2004			
Second Titled Compensation Area	17,370.6423	2008			
Area to de Titled	16,361.0192				
Total Titled Area	371,933.3385				

Territorial Management

Microzoning of Tacana I



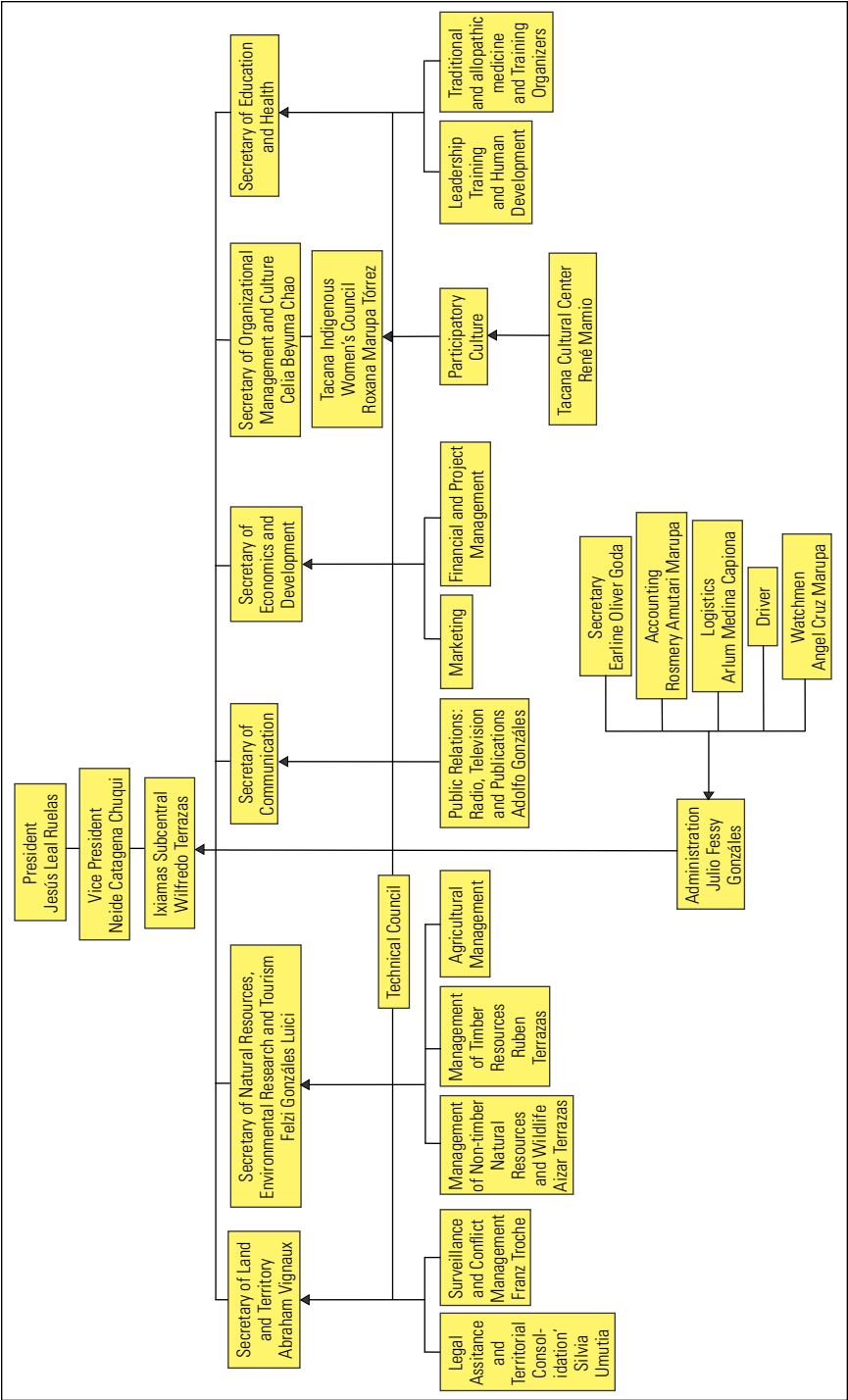
(Left) Key (Leyenda): Categories: Army Green—Agricultural; Light Green—Silvopasture agroforestry; Brown—Hunting; Light Brown—Hunting/ Timber forest; Tan—Hunting/Non-timber Forest; White—Timber Forest; Light Yellow—Non-timber Forest; White with Orange Border—Pastoral Ranching; Pink—Feed Lot Ranching; Purple—Reserve; Dark Blue—Servitude; Orange—Tourism. Conventional Symbols: x—Border; Small houses—Communities; Red Lines—Roads; Blue lines—Rivers; Grey lines—Mountains; Tan border—Madidi Protected Area border. **Above right Key:** Communities Yellow—Toromonas; Light green—Puerto Perez; Pink—El Tigre; Light Blue—Las Mercedes.

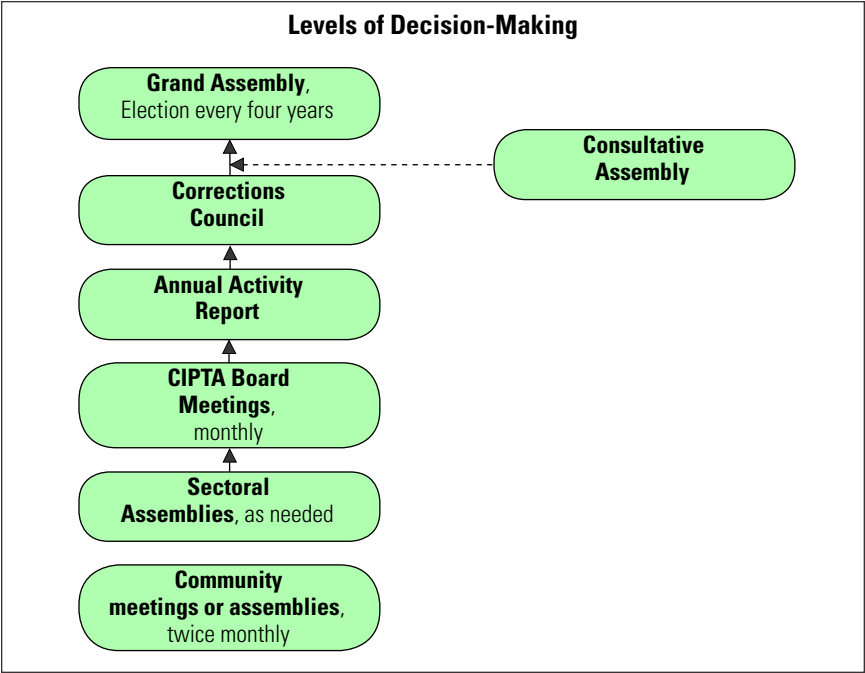
Microzoning of Tacana II



Natural Resource Management

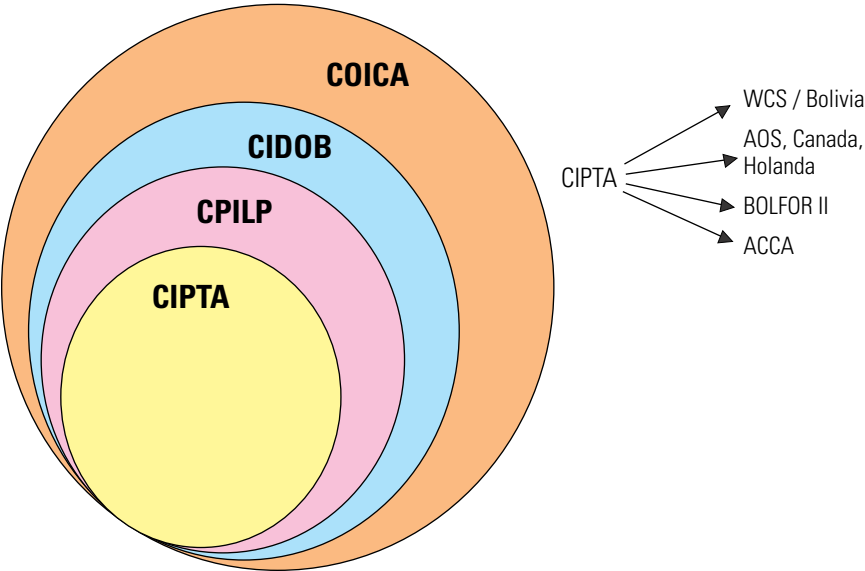






Allies

Supracommunity Organizations & Institutions



We do not forget our cultural identity ...

We value and promote Tacana culture.



Reviving our dances

Next Steps

- Development of the second phase of the Land Management Strategy
 - Reconcile the discontinuous territories demarcated by the new Constitution of the State with Indigenous Autonomy
 - Continuation of Sustainable Management of Natural Resources
 - Water Resource Management
 - Tackling the issue of Climate Change
 - Strengthening technical capacity
 - Strengthening administrative capacity to manage direct financing
 - Create a trust fund for self-sustainability

[Back to Contents](#)



CHAPTER 16

Cofan Territorial Loss and Recovery— Toward Co-Management Cofan Territory, Northern Ecuador

By Luis Narvaez Cardova & Roberto Aguinda

Federation of the Indigenous Nation of the Cofan of Ecuador (Federación Indígena de la Nacionalidad Cofan del Ecuador (Feince))

- Ancestral Lands: The banks of the San Miguel, Aguarico, Putumayo and Guames Rivers in Colombia.
- Historically, hunting and fishing have been our basic activities for subsistence.
- The economy: Our economy was based on trade and barter (gold, leather crafts, etc)
- Historically, the Cofan roamed with absolute freedom in the splendor of the jungle of the north-eastern Amazon in Ecuador.



Causes of the loss of Cofan Territory

- Oil drilling
- Colonization
- Mining
- Road Construction
- Logging

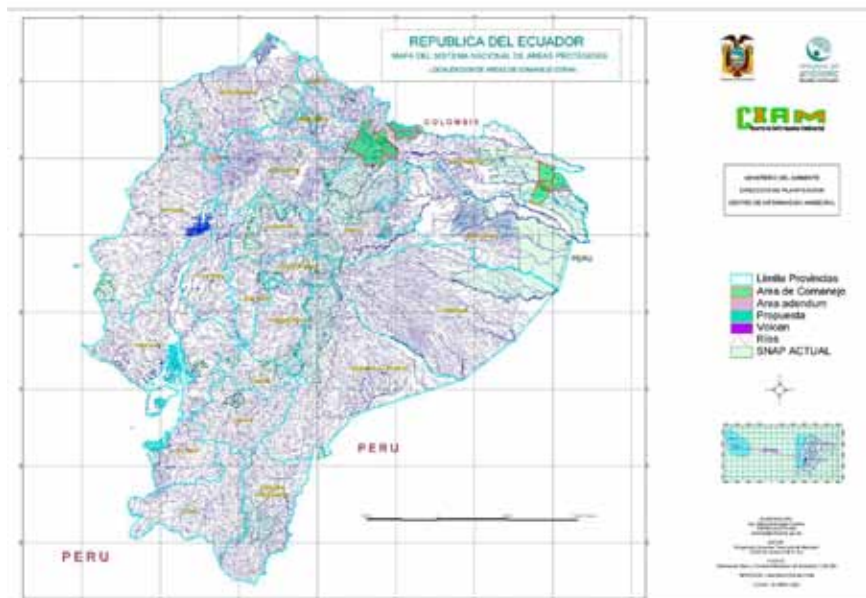


- Fragmentation of the Cofan Territory
- Hunting
- Fishing

In the 1960s and 1970s, the oil industry, first through exploration and then oil drilling stripped us of our territory.

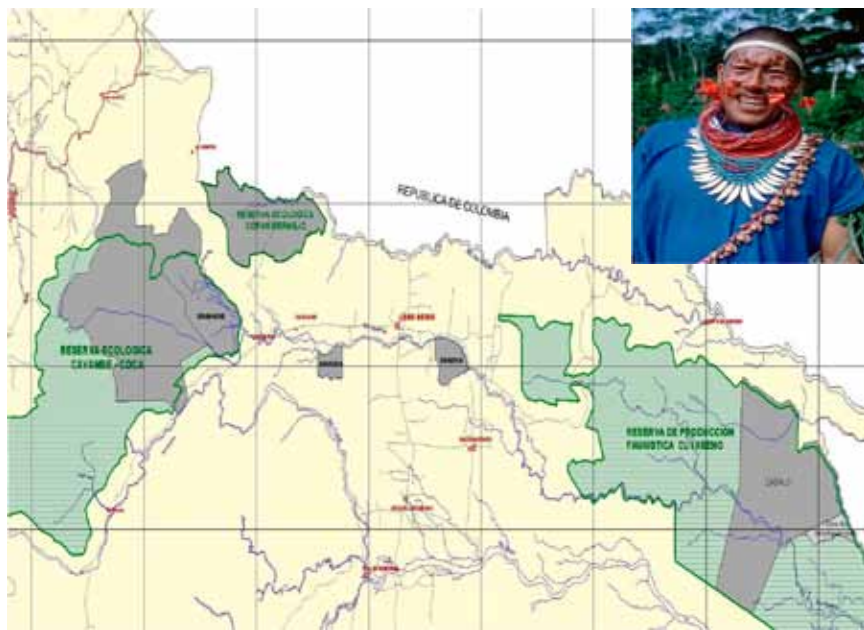
Developing roadways gave way to colonization which was supported by the contemporary government, without noticing that our people and culture were being effected.

Map of the National System of Protected Areas in the Republic of Ecuador.



Key: White with light blue border—Province borders; Green with Red border—Co-management Area; Lavender—Annexed Area; Aquamarine—Proposed Areas; Purple—Volcano; Grey zig-zag—Rivers; Off-white with light green border—Current Protected Areas. Source: Centro de Información Ambiental, 2002.

Detailed Map of Three Protected Areas: Reserva Ecológica Cayambe-Coca, Reserva Ecológica Cofan Bermejo, Reserva de Producción Faunística Cuyabeno



Logging companies not only cut down trees but also damaged the land with the introduction of heavy machinery.

These processes gave way to the fragmentation of our communities.



Organizational Strengthening

- From 1980 to 2000, out of desperation, the Cofan people looked for strategies to defend what little remained of their territory, establishing an organizational model that concurs with the national justice system.
- The Federation of the Indigenous Nation of the Cofan of Ecuador (FEINCE) consists of a political and an administrative structure.
- The objective of the organization is to represent and manage the defense and recovery of the Cofan territory, to better the quality of life of the Cofan communities
- FEINCE is made up of 13 communities, with a total of 1300 inhabitants living in five counties in the Sucumbios province.

- The territory covers 438,000 hectares (roughly 1,082,317 acres)
- 45,000 hectares are privately owned and 393,000 are under use and management agreements with the Minister of the Environment. The Minister has recognized the ancestral possession of the Cofan nationality. The territory is located in three Protected Areas: Cayambe Coca, Cofan Bermejo and Cuyabeno.



Management

- We now have signed agreements to to strengthen the organizational, institutional and territorial consolidation efforts, focused on the conservation, protection and management of natural resources.
- Today, we receive support from WCS, FSC, MAE, CD and local governments.

[Back to Contents](#)



CHAPTER 17

Cofan Rangers Program

Conservation and Protection of Natural Resources
Dureno, Ecuador

By Kristen Walker



Capacity Building



Credentials



Control System and Patrols

- Within the system, there are two ranks, or levels
- Patrols are made up of five people, each with a different capacity: Leadership, Communication, First Aid, Logistics, Geography
- Stations are made up of two people working as guardians, or guards, in strategic locations

A Patrol works for one month.

Activities include:

- Monthly planning meetings
- Clearing trails, maintaining the boundary lines
- Registering geographically significant data, including impacted areas, changes to the forest, feeding sites of significant species, significant sightings, etc.
- Monitoring biological activities
- Educating people outside the area about the existence of Protected Areas and the prohibition of extracting resources
- Conducting monthly reports about the activities and events of the month's work
- Permanent coordination with the Minister of the Environment

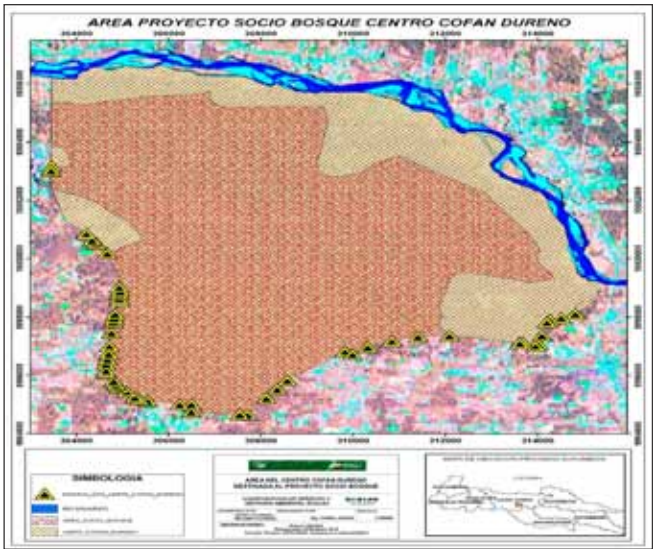


Ecuador—Dureno Area Intervention Zone



Key: Green—Dureno Cofan Territory;
Blue—Waterways;
Orange—Roadways;
Diamonds—Contained Cultivated Areas
The map is the property of the Dureno Cofan Community. Created in 2009 by Cesar and William Lucitante.

Dureno Cofan Forest Partners Program Area.



Key: Yellow Triangles—GPS points along the Dureno Cofan territory boundary line; Blue—Aguarico River; Red and White together—Forest Partners Program Area; Yellow stripes—Dureno Cofan inhabited areas

For the first time in Ecuadorian history, the government has created an incentive program for conservation.

In reality the incentive amount is very small but crucial for our conservation activities.

Economic Development Projects, Strategies for Lowering the Consumption of Bush Meat



Marketing Crafts

- Today, making handcrafts has become one of the most important sources of income for Cofan women.

Conserving Traditional Knowledge



“It’s our life.”

[Back to Contents](#)



CHAPTER 18

The Sacred Caves of The Wind and Fertility San Luis Potsoi, Mexico

By Maria Gregoria Catarina

*Conserving sacred spaces assures the conservation of
the various nature sites of our ancestors.*



Sacred Space Conservation

- Tenek
- Nahua
- Pame



Essential Spaces

- Rocks
- Springs
- Caves

The Wind Cave

- The cold wind blows at the entrance of the cave
- The entrance, an ellipse 3 meters wide and 1.3 meters tall, leads to a room with paths to other chambers.

The Fertility Cave

- From the entrance, you descend to the primary chamber of the cave
- To the side of the Cave, the largest column is known as “the Goddess of Fertility” and is surrounded by three smaller pillars that grow toward the inside of the cave. According to tradition, these are said to be the sons of the Goddess.

13 rituals preformed in these caves

1. Initiation of the dance captains
2. Initiation of the performers
3. Initiation of traditional doctors
4. Initiation of the dance governors
5. Initiation of the advisors
6. Healing rituals
7. Ritual corn purification
8. New Year Ritual
9. Fertility Ritual, women and the earth
10. Rain Summoning Ritual
11. Harvest Ritual
12. Ritual of offering for the new Traditional Authorities

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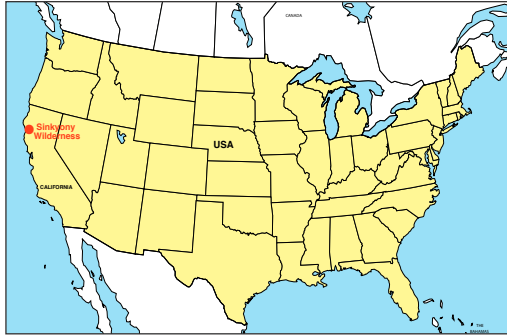
13 Rituals Performed in these caves

- Initiation of the dance captains
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- New Year Ritual
- Fertility Ritual, women and the earth
- Rain Summoning Ritual
- Harvest Ritual
- Ritual of offering for the new Traditional Authorities

Organizations involved

- Canhuitz
- Cultural Unity, Nahua de Xilitla (Unidad cultural Nahua de Xilitla)
- Cultural Unity, Nahua de Axtla (Unidad Cultural Nahua de Axtla)
- Traditional healers of Tamazuchale (Médicos tradicionales de Tamazuchale)
- Social Organization of Traditional Indigenous Peoples of Aquismón (Organización Social de Indígenas Tradicionales de Aquismón)

[Back to Contents](#)



RELATED ARTICLES

The InterTribal Sinkyone Wilderness

*Ten Tribes Reclaiming, Stewarding, and
Restoring Ancestral Lands*

Sinkyone Wilderness, Northern California, USA

By Hawk Rosales

**Original article appeared in
International Journal of Wilderness, April 2010**

The 4,000-acre (1,619 ha) InterTribal Sinkyone Wilderness is located along the “Lost Coast” of northern California, an area that holds great cultural and spiritual significance for the indigenous Tribal Peoples of this region. Located 200 miles (323 km) north of San Francisco, this portion of the Sinkyone land is the longest stretch of permanently protected coastal wilderness in the lower 48 states of the United States. It is the westernmost part of the vast Sinkyone Indian Aboriginal Territory that includes the Wild and Scenic Eel River, the stunning and mountainous Lost Coast, and the vestiges of a 3,000-year-old temperate rain forest.



History of Designation

For thousands of years, the indigenous people of this land employed a complex and sophisticated system of cultural stewardship that significantly influenced the biological diversity and abundance of the Sinkyone temperate rainforest. The land management methods employed by the Sinkyone and other neighboring Tribes

of California's North Coast included rotational burning of understory plants to ensure the health and productivity of important species; selective thinning and harvesting of seaweeds, basket-making materials, medicines, and a host of other plants; breaching of berms at river mouths to enable salmon migration (see figure 1); the transplanting of desirable plant species; and countless other practices that were conducted hand-in-hand with prayers and ceremonies for eons throughout this land. The success of their cultural management was informed by close observations of the seasons and other natural phenomena; the understanding that one must never take more than one needed; a unique set of original instructions that had been given spiritually to the people; and a vast body of unsurpassed wisdom and knowledge gained by thousands of years of living daily with respect upon Mother Earth.

The Sinkyone people established and inhabited permanent villages and seasonal encampments throughout their territory. Although autonomous, the many Sinkyone groups inhabiting these villages and encampments shared distinctive cultural and social characteristics that distinguished them from neighboring Indian peoples. These shared characteristics included an Athabaskan language unique to the Sinkyone, a common system of spiritual beliefs and practices, distinctive styles for their art forms and architecture, and commonly understood territorial boundaries within which members of the Sinkyone bands socialized, gathered and hunted food sources, and conducted trade. They utilized the prairies and meadows, the river valleys, the redwood forests, and the coastal areas throughout the year to gather traditional foods (see figure 2). This varied land was the place in which they lived and practiced their traditional ways for untold generations.

In the mid-1850s, however, the Sinkyone people were suddenly and violently confronted with invading multitudes of Euro-American settlers who considered themselves entitled to indigenous peoples' lands and resources. Within 15 years, most of the Sinkyone people were annihilated through a combination of massacres,



Figure 1—InterTribal Sinkyone Wilderness, Wolf Creek salmonid jump pools. Photo by Joe Scriven; © InterTribal Sinkyone Wilderness Council.



Figure 2—Looking south from Needle Rock to Bear Harbor. Photo © by Hawk Rosales.

slavery, forced relocations, starvation, land theft, introduced diseases, rape, impoverishment, and other atrocities. The state and federal governments paid white citizens for the scalps of Sinkyone men, women, and children, and many Indian toddlers and young people were sold as slaves to wealthy families throughout California. The U.S. Army removed Sinkyone survivors to concentration camps, called reservations, which were established throughout the region. In the ensuing years, Sinkyone people married other peoples of local Tribal affiliations and eventually became enrolled members at several Tribes located throughout the region.

In the face of this profound suffering and loss, the descendants of the original Sinkyone people retained their ancient connections to Sinkyone and, throughout the generations, have continued to travel seasonally to their ancestral lands to harvest traditional food and medicine plants and to offer their prayers.

Redwood Ecosystem

With the genocide of the Sinkyone people came the ecocide of the ancient forests of Kahs-tcho (redwood tree), considered by local Tribes as especially sacred. The people used various parts of the redwood in the manufacture of their houses, clothing, baskets, fish traps, canoes, and a host of other items. Carved parts of the canoe corresponded to various parts of the human body, such as the heart and lungs. The Sinkyone people considered their canoes to be alive, and they often spoke to them. A traditional religious leader of the Chilula people, whose territory is located to the northeast of the Sinkyone, expressed the spiritual beliefs of Native peoples of the redwood region when she explained the importance of this great tree:

The redwood trees are sacred. They are a special gift and reminder from the Great Creator to the human beings. The Great Creator made everything, including trees of all kinds, but he wanted to leave a special gift for his children. So he took a little medicine from each tree, he said a prayer and sang a powerful song, and then he mixed it all with the blood of our people. Then he created this special redwood tree from this medicine. He left it on Earth as a demonstration of his love for his children. The redwood trees have a lot of power: they are the tallest, live the longest, and are the most beautiful trees in the world. Destroy these trees and you destroy the Creator's love. And if you destroy that which the Creator loves so much, you will eventually destroy mankind. (National Park Service 1994, unpaginated)

Commercial harvest of the old growth redwoods of the region began as early as the 1850s, but large portions of the ancient forest remained intact until the late 1940s when an “improved” style of bulldozer dramatically changed logging

methods and the rate of extraction. With the advent of this new equipment, steep slopes that had been previously inaccessible were now open to unrestrained clear-cut harvesting. The ensuing pillage destroyed most of the original redwood ecosystem and set in motion a severe decline in the health and productivity of native salmonid fisheries.

Beginning in the mid-1800s, a long succession of commercial timber interests held title to a vast acreage of redwood forestland within the Sinkyone territory and neighboring aboriginal Tribal lands. These interests grew wealthy from their exploitation of the sacred redwood trees, while the Tribal communities who had occupied these lands for millennia suffered economic impoverishment as well as oppression from societal racism and unjust governmental policies. In order to survive, many Tribal members were forced to work for the timber companies, felling the ancient and sacred redwood trees that had sheltered and provided for their prosperity for countless generations. During the 100-year heyday of North Coast timber operations, many in white society viewed the juxtaposition of timber industry profits and Native impoverishment through the lens of the Manifest Destiny doctrine that supported this dreadful disparity. Today, we refer to it as genocide and environmental racism.

Because redwoods regenerate both by seed and stump sprout, and grow rapidly, many areas of the North Coast redwood rain forest have been subjected to clear-cutting three or more times. Less than 4% of the region's original old growth redwoods are still standing. Fortunately, organizations such as California State Parks, Redwood National Park, Save the Redwoods League, and others have helped preserve scattered residual stands of ancient redwoods, thus ensuring at least some legacy for future generations of humans.

Environmental Movement

During the 1960s and 1970s another kind of settler began arriving in the North Coast. People who had become disillusioned by the consumerism, aggression, and hypocrisy of American society sought refuge and peace in remote locations within the forests of the North Coast. They soon were confronted by horrific clear-cut logging operations within their viewsheds and watersheds as the timber companies expanded into previously unentered areas of old growth. The new settlers quickly organized by inspecting and documenting damage, researching environmental laws, and protesting at locations where old trees were being cut or were scheduled for cutting. They chained themselves to redwoods, blockaded logging sites, were arrested, and reached out to other potential North Coast allies. Efforts were made to contact local Tribal representatives and an important dialogue began between the leaders of the indigenous community and the environmental movement.

Soon, Tribal members were joining nonnative activists and protesters at various sites on Sinkyone land threatened by logging. A lawsuit was brought by the Environmental Protection Information Center, the International Indian Treaty Council, and other plaintiffs against landowner Georgia-Pacific Corporation (G-P), California Department of Forestry, and the State Board of Forestry. The lawsuit alleged serious violations of the California Environmental Quality Act (CEQA). A key element of the lawsuit was the timber company's blatant violation of state requirements to protect documented cultural resources, which the company was caught in the act of destroying. The case also highlighted the fact that state forest regulatory and policy-making agencies were turning a blind eye to the timber company's violations. The case, known as *Environmental Protection Information Center, Inc. (EPIC) v. Johnson*, was won by the plaintiffs in July 1985 when the State Appellate Court ruled that G-P and the state had violated four important elements of CEQA in that they had failed to: (a) adequately consult with Native Americans; (b) protect Native American cultural resources; (c) provide adequate public notice regarding the timber harvest plan; and (d) consider cumulative impacts. As a result of this ruling, the State Board of Forestry revamped timber harvest rules for the entire state of California.

InterTribal Sinkyone Wilderness Council

The lawsuit opened the door for the eventual return of nearly 4,000 acres (1,619 ha) of aboriginal Sinkyone land to local tribal control and stewardship. In 1986, a Native peoples' cultural land conservation organization, known as the InterTribal Sinkyone Wilderness Council (ISWC), was formed in response to G-P's planned divestiture of 7,100 acres (2,875 ha) of its coastal Sinkyone holdings. The council was founded by and for the benefit of local Tribes retaining cultural and ancestral ties to the Sinkyone region. It was established with the specific purpose of acquiring and permanently protecting 4,000 acres (1,619 ha) of G-P land from further commercial harvesting, and reestablishing and revitalizing traditional cultural uses for local tribal members.

The ISWC is unique in that it is a cultural land trust established by, and for the benefit of, so many Tribes. Seven Tribes originally formed the ISWC. Over the ensuing years, the number of member Tribes has grown from seven to ten, all of which are sovereign nations recognized by the U.S. federal government. Member Tribes have joined the ISWC through certified tribal resolutions that identify the delegate (and alternate) who represent their Tribe on the ISWC board of directors. Continued consensus on common cultural goals, and the dynamic of contributing to and benefiting from this intertribal effort, are important factors that have enabled the Tribes to achieve their original purpose in founding the ISWC.

InterTribal Sinkyone Wilderness

Two weeks after the ISWC received its nonprofit status, Trust for Public Land (TPL) acquired the 4,000 acres (1,619 ha) with the intent of eventually transferring it to a local conservation-oriented organization. After receiving a loan for the purchase from the California State Coastal Conservancy, TPL placed the conservancy under contract to develop a disposition plan for the property.

During the 10 years following TPL's acquisition of the land, the ISWC worked hard to raise funds for purchase of the 4,000 acres (1,619 ha), and the support necessary to convince the state and TPL that the land should be transferred back to Indian hands. As part of this effort the ISWC developed educational tools and initiatives; built a multifaceted fundraising program; designed and implemented fisheries restoration projects, forestry inventories, and cultural-educational programs on the 4,000 acres (1,619 ha) and the adjacent Sinkyone State Park; collaborated with universities; developed an intertribal restoration workforce; created a documentary film (J. Rosales 1994) that screened at the Sundance Film Festival and 10 other film festivals; and garnered an international support that ultimately enabled the ISWC to acquire the land.

The ISWC purchased the 4,000 acres (1,619 ha) in August 1997, thereby legally returning local Indian peoples' presence to the land and protecting it in perpetuity from future threats of development, industrial extraction, and fragmentation. The ISWC holds title to the InterTribal Sinkyone land and is solely responsible for its management. The ISWC's primary focus is to protect and revitalize this critical part of Sinkyone through the reintroduction of tribal members' cultural-ecological stewardship and traditional land uses. Four separate conservation easements protect the land's cultural and ecological values in perpetuity. The ISWC is believed to be the first tribal entity in the United States to have entered into a conservation easement with private land trusts.

The ISWC's tenacity demonstrates that adhering to tribal mandates and the determination to reclaim ancestral lands can eventually pay off. Ten years' worth of on-the-ground experience gained from wilderness land management and restoration, as well as important cultural, educational, and recreational project work, was all gained prior to the ISWC's purchase of the Sinkyone property. This proactive approach helped strategically position the ISWC to acquire and conserve this important area of ancestral land.



Figure 3—Looking north from the Sinkyone Wilderness State Park into the King Range National Conservation Area. Photo © by Hawk Rosales.



Figure 4—Bear Harbor and the mouth of Wolf Creek. Photo © by Hawk Rosales.

Since its acquisition of the 4,000 acres (1,619 ha), the ISWC has continued its focus on salmonid fisheries restoration, watershed rehabilitation, planning for backcountry hiking trails and campsites, protection of cultural re-sources, cultural-educational outreach, and involving tribal members in the healing and stewardship of the land. It has forged important alliances with environmental and

conservation organizations and has been recognized for its unique partnership with the North Coast Redwoods District of California State Parks (see figure 3), a collaboration that enables the ISWC to conduct restoration projects, stewardship work, and cultural activities on the 7,250-acre (2,935 ha) Sinkyone Wilderness State Park (California State Parks 2009), with which the ISWC shares a common 12-mile (19.4 km) boundary.

The ISWC's land includes the upper reaches of seven coastal watersheds, the lower half of which are all located on the adjacent Sinkyone Wilderness State Park (see figure 4). An important collaborative effort between the ISWC and California State Parks has been the rehabilitation of large portions of several of these watersheds. This recently completed multiyear project entailed the removal of abandoned logging roads, landings, and stream crossings in order to stabilize slopes that had been severely altered by past logging activities. Tribal members worked as cultural monitors and heavy equipment operators during the project, which utilized bulldozers and excavators to reform roaded hillsides and reconstruct the original gradients of stream channels. This project has dramatically reduced sediment in streams, and improved stream water quality and habitat of native fish species.

Reestablishing Traditional Relationships

Although the people and the land have suffered tremendous losses from genocide and ecocide, both the Tribes and the ecosystem are resilient and can recover. Both have been here for countless generations and are able to adapt and to heal. The Indian people believe that the Earth recalls how the ancestors once walked and lived here in a sacred manner. Memories of the people's traditional songs, prayers, dances, and ceremonies are forever embedded in the Earth (see figure 5). As these ways are brought back to Sinkyone, the healing of the land and the people is being realized.

Hard work and determination are key ingredients to developing and nurturing a successful intertribal land trust. In sharing the story of our experience

in reestablishing Tribal control over ancestral Sinkyone land, our ISWC hopes to encourage other indigenous communities around the world to undertake similar efforts so that they also can regain the stewardship and management of culturally important areas of their ancestral homelands.



Figure 5—Dancer, Sinkyone Cultural Gathering event, August 2008. Photo © by Hawk Rosales.

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Hawk Rosales is executive director of the InterTribal Sinkyone Wilderness Council (www.treesfoundation.org/affiliates/specific-22) and has worked with the ISWC since 1990. Hawk is responsible for developing and managing the ISWC's multifaceted program of cultural land conservation, which has created jobs for tribal members working on Sinkyone land in various areas of ecological restoration and cultural stewardship; email: director@sinkyone.org. Contact: InterTribal Sinkyone Wilderness Council, P.O. Box 1523, Ukiah, CA 95482, USA; phone: (707) 468-9500; email: intertribalsinkyone@sbcglobal.net.

[Back to Contents](#)



RELATED ARTICLES

Mexico Welcomes Uganda to the 9th World Wilderness Congress

**By Charles Tumwesigye,
Chief Warden of the Bwindi Impenetrable National Park**

**Original article appeared in
Fauna & Flora International, May–July 2010**

The hand of the clock is ruthlessly striking wilderness areas off the face of the earth, one by one. Scars leave cracks in the landscape and the earth greys with the age



Crop raiding by mountain gorillas in Southern Bwindi, Uganda. Photos © by Charles Tumwesigye & Sandra Slater-Jones

of man. Islands of pristine wilderness are being ambushed by development and before we can turn back, they will be tainted or totally lost, says Charles Tumwesigye and Sandra Slater-Jones.

Conservationists are working tirelessly to rescue wild areas from being damaged to serve human needs. Protected areas, as a result, are being secured globally but in order to earn their keep they have to be altered in some way. As an example, to sustain tourism in protected areas roads, trails, buildings, and facilities are developed

and, as a result, the natural systems are often adversely impacted. The WILD Foundation (an international organisation based in the US) and its sister organisations in Africa and the UK promote the importance of protecting areas in their most intact form, to safeguard the “life support services” these areas provide (clean water, air, balancing global climate, medicinal plants and much more)



Charles Tumwesigye (left) and other delegates at the 9th World Wilderness Congress.

while also preserving the spirit of untamed land. This type of protected area is termed ‘wilderness’. The only form of human intervention usually permitted in such areas is traditional resource utilisation by indigenous residents—which must be historically and ecologically justified—and scientific studies and recreation that have no technological impacts. It is not only encouraged that new wilderness areas are secured globally, but also that wilderness is zoned into existing protected areas.

The 9th World Wilderness Congress—dubbed ‘WILD9’—was held in Merida in the Yucatan Province of Mexico in November 2009. Every four years the World Wilderness Congress brings scientists, protected area managers, government officials and leaders, artists, writers, photographers and film makers, indigenous leaders, academics and the private sector together, to find practical solutions to ensure that wilderness is recognised and protected on a global scale. The wilderness network developed at each Congress keeps track of and supports the many outcomes and resolutions that are produced, and that target practical conservation and community accomplishments are followed through. Vance Martin, Director of the WILD Foundation explains, “the Congress is not an institution, but rather a global community of people (professionals and the public) who understand the importance of wild nature to the health and prosperity of human communities, and want to act on its behalf.”



Merida, state capital of Yucatan Province of Mexico, was the venue for the 9th World Wilderness Congress.

Charles Tumwesigye, Chief Warden of Uganda’s Bwindi Impenetrable National Park and Mahinga



Mayan ruins, Yucatan province in Mexico

Gorilla National Park, which protects half of the world's population of mountain gorillas and other endangered species, was a speaker at the World Wilderness Congress in Mexico. Bwindi Impenetrable National Park not only keeps half of the world's population of mountain gorillas but is also a World Heritage Site inscribed by UNESCO in 1994. The park is surrounded by a very high human population of local communities. Mr. Tumwesigye participated in a pre-congress Wilderness Seminar with protected area managers from all over the globe where various wilderness policies and strategies were discussed, as well as a Government Forum where various issues and solutions of wilderness management feature were brainstormed and debated. Mr. Tumwesigye also addressed the Native Lands and Wilderness Council, which met during WILD9, about the importance of the relationship the Bwindi Impenetrable National Park has developed with the surrounding communities to improve its management as a wilderness area. In this talk, Mr. Tumwesigye indicated that previously communities in the southern part of the Bwindi Impenetrable National Park were hostile to the park as a result of frequent crop raiding by mountain gorillas and other wild animals from the park. The park habituated a group of gorillas in this area for tourism but no sooner had the group been habituated than it started spending more than 50 per cent of its time outside the park on community land, which increased the conflict and exposed the endangered mountain gorillas to disease. With support from development partners (especially African Wildlife Foundation – AWF), the park convinced the local communities to sell part of their land next to the Bwindi Impenetrable National Park where gorillas were ranging outside the park for use as a 'buffer zone' to the general wilderness area of Bwindi. This 12 kilometres by 350 metres 'buffer zone' has been used for problem animal intervention measures

that are also aimed at improving community livelihood through growing buffer and commercial crops that are not palatable to the gorillas, and generate income for communities. The outer boundary of the buffer zone has been planted with a live fence of Mauritius thorny plant that prevents gorillas and other wildlife from crossing into community land. This intervention has significantly reduced crop raiding incidents in southern Bwindi by over 80 per cent since 2006.

To further increase tourism benefits to communities around the park, the communities (through their umbrella organisation, Nkuringo Conservation Development Foundation—[NCDF]) were linked to a partner to help build and manage a high end eco-lodge for them. In addition, the national park authority gave the communities “first priority” to purchase six of the eight available gorilla permits for the Nkuringo gorilla family. That way, the communities are able to market their lodge and attract clients who want to track the mountain gorillas. The lodge has been operational since August 2008 and the income from the lodge has been used by NCDF to support community development projects including schools and other livelihood projects (heifers, piggery, apiary and a modern craft shop).

All these have contributed to livelihood improvement and the once-suffering community that considered the national park as a necessary evil is now a very happy community obtaining a wide range of benefits from conservation. As a result, the relationship between community and park has improved dramatically. The Uganda Wildlife Authority (UWA), charged with managing all wildlife protected areas in Uganda, is now using the transformation of communities in southern Bwindi as a model for community engagement in protected area management. Mr. Tumwesigye can now look back and sigh with relief that his work of managing mountain gorillas and their wilderness habitat has been made easy with local community participation. Much gratitude to Flora and Fauna International and to Vance Martin and The WILD Foundation for the support for Mr. Tumwesigye to represent Uganda Wildlife Authority at the 9th World Wilderness Congress.

[Back to Contents](#)

APPENDIX

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APPENDIX

Native Lands & Wilderness Council Project Description

WILD9: The 9th World Wilderness Congress

Following the 2nd Native Lands Wilderness Council at WILD9, the 9th World Wilderness Congress (Merida, Mexico, 2009), NLWC participants developed the following mandate (see Chapter 1 of this volume) and practical plan for moving forward, and requested that The WILD Foundation steward its development in collaboration with all involved tribes and communities.

*“For us, land includes everything that surrounds us—
the sea, the earth, the sky, the air; everything is included in our
understanding of land and wilderness.”*

—Gabriel Hoeffler, Governor, Comcaac Nation

Project Summary

Indigenous peoples and traditional communities are the original stewards of wild nature and the world’s biocultural diversity. Their traditional knowledge and understanding of complex ecosystems have long supported abundant economies based on reciprocity, a balance between taking and giving. Indigenous peoples are currently the stewards of at least the same amount of wild nature as all regional and national governments and conservation organizations combined. Despite this, they are often left out of the nature conservation equation, much to their detriment and that of global nature conservation.

In 2004, a shared commitment to land stewardship brought Vance Martin, of The WILD Foundation, and Terry Tanner, of the Confederated Salish and Kootenai Tribes, together in a conservation dialogue focused on the need to ensure the inclusion of native leaders in mainstream wild lands conservation. Over time, through this relationship of shared vision and purpose across cultures the NLWC was born under WILD’s wings.

Through their collective meetings in 2005 and 2009, at the 8th and 9th World Wilderness Congresses, the Native Lands & Wilderness Council has developed a clear mandate that The WILD Foundation has agreed to continue to steward—at the request of the Council—with the understanding that these goals and objectives require alliances between both indigenous peoples and organizations and their allies. WILD provides program development and management support, in collaboration with various indigenous partners and partner organizations. In 2012, the CSKT are the primary drivers.

The Native Lands & Wilderness Council (NLWC) strengthens biocultural diversity, healthy relationships between land and people, culture and nature, by strengthening the capacity of indigenous peoples—worldwide—to manage and steward their wild lands and seas, providing a critical platform for the meeting of indigenous and conservation agendas, thus enhancing our collective ability to preserve and protect wild nature.

The Native Lands & Wilderness Council works to:

- Create a coherent and accessible **body of knowledge** on indigenous management/stewardship of wild lands and seas
- Promote **intertribal collaboration** and **direct representation** by traditional custodians in policy processes related to biodiversity, wilderness and climate change
- **Enhance the application of TEK**, customary and traditional practices and indigenous wisdom to land/marine conservation and management
- **Globally expand the conservation of, and benefits from, stewardship of indigenous wild lands and marine/coastal areas** for their cultural and biodiversity values

NLWC Activities

- 1) Conceive, steward and build a coherent body of knowledge on indigenous management/stewardship of wild lands and seas through Council presentations, a web-based platform, case studies volumes and other print media. The web-platform provides visibility for the NLWC to share its messages, achievements and current projects. It features collections of global case studies, application of TEK to stewardship and management of wild lands and seas, contact information, etc.
- 2) Regional Councils
Regional working sessions are needed between Congresses in order to: a) Provide a platform for peer-to-peer knowledge exchange, b) Catalogue and collect case studies, c) Develop international handbooks/guides to support

the creation of policies and ordinances for the protection of indigenous lands and waters, including sacred sites and critical ecosystems, integrating indigenous-appropriate use of language reflecting conservation concepts, d) Prepare regional sessions, plenaries and concurrent sessions for the World Wilderness Congresses, e) Increase regional capacity through knowledge exchanges, planning and development of strategies related to Nature Needs Half and global conservation goals, f) Convene stakeholders toward policy and law reform related to indigenous land law and tribal wilderness designations.

3) NLWC and the World Wilderness Congress

At World Wilderness Congresses, the NLWC will: a) Host indigenous-led plenary sessions, b) Host concurrent sessions on co-management with indigenous communities, highlighting successful management and stewardship practices, including the use and application of TEK and wisdom, c) Host concurrent sessions on narratives of relationship between indigenous communities and the natural world, d) Draft and pass resolutions related to the use of the Indigenous Conservation Policy Handbook, e) Publish related articles in the *International Journal of Wilderness* and other publications, f) Document case studies and generate case studies volumes.

Financial Request

Financial support is needed to cover program-related costs, including, publication, printing and distribution of case studies volumes, development of the web-based platform, policy initiatives, and Council meetings. By supporting the continued development of the NLWC, funders can help to ensure that the wisdom, TEK and biocultural stewardship and management practices of the land and seascapes of the world's indigenous peoples are recognized, honored and supported at scale, both locally and internationally. Thank you for your consideration.

Project Background

The orientation of indigenous stewardship is a process that sustains community, culture and place. These lifeways and examples can provide critical models for sustainability and renewal of the planet's resources. Through the Native Lands & Wilderness Council, participants provide models of living in balanced relationship with the wild lands and seas and describe sustainable ways of living. All of the stories express deep understanding, practical knowledge and love of place that critically inform the actions of conservation. The NLWC is committed to making this knowledge and wisdom coherent and well known

in the international arena: These are the narratives that we need to secure our common future.

The Native Lands & Wilderness Council was launched in 2005 at the 8th World Wilderness Congress. The number and diversity of tribal groups participating in the NLWC increased from twelve at the 8th WWC to twenty-five at WILD9. These initial meetings strengthened the leveraging power of the NLWC, led to the publication of the first-ever volumes of indigenous-authored case studies on wilderness management/stewardship and led the Council to solidarity of purpose. The Council has created a clear mandate that The WILD Foundation has agreed to steward—at the request of the Council—with the understanding that these goals and objectives require alliances between both indigenous peoples and organizations and their allies.

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[Back to Contents](#)



Native peoples and traditional communities were the original stewards of wild nature and the world's biocultural diversity. Today, they still oversee, coexist with, and manage vast areas of wilderness in almost every region of the world. In fact, current statistics tell us that traditional peoples currently steward at least the same amount of wild nature as all regional and national governments and conservation organizations combined. Even still, for years they were left out of the nature conservation equation, much to their detriment and that of global nature conservation.

This volume of case studies is the second in an ongoing series produced through the Native Lands and Wilderness Council (NLWC), a platform for indigenous knowledge exchange and capacity building that ensures that the knowledge and wisdom of indigenous peoples influences the policies, practices and approaches of the global wilderness conservation movement. These case studies highlight indigenous peoples' strategies for coexisting with and managing their wild lands and seas, and are practical and spiritual examples of how to live in harmony with wild nature. They also address current and pressing needs for nature conservation on ancestral lands by honoring the past, while looking forward with tangible plans and actions for the well-being of future generations.

