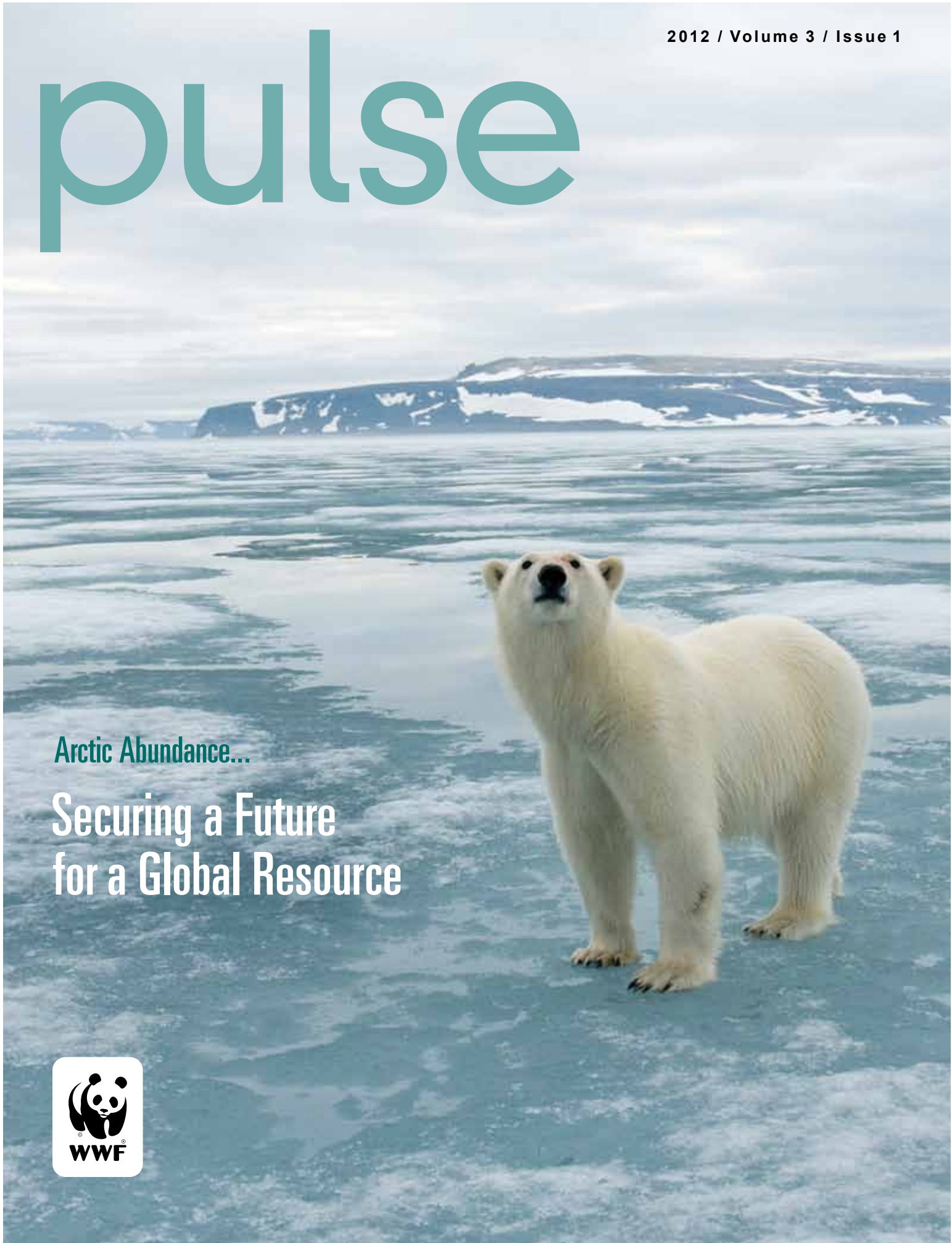


2012 / Volume 3 / Issue 1

pulse

Arctic Abundance...

**Securing a Future
for a Global Resource**





pulse

the heart of conservation

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Washington, DC 20037-1193

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A Seat at the Table



Considering how much we rely on nature, making sure it has a seat at the table is the least we can do.

Last year I participated in a conference which addressed the economic future of the Arctic, most particularly Alaska. We were meeting in Anchorage, so our discussions occurred against the backdrop of the state's current economic reality: Nearly 90 percent of Alaska's revenue flows from one place—the Trans-Alaska Pipeline.

Alaska's fortunes were forever changed when oil was discovered in Prudhoe Bay in 1968. The pipeline was completed in 1977, and oil revenue has funded large portions of the state budget for more than 30 years; the oil industry supports an estimated one-third of Alaska's workforce. The problem is that when an economy is built around a single commodity, it is not sustainable.

At the pipeline's peak it pumped 2 million barrels a day. That number has declined to about 600,000 today, and is only going down. As the pipeline's production continues to decline, many are placing their bets on Alaska's outer continental shelf and the Alaska National Wildlife Refuge as critical new sources of oil. But both of these options pose serious environmental and cultural challenges.

Edward Itta, the mayor of Barrow, Alaska, drove this point home with the speech he gave at the end of the conference. He described how, for millennia, his people and their culture evolved and thrived on Alaska's North Slope, interwoven with the landscape and the harvest from the sea upon which they depend. "We may not have the legal right to make the decisions about what happens in these

waters," Itta said, "but we have the moral authority to ensure the choices are smart and enable us to continue our way of life. Because long after these companies have come and gone, we will still be here."

Now, there is not a serious environmental group that imagines the way to save nature is by putting a bubble over it. And by the same token, there is not a legitimate business that does not embrace its responsibility to make sure its practices don't destroy what makes Alaska and other places so unique. That means mapping all the resources located in the Arctic and then making smart choices about areas to conserve and areas to use sustainably. It is madness not to understand nature before making those decisions.

Whether you're the CEO of Procter & Gamble or the president of CARE or a herdsman in Namibia, we are all united by the undeniable fact that we need nature. That reality should drive us to make sure nature is at the table whenever decisions are made—whether it's the design of a governance system for an African state, or the locations chosen for roads that cross the Amazon, or how to sustain what makes the Arctic unique.

Nature must also be at the table when we make decisions in our everyday lives, from buying groceries to deciding how to get to work to casting votes. Considering how much we rely on nature to sustain and enhance our lives, it's the least we can do.


A handwritten signature in black ink, appearing to read 'Carter S. Roberts'.

Carter S. Roberts
President & CEO

Charting New Opportunities for the Arctic

A scenic landscape of a calm lake at sunset or sunrise. The sky is filled with soft, colorful clouds in shades of orange, pink, and blue. In the background, snow-capped mountains rise against the sky, their peaks catching the low light. The water of the lake is still, reflecting the colors of the sky and the silhouettes of the mountains. In the foreground, several large, mossy rocks are scattered across the shoreline, some partially submerged in the water. The overall atmosphere is serene and majestic.

The Arctic may seem remote and desolate, but in reality it is closely connected to our everyday lives and is one of the planet's most abundant places. WWF experts Bill Eichbaum, Victoria Elias and Margaret Williams discuss how WWF is helping to lead local, regional and international actions that are saving one of the last true paradises on Earth.



The Arctic is one of Earth's last pristine places. It is home to diverse habitats, from seafood-rich Bristol Bay in the Bering Sea, to sea ice, mountain glaciers and treeless tundra. But rapid changes are under way that may transform it into a very different place by the end of this century. The repercussions will be felt not only by its inhabitants, but by people all over the world.

VICTORIA ELIAS: When you say “Arctic,” many people think of something cold, far away, empty. Actually, it’s an ice- and snow-covered desert. But it is also a place with great biodiversity, which you can see when you think about the Arctic food chain.

At the top of the food chain, there is the iconic polar bear. There are also mammals like walrus and seals, which eat a variety of fish. And then there are the migrating birds that come to the Arctic zone, and a number of small mammals, such as lemmings.

BILL EICHBAUM: One of the things that’s really interesting about the Arctic is that the energy that feeds the system begins microscopically at the ice edge. That’s where—particularly in the spring, as the sun begins to shine longer and melt the ice—you get a tremendous burst of microscopic life, the plankton and phytoplankton.

MARGARET WILLIAMS: It may be surprising to many people that the Arctic also has corals. One of the largest coldwater coral reefs is found off the coast of Norway. These corals are important nursery areas for marine vertebrates and for fish, and play a very important ecological role. There are some really astounding, unique corals that are still being named and described and are found only in the Arctic and sub-Arctic waters of Alaska’s Aleutian Islands.

Another thing that’s striking is the incredible abundance of species. There are places where there are 4 million individuals of one particular bird species and over 100,000 marine mammals, such as the northern fur seals in the central Bering Sea. And these habitats are, for the most part, still intact.

BILL: But the Arctic isn’t immune from human influences. More than any other factor, it is climate change—generated by carbon emissions from activities all over the planet—which is transforming life in the Arctic. One of the biggest, most visible changes is the disappearance of summer sea ice, which has declined between 30 and 40 percent over the last 30 years.

This physical change—the loss of the Earth’s multiyear sea ice—has enormous implications for our entire planet, and of course for the people and wildlife living in the Arctic. The sea ice is not only a habitat for species such as polar bears, walruses and ice seals. It is an engine for life and energy in the ocean, releasing microscopic plankton each year in a “spring bloom” that in turn feeds a rich Arctic food web. It also acts as a buffer for coastal communities. With less sea ice to buffer the shoreline when harsh winter storms pummel the coast, erosion accelerates. Some coastal communities are facing tough and urgent decisions—as well as huge costs—regarding mitigation and construction to prevent loss of roads, homes, and village infrastructure.



BILL EICHBAUM
Vice President, Marine & Arctic Policy, WWF



VICTORIA ELIAS
Program Director, WWF-Russia



MARGARET WILLIAMS
Managing Director, Arctic Program, WWF

© WWF-US

Other human activities are also on the rise: Maritime shipping is increasing as globalization increases, due to the demand for all kinds of products. The change in sea ice yields longer seasons of open, ice-free water, increasing opportunities for shipping. At the same time, mineral exploration throughout the Arctic is on the rise, and is likely to lead to increased vessel traffic as well. Even Arctic tourism is increasing; cruise ships are venturing into northern waters with greater frequency.

One major issue that we're working on is the exploration for offshore oil and gas resources in places in the Barents Sea, which is shared by Norway and Russia. In Alaska, we haven't really had this problem before. But, the U.S. administration has approved several key permits for aggressive plans for oil exploration in the Beaufort and Chukchi seas. At WWF, we're really concerned about the potential for oil spills because we know there is no technology that allows for the containment of oil in a place with ice, storms, harsh conditions and darkness half the year.

VICTORIA: It is the job of governments to ensure that development there is done responsibly. If you look at the map of Russia, you will see that almost one-third of the country belongs to the Arctic zone, so this region is the focus for future development of industries, transportation and infrastructure.

Russia is also exploring opportunities in oil and gas extraction on the Arctic shelf. Our position is to ensure that development is sustainable and that



© ROBERT STONE/NOAA FISHERIES

“The loss of the Earth’s multiyear sea ice has enormous implications for our entire planet, and of course for the people and wildlife living in the Arctic.” **BILL EICHBAUM**



© PAUL NICKLE/NATIONAL GEOGRAPHIC STOCK/WWF-CANADA

ABOVE An Atlantic walrus rears above the ice in Canada’s northern Nunavut region. WWF is working not only to protect wildlife and pristine wilderness, but to secure a future that marries local culture, global economics and space for wildlife to roam free.

LEFT Alaskan cold-water corals are still being discovered and explored. They play a foundational role in the Arctic food chain.

areas of critical biodiversity are protected during this development.

BILL: We have examples in the Arctic where we’ve done a good job managing resources. The challenge is to get those systems in place elsewhere before exploitation happens.

For example, the Arctic fisheries, which produce more fish than any others in the U.S., are increasingly better-managed, particularly in the Bering Sea, where we have certification of sustainably caught fish pursuant to the Marine Stewardship Council. This gives consumers the ability to make a choice of well-managed fish when they purchase seafood.

But in the far north, the concern is that we don’t have enough science to understand how to manage those fisheries and there are no real management agencies able to oversee them. So the United States government is leading a strong movement to disallow fishing north of the Bering Straits until those things are in place.

MARGARET: Together, Alaska and Russia’s Kamchatka are really the most important strongholds in the world for wild Pacific salmon. In both cases, we are working on the ground to encourage communities to participate in the management process.





© JOHN ALEXANDER/WWF-US

ABOVE The caribou (also known as reindeer in many areas) are a central part of many Arctic cultures.

LEFT On Alaska's St. Paul Island, thick-billed guillemots claim any available space to make their nests.

RIGHT Nearly 40% of the United States' wild-caught seafood comes from Alaska. WWF's partnerships in Bristol Bay and beyond are making the case for more sustainable use of the Arctic's natural resources.

In both Alaska and Russia, we are working to reduce marine bycatch, which is when species that are not being targeted get caught—and often killed—in fishing gear. In Alaska, tens of thousands of king and chum salmon are accidentally taken by pollock trawlers every year. In Russia, the expanding offshore drift net fishery for salmon takes thousands of birds and mammals. This is a big concern for the ecosystem and for local people who depend on salmon for subsistence.

WWF is working on a variety of solutions, including engagement in the policy and regulatory process on both sides of the Bering Sea. In Alaska last year, we partnered with Alaska Native organizations and fellow conservation groups to provide training for effective involvement in the federal fisheries management process, which can be confusing and outright intimidating. On Russia's Kamchatka Peninsula, WWF has helped to create local public councils, where people can discuss in a public forum their concerns and opinions regarding salmon management.

Also in Russia, we are trying to address the problem of in-river poaching of caviar by funding some antipoaching brigades. But over the long term, the most important solution is building a sense of local ownership and stewardship of the resources, so there is incentive for good management and a vision for long-term sustainability of the resource.

We're also working at the local level with fishermen on both sides. In Alaska, many fishermen are huge advocates for conservation and they have become strong voices for stopping offshore oil and gas development in Bristol Bay, as well as for stopping plans to develop Pebble Mine, a huge gold and copper deposit now proposed for construction in the headwaters of Bristol Bay. We've had opportunities to collaborate with local community leaders in a shared effort to educate the U.S. Interior Department, other agencies, and the media about the ecological and cultural values—in addition to the vibrant fisheries—that would be greatly jeopardized by this mine.



© SCOTT DICKERSON/WWF-US

“Working with indigenous people, who rely on many of the species and habitats that are important to WWF, is a high priority.”

MARGARET WILLIAMS



© BRYAN AND CHERRY ALEXANDER/NATUREPL.COM



© SINDRE KENNEROD/WWF-CANON



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VICTORIA: Another important tool we have is certification according to the standards of the Marine Stewardship Council (MSC). The MSC accredits third-party independent auditors who consider the status of a particular fish stock, the ecological impact of the fishery in question, and the flexibility of the management system to adapt to new information. At the same time one needs to ensure that the quality of the certification is relevant. We're working with fishermen and fisheries-related companies and associations, helping them to understand the value of the MSC system and promote MSC certification among fishermen, wholesale buyers, retailers and consumers, as well as ensure the quality of the conditions of certification implementation. We also assist local fishermen in getting their responsibly caught fish to the market.

BILL: The industries that depend upon the long-term existence of the resource to survive, such as those involved with the fisheries, have been the ones with which we have been most successful in getting partnerships for sustainable management. The extractive industries are much, much more difficult to work with.

We have talked over the years with virtually every major oil industry, and increasingly with the mining industry, in an effort to get them to agree to the highest standards—and to agree that there are areas where there should be absolutely no production because of the risk to resources. This has proven very difficult, so we really have to rely on the governments to adequately regulate these industries, whether it's through the Arctic Council or national governments. There are places where the biological resource is either so fragile or so rich that there just should not be any risk to that resource, because the sustainable use of these living resources has long-term benefits greater than those from short-term exploitation of

LEFT Across eight Arctic nations, WWF works closely with many native people, including the Inuk of Nunauut, Canada.

CENTER LEFT Short summers burst with life for this Arctic fox and other species.

BOTTOM LEFT Inside a reindeer-skin tent in Siberia, a Nenets woman comforts a baby.

RIGHT In Greenland's capital, Nuuk, homes cling to the rugged coast.

BELOW Inukshuks—stone landmarks found across the Arctic—traditionally signify “someone was here” or “you are on the right path.”





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nonrenewable resources such as oil and gas. Bristol Bay in Alaska, the Lofoten Islands in Norway, and the shelf on the western edge of Kamchatka in the Russian Far East are all examples of where that is true.

MARGARET: One solution we are exploring will be some kind of no-go zone or protected area, safeguarding sensitive marine habitat from offshore exploration. This doesn't mean prohibiting activities such as recreational and subsistence fishing.

BILL: It's important to recognize that there are companies that don't really do business in the Arctic but are strong partners in our work there. Coca-Cola, for instance, which for over 70 years has used the polar bear as an icon in its winter advertising campaigns. This past winter, Coke ran a fundraising campaign in North America in which they matched the public funds raised. That campaign focused on polar bears and on protecting what we call the last ice area—the archipelago all the way in the north of Canada and Northwestern Greenland, which, if the trend of receding ice continues, will be the one place where ice persists.

All of the ice-dependent species will be critically dependent on the protection of that area. So we are working with the governments of the native communities that use that area, and with other stakeholders, to strategize on how to get a management regime up there that will allow those species to persist.

MARGARET: Working with indigenous people, who rely on many of the species and habitats that are important to WWF, is a high priority.

For example, we have collaborated with, and learned a great deal from, communities who harvest whales. Although there is no commercial whaling in Alaska, subsistence whaling is a centuries-old practice that is central to the cultural and nutritional needs of many Arctic people. The culture of whaling and other subsistence uses of wildlife is very strong in the Arctic. For example, to have the status of captain of a whaling crew affords special authority and leadership. In large part, it is members of a whaling community up in the Alaskan Arctic who have effectively highlighted concerns about potential impacts of oil and gas on marine mammals, especially bowhead whales.



VICTORIA: A good example from the Russian coast is the Umky patrols. Umky is the word for polar bear in Chukchi language. The patrols act to prevent conflicts between polar bears and people. Because climate change has caused shifts in their habitat, polar bears have taken to looking for food in human communities. The patrols set up feeding areas for the bears far away from the villages, so they don't need to come in.

The patrols help monitor bear populations. While this does not replace scientific monitoring, the data collected by indigenous people is very helpful to our work.

MARGARET: We have two polar bear populations in Alaska: one that we share with Canada, one that we share with Russia. The Alaska-Chukotka polar bear population has its primary denning area in Russia, but then the bears cross over to the Chukchi Sea. Alaska and Chukotka also share indigenous people who have common family ties, common languages, and common cultures across the U.S.-Russian border, and are separated by the Bering Strait. The same is true of Inupiat and Inuit people who live on the shores of the Beaufort Sea, yet are divided by the U.S.-Canadian border.

WWF plays an active role in bridging these boundaries as we develop our conservation work. For example, in 2010 we invited three leaders from the community-based Umky patrols, and a Russian biologist who was working with that group, to come to Alaska. They went from village to village to talk with their Alaskan neighbors about their efforts to reduce human-polar bear interactions, and to share their approaches to protecting areas where walrus are coming ashore.

I'll never forget, one of the Chukchi leaders stood up at a meeting and he said, "There were times when it was really difficult, when we didn't have much to eat, and the polar bear and the walrus helped us out in Chukotka. And now, they're in trouble [from climate change impacts] and we need to help them." It was a very powerful statement coming from a hunter and local resident.

BILL: You know, a lot of people might say, "Well, the Arctic doesn't really mean much to me where I live," in San Diego or in Atlanta. But the Arctic is very important to all of us around the world because of the role that it plays in driving global weather patterns.



ABOVE Local Aleut women study seals. Paired with economic data and local knowledge, scientific research is guiding balanced plans for the Arctic.

TOP A bowhead whale's fluke breaks the surface of Niginganiq, or Isabella Bay.



ABOVE Near the top of the food chain, fur seals—gathered in the Bering Sea peninsula—represent the abundance of Arctic waters.

RIGHT In Iqaluit, Canada, an Inuit man fishes for Arctic char. The Arctic's relatively unspoiled abundance offers a unique opportunity, and WWF is making the most of it by crafting plans to merge recreation, commerce and conservation.



Those weather patterns, and their stability, are dependent upon careful balancing of temperatures in the Arctic. The currents of the world's oceans—which drive the productivity of marine life all over the world—originate in the Arctic. Masses of fresh water, coming largely from Russia, move out of the Arctic and drive circulation.

Sea level rise is potentially exacerbated if there is significant ice melt, especially on the Greenland ice shelf. A complete disappearance of that ice would raise sea levels as much as 20 feet, which would be extraordinarily destructive for many cities and populations around the world.

VICTORIA: In addition to the threats posed by climate warming and ice melting, an increasing number of people are moving into this region as new opportunities open up, and that means increased development.

BILL: That's right. Even though people have lived there for thousands of years, until now they've lived at very low densities and in harmony with nature. But now, as the demand for resources that are depleted elsewhere grows, there's a rush to develop the resources of the Arctic.

Historically, we've gone into places, we've exploited them, we've used up the natural resources, we've polluted rivers, we've destroyed wildlife and then we go back and try to correct it. With the Arctic, we have an opportunity to really ensure sustainable management first. But to do that, we've got to strengthen the mechanisms for cooperative governance among the Arctic countries.

There are eight Arctic countries, five of which are maritime countries. We are working with the Arctic Council, created by those governments, to get them to take responsibility for better planning than has been done elsewhere. This is a major feature of our conservation work. WWF is well-situated because we're the only environmental organization that has a presence in almost every Arctic country, with the exception of Iceland. So we can collectively talk to the Arctic Council, but also to the environmental ministries, the foreign ministries, the fisheries ministries—in Russia and Norway, Canada, the United States and all the other countries—to get advocacy for good governance. This is going to be the key to whether the Arctic is a sustainable place by the end of this century. ■

History, Culture and Hope in Bristol Bay



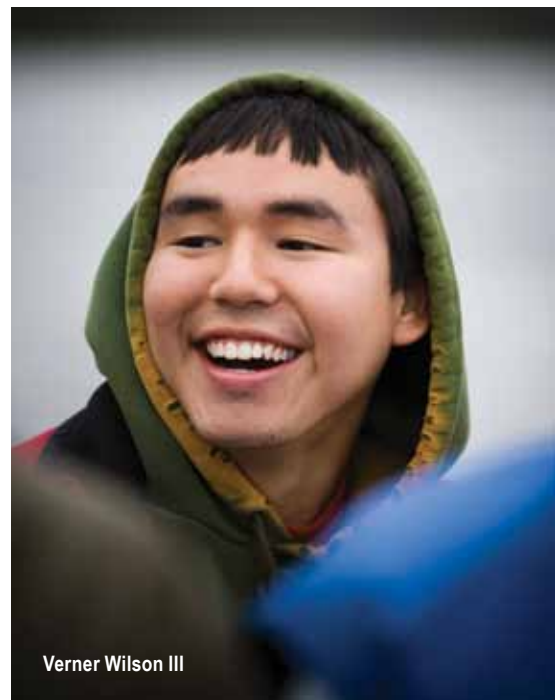
Verner Wilson III, WWF's Arctic field program officer, offers both traditional and cutting-edge insights into the many levels of partnerships needed to save the wild heart of Alaska's Bristol Bay.

f For as long as I can remember, summers have always been about salmon: fishing for it with my father and brother, cutting it into strips and fillets with my mother and sisters, then freezing it to feed our family through the winter months. In fact, salmon has defined my ancestors' summers for thousands of years. When you're a Yup'ik Eskimo born and raised in Bristol Bay, Alaska, you love salmon because it has helped your people survive for thousands of years.

My close relationship to the land and sea in this region of the Arctic is what inspired me to learn more about the problems currently facing Bristol Bay and the natural resources my family and thousands of others still depend on for survival. Bristol Bay is home to the world's largest sockeye salmon fishery, responsible for at least half the wild sockeye in the whole world. It doesn't just help feed, employ and provide the economic boost for the 2,500 people of my hometown of Dillingham—Bristol Bay feeds people all over the world who purchase our sustainable, wild, healthy seafood from countries like Japan and the United Kingdom. Many of our families rely on that global demand to earn our living.

But if I want to continue to live off the land, and to keep this amazing place of my childhood sustainable for generations to come, there's much work to be done. And I'm proud to say that I spend every day of my life helping to find solutions that will save this pristine place from the many threats it now faces.

As a program officer for WWF's Arctic field program, it's my job to communicate with everyone who has a stake in protecting Bristol Bay and the Bering Sea from threats such as offshore drilling and the proposal to build Pebble Mine. That mine would be one of the world's largest open-pit mines for gold and copper, and could forever destroy



Verner Wilson III

© SCOTT DICKERSON/WWF-US

freshwater habitat for salmon and other iconic Alaskan wildlife such as beluga, moose and caribou. These short-term projects could taint the pristine image of Alaska's clean water and untouched beauty, as well as our renewable, sustainable global seafood products.

The stakeholders I work with include everyone from members of Alaska Native and tribal groups—such as Nunamta Aulukestai (“Caretakers of Our Lands”), a coalition of



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“The work I do for WWF makes me feel like I am making an important contribution to securing much-needed environmental protections for my people’s culture and traditions, my region, my state, and the world.” **VERNER WILSON III**



© MICHEL ROGGO/WWF-CANON



© STEVE MORELLO/WWF-US

nine village corporations and one of our biggest partners—to fishing companies and organizations, Alaska’s congressional delegation, and national leaders such as Secretary of the Interior Ken Salazar.

I have had the honor of meeting Secretary Salazar twice on behalf of WWF and the people of my region. One of my proudest moments since I began working for WWF in 2008 was when Secretary Salazar came to Bristol Bay to hear what local residents thought about a proposal for offshore oil drilling in the region. Before the secretary came, WWF gave me the opportunity to speak with people throughout the region about the impacts drilling could have on our fisheries and communities, and to educate them about the process of seeking protection for the bay and how they could get involved. I visited my neighbors throughout Southwest Alaska, urging them to sign a petition to permanently protect the bay from offshore drilling. Even while herring fishing with my father that year, I urged my fellow fishermen



© HOWARD W. BUFFETT/WWF-US

ABOVE Bald eagles and other raptors hunt Alaska's rivers, lakes and seas.

RIGHT A community rallies to protect Bristol Bay from the proposed Pebble Mine.

TOP LEFT Sockeye salmon form the backbone of a massive fishing culture that includes native subsistence fishers, industrial operations and global demand.

BOTTOM LEFT Pebble Mine would pollute Bristol Bay waters and impact habitat for both moose and caribou.



© MISTY NIELSEN

to sign. By the time Secretary Salazar arrived, I had the signatures of 1,000 local residents and fishermen on the petition, which I handed to him when he spoke at a meeting in Dillingham.

He came up to me during the public meeting and shook my hand, saying he was proud that younger people like me (I was 22 at the time) were involved in the important issues of our communities. I was grateful to be able to give a voice to the people of my region and state, thanks to WWF.

Last year, a delegation from Bristol Bay traveled to Washington, D.C., to continue discussions of the need to permanently protect the bay, as well as the Bering Sea, from drilling. I was asked to go with them because of my previous encounter with Secretary Salazar. Though the secretary had a very busy schedule and had to go before Congress that day, he made time to meet us personally—and he remembered me. “I know you,” he said, and he asked me if I were going to run for president some day. I’m glad to have that personal connection with him, particularly if it helps get the message out from the fishermen and people in our region that the bay needs permanent protection.

Without that protection, “America’s fish basket” in Bristol Bay and the Bering Sea is in danger from

short-term, potentially toxic proposals. So much is at stake. These waters produce 40 percent of America’s wild-caught seafood, contribute \$4–\$5 billion per year to America’s economy, provide tens of thousands of jobs, and are home to the world’s last great wild salmon fisheries. They also harbor other huge wild fisheries—pollock, king crab, halibut and herring—and 25 marine mammals, including the endangered right whale. Bristol Bay and the Bering Sea are nothing less than a global food resource, a rich sustainable source of healthy omega-3 fatty acids, good for both humans and wildlife.

The work I do for WWF makes me feel like I am making an important contribution to securing much-needed environmental protections for my people’s culture and traditions, my region, my state, and the world. My ancestors left these vital natural resources for people in my region and around the world to enjoy. I hope that our efforts today will ensure that these resources will be here for thousands of years to come. ■

Verner Wilson III works for WWF’s Arctic field program. He is based in Dillingham, Alaska.



Enhanced surveillance and patrols will benefit Malagasy wildlife like this Verreaux's sifaka.

Global Action



We are strategically focusing on conserving critical places and species while also working to reduce humanity's ecological footprint. Here are some highlights of WWF's recent successes **made possible by your support.**

SPECIES

CREATING A REFUGE FOR THE WORLD'S RAREST WILD CAT

The Amur leopard once ranged throughout northeast China and the Korean Peninsula. Today, only about 30 remain in the wild in Russia and China. Extensive habitat loss, illegal logging, poaching and conflict with humans have placed this subspecies of the leopard on the brink of extinction. Protecting habitat is a critical first step to bring back the species. This year, a tremendous victory was scored for the Amur leopard with the creation of the 650,000-acre Land of the Leopard National Park in the Russian Far East. The park is also home to 10 endangered Amur tigers.

WWF has long advocated for the creation of the park, which includes all of the Amur leopard's breeding areas and 60 percent of its remaining habitat. Various zones exist in the park, including protected areas, an economic development zone, and a recreational zone that will include forested areas and sites for ecotourism. The success of other species restoration efforts gives WWF real hope that it is not too late for the critically endangered Amur leopard. With this habitat secured, WWF can now focus on strategies to bring the population back.

MODERNIZING LAW ENFORCEMENT AND PROTECTED AREA SURVEILLANCE IN MADAGASCAR

The Spiny Forest in southern Madagascar is a distinct ecosystem harboring an extraordinary



Helping secure protections for Amur leopards

© VALERY MALEE/WWF-RUSSIA

array of wildlife and plant species—many found nowhere else in the world. Though protected areas exist here, a weak government and declining funding for conservation mean that these areas do not receive adequate protection. As a result, wildlife trafficking, illegal collection of timber for firewood and charcoal production, and slash-and-burn agriculture still pose serious threats to the region's unique biodiversity.

This year, WWF worked with Aviation Sans Frontières to launch a widespread system of aerial surveillance of protected areas. Highly effective and cost efficient, the aerial surveillance identified 76 areas of illegal deforestation in four protected areas and led to fines being levied against 53 individuals. Using information collected during aerial surveillance, WWF helped to create maps of conservation targets and develop monitoring plans for protected areas. These maps will guide the patrolling and monitoring activities of the

Polisin'Ala (community forest police). WWF also established 14 new Polisin'Ala teams and provided them with essential equipment to strengthen their enforcement capacity.

RESTORING FREEDOM TO ROAM FOR WILDLIFE ON ICONIC AMERICAN GRASSLANDS

Oceans of grass and sagebrush stretch as far as the eye can see on the American Prairie Reserve in Montana—but for years, wildlife has been prevented from roaming free by miles of fencing erected to manage livestock. The fencing fragmented habitat and posed serious hazards to wildlife such as pronghorn antelope and sage grouse. With our

partners American Prairie Foundation and Montana Conservation Corps, WWF completed fence removal on the 30,000-acre Sun Prairie Management Area. This is a significant milestone in our ongoing efforts to restore migration across the reserve, including part of the pronghorn's 250-mile journey to Canada, one of the longest terrestrial migrations in North America.

This year, a crew of 12 Conservation Corps youth removed more than 10 miles of fence. To date, more than 30 young people have removed a total of 26 miles of fence and modified two miles of

fence to be more wildlife-friendly. These grasslands provide a critical foundation for restoring the diversity and abundance of wildlife that once occurred in the northern Montana prairies.

SAVING RHINOS IN THE EASTERN HIMALAYAS

This year, WWF marked two victories in efforts to protect the greater one-horned rhino from habitat loss and poaching. In Nepal, WWF celebrated with the government and other organizations an extraordinary achievement: zero rhinos poached in 2011. Nepal has the second-largest population of greater one-

horned rhinoceros and this milestone comes at a time when global rhino poaching has increased to record numbers. Rhinos are poached for their horns, which are used for folk cures and are believed to cure cancer in some Asian countries. The government of Nepal, WWF and various other conservation organizations commemorated the occasion at Chitwan National Park in Nepal's Terai Arc Landscape, home to the majority of the country's rhinos. Six different institutions were recognized for their efforts by special Enforcement Awards established by WWF's Tigers Alive Initiative.

Manas Park also gained six new rhinos as part of Indian Rhino Vision 2020, an ambitious plan to give India a population of 3,000 rhinos spread over seven protected areas in the state of Assam by 2020. Accompanied to their new home by police protection and a team of vets, the rhinos will be monitored closely as they adapt to their surroundings. To ensure that each of these successes has a true long-term impact, WWF will continue to support these field-level initiatives while also working to reduce the global demand for rhino horns.



Removing obstacles to the pronghorn's freedom to roam

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CLIMATE

MAPPING THE FUTURE CAPACITY OF THE ARCTIC TO ADAPT TO CLIMATE CHANGE

The influence of Arctic ecosystems on the atmosphere and oceans, world fisheries, and migrating birds and mammals is significant. As climate change continues to alter Arctic environments, WWF scientists are working to translate the concept of resilience—the ability of ecosystems to adapt to climate change impacts—into conservation-relevant practice that considers future climate threats.

The result is the RACER project (Rapid Assessment of Circum-arctic Ecosystem Resilience), undertaken by an international group of Arctic experts from WWF, other conservation organizations, and academia. The group developed a completely new tool for identifying and mapping locations in the Arctic that hold the promise of a future capacity to adapt. It examines the key features that make the ecosystem productive and diverse, and tests whether these features will continue to provide region-wide resilience as predicted changes in temperature, rain, sea and



Defending forests for tigers, elephants and orangutans

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snowfall occur. The ultimate purpose of RACER is to advance the way we deal with the effects of climate change in the Arctic.

SHIPPING INDUSTRY TRADE ASSOCIATION CALLS FOR GUIDANCE ON REDUCING EMISSIONS

International shipping is a major and rapidly growing source of carbon pollution. Although shipping is a relatively efficient mode of transportation, it is responsible for about 3 percent of global emissions—twice that of Australia. Until now, little has been done to address this substantial and growing carbon pollution source. This fall, support for regulation of shipping emissions came from an unexpected alliance.

At the United Nations Climate Change Conference in Durban,

South Africa, the International Chamber of Shipping joined WWF and Oxfam to call on delegates to the 17th Conference of the Parties to give the International Maritime Organization clear guidance on continuing its work to reduce shipping emissions. They called for development of market-based measures that are global in nature and consider the best interests of developing countries—a strategy put forth in a WWF-Oxfam report outlining how the sector can reduce emissions without hurting its bottom line or unduly penalizing developing countries. While the details will take time to work out, the engagement of the shipping industry in searching for solutions to the climate crisis is significant and welcome.

CELEBRATING FIVE YEARS OF COOPERATION TO PROTECT THE HEART OF BORNEO

The Heart of Borneo covers 85,000 square miles of equatorial rain forest with extraordinary biological diversity, including endangered rhinos, elephants and orangutans. In 2007, the three nations of Brunei, Indonesia and Malaysia signed a declaration to protect and sustainably manage the Heart of Borneo. Five years later, this important transborder cooperation has yielded significant achievements for this vital forest, which plays a key role in absorbing carbon emissions.

With help from WWF's Global Forest & Trade Network and USAID, more than 1,000 square miles of forest have been certified by the Forest Stewardship Council (FSC) in the Malaysian state of Sabah. This quadruples the amount of land under FSC certification and assures that the forest will be managed in a socially and environmentally responsible way. WWF also launched the Heart of Borneo Green Business Network—a network of organizations committed to environmentally sustainable business practices. The initiative was rolled out at a dinner in Indonesia attended by former U.S. Vice President Al Gore and more than 600 Indonesian government and business leaders. WWF will continue our work in this region as a powerful collaborator uniting government, business and communities to create positive results for wildlife and people.

CHALLENGING CITIES TO GO BEYOND EARTH HOUR

It started in one city and over the years became a global movement. This year's Earth Hour on March 31 saw hundreds of millions of people, in thousands of cities on all seven continents,

switch off their lights for one hour to display a universal commitment to protect the one thing that unites us all—the planet. Earth Hour has become a powerful reminder of what is possible when people connect behind a common cause. And around the world, people and communities pledged to find ways to “go beyond the hour.”

This year, WWF is challenging cities to do more than turn out the lights. Cities are on the front lines of increasingly extreme weather caused by climate change—from intense heat waves and wildfires to droughts and flooding rainstorms. As climate change worsens, dangerous weather events are getting more frequent or severe.

Launched in March, the Earth Hour City Challenge encourages cities to take practical steps to make our communities safer and

healthier. This year-long process will culminate next year when WWF will recognize those cities that took the most ambitious steps while promoting renewable energy and reducing their carbon footprint.

PEOPLE CREATING OPPORTUNITIES FOR GIRLS AND WOMEN IN TANZANIA

Since 1997, the WWF Girls and Women Program has successfully empowered marginalized young girls from disadvantaged families by supporting primary and secondary schooling and providing environmental education. Believing that women hold tremendous power to influence future generations, the program helps girls like Mariam Hamdani from Tanzania's remote Mafia Island, who overcame significant financial and cultural obstacles to attend secondary school.

Like many families in her isolated community, Mariam's family could not afford to send her to high school, and she was needed at home. A determined Mariam applied for and received scholarships from WWF to pay school fees and boarding expenses to live in WWF-built dormitories. She became the first woman from Mafia Island to graduate from college and now holds a degree in geography and environmental sciences. She plans to pursue a master's degree in conservation biology.

Success stories like Mariam's demonstrate the power of educating girls and fuel the program. Today, the program has helped build three girls' dormitories on Mafia Island and helped 468 girls attend secondary schools and universities or receive technical/vocational training.



Challenging cities worldwide to go beyond Earth Hour

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GROWING PEPPERS FOR PANDAS

The Sichuan pepper has been an important source of income for villagers near China's Baodinggou Nature Reserve, home to 36 pandas. Yet, middlemen were skimming the profits, leaving farmers without enough income and forcing many to collect firewood and forage for vegetables and medicinal plants in nearby panda habitat to make ends meet. When strict government regulations to protect pandas prohibited these activities, the villagers became resentful.

Recognizing that conservation solutions must benefit people and wildlife, WWF helped the community form a cooperative and introduced the village's struggling pepper association to Carrefour, the second-largest retailer in the world. Pepper from the region is now part of Carrefour's direct purchasing system. To date, the cooperative has sold more than 90 tons of pepper to more than 116 Carrefour stores in 32 cities around China. The project has benefited more than 1,300 families in Mao County. On average,

each family's income has increased about 500 yuan annually—20 percent of their annual cash income. This model of sustainable development creates income security for farmers while protecting important panda habitat for the long-term.

BUILDING LOCAL AND PROFESSIONAL CAPACITY IN THE GALÁPAGOS

One of the chief threats to the Galápagos Islands is a growing population fueled mainly by people coming to the islands for jobs. Because there is a lack of local capacity, these jobs

are being given to people from the outside.

Since 2006, as part of our commitment to protect Galápagos, WWF has worked with Galápagos tourism operator Ecoventura and Ecuadorian Airline AEROGAL to create and support the Galápagos Marine Biodiversity Fund. The fund supports education and marine conservation projects and provides scholarships to local young people to give them the skills they need to compete for local jobs.

The scholarships cover tuition for two years of academic study and have been awarded for five consecutive years. To date, 58 scholarships have been awarded and 12 students have graduated from the Universidad San Francisco de Quito; 10 more will receive university diplomas in October 2012. Some graduates have already entered the work force on the islands—three in tourism-related activities; three in public institutions, including Galápagos National Park; and one in a local high school as a teacher. Two other graduates have decided to pursue advanced degrees.



Providing scholarships so locals can make a living by protecting Galápagos wildlife

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MARKETS

PROMOTING SUSTAINABLE TUNA FISHERIES IN THE CORAL TRIANGLE

To stem the alarming loss of tuna stocks in the Coral Triangle—home to the world’s largest population of commercially important tuna species—WWF works with the local tuna industry to facilitate the adoption of best practices and meet sustainability standards. Navigating the delicate and complicated business of communicating with businesses, government and local people, WWF has made important progress in improving fisheries practices this year. As of October 2011, 15 tuna companies (representing approximately 75 percent of the volume of global trade in canned tuna) were participating in the International Seafood Sustainability Foundation.

WWF also marked successes in the Indonesia Tuna Fisheries Improvement Project. Supplier Anova implemented a data collection system to document tuna catch at the vessels from which they buy. The system ensures that the data are collected according to protocol and then shared with the government. WWF also

worked with Poseidon Aquatic Marine Resources to draft detailed Terms of Reference for project activities. WWF facilitated meetings with stakeholders to ensure that Fisheries Improvement Project activities met the standards of the Marine Stewardship Council and to establish the Ministry of Marine Affairs and Fisheries as a leader in promoting sustainable fisheries. In the Philippines, WWF began talks with Ocean Infinite Company to explore energy efficiency measures in their operations, and we continued our dialogue with canneries about reducing negative impacts.

ENGAGING MINING COMPANIES ON SMART DEVELOPMENT IN THE CONGO BASIN

Spanning Cameroon, Congo and Gabon, the TRIDOM transborder rain forest is home to western gorillas, central chimpanzees and the largest forest elephant population in the Congo Basin. It is also an “emerging iron ore province,” with at least seven mining companies currently exploring for iron. Normally, each company develops its own roads and infrastructure, with little coordination among the three governments. To encourage a coordinated and prudent

approach that minimizes negative environmental impacts, WWF brought together representatives from six mining companies active in the TRIDOM Interzone—the core area between protected areas.

Participants discussed potential environmental impacts and ways to share information to avoid, minimize or mitigate these impacts in a coordinated manner. A biodiversity and mining expert will guide these efforts in support of WWF’s conservation goals in the region. Going forward, the group will engage additional



Developing smarter solutions for tuna fishing in the Coral Triangle

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stakeholders from the private and government sector in a second meeting in Brazzaville.

EMPOWERING INDIGENOUS COMMUNITIES IN PANAMA

For hundreds of years, the Emberá-Wounaan indigenous people relied on the resources of the Darién, Panama's largest tropical rain forest, to make a living. As more and more timber companies began operations there, the Emberá-Wounaan suffered and lost income even as corporate profits continued to grow. Knowing that markets for certified, well-managed forests can help indigenous people sustain themselves economically, WWF's Global Forest & Trade Network (GFTN) trained local communities in responsible forest management and in building community-based forest enterprises. This eventually resulted in a 10-year trading contract with Green Life Group.

In 2011, WWF continued to build on this success. With a grant from the Caterpillar Foundation, GFTN provided technical assistance and planning in responsible forest management and improved business practices to 10 Emberá-Wounaan communities to help them trade their soon-to-be-



Providing tools to keep the rivers of the Amazon basin flowing

© MICHEL ROGGO/WWF-CANON

certified wood. This training will enable them to meet the requirements of customers who sell certified wood on the international market. GFTN's work with these indigenous communities has generated \$390,000 in sales on local and international markets, and created numerous temporary jobs. It has also resulted in \$1 million in new investment from banks and the private sector and helped improve the living conditions of indigenous communities. With additional funding for equipment and training on its way from the Inter-American Development Bank, and continued technical support from WWF-Panama, the future of the Emberá-Wounaan communities is much brighter.

MINIMIZING HYDROPOWER DEVELOPMENT IMPACTS IN THE AMAZON

WWF's Living Amazon Initiative has worked to conserve the complex and integrated system of rivers and rain forest that is the Amazon. Like the branches of a tree, the hundreds of miles of interconnected rivers and streams cannot endure significant changes without compromising the whole system. In response to the rapid growth of hydropower now threatening the Amazon, WWF created the Decision Support System and the Amazon River Assessment. These tools identify priority conservation areas, where the survival of people and biodiversity depend on connection to free-flowing rivers.

These tools underpinned a landmark cooperation agreement between the government of Brazil and WWF on hydropower development. The agreement is transformational: It is the first to promote a basin-wide approach to development that identifies conservation priorities and assesses impact within the basin. The first watershed to undergo this planning process will be the Tapajós River basin, which has been identified as one of the most at-risk for hydropower development. The agreement highlights how conservation planning tools can promote constructive dialogue and informed decision making to create shared goals that support the people, the natural diversity, and the future of the Amazon. ■

Adventure Conservationist



A life lived in connection to water inspires a personal commitment to WWF's work.

The day Judy Sturgis accepted an invitation from friends to cruise the inland passage of British Columbia marked a turning point in her life—and the beginning of a lifelong love affair with the sea.

She was 23 years old, owned a small travel agency on Vancouver Island, and was determined to get back out and explore the hundreds of miles of majestic coastline. Within six months, she'd bought an old 36-foot boat and, with the help of her father, fixed it up and moved aboard. She lived on it for four years, learning how to run the boat thanks to advice from a local salmon fisherman. She has been cruising the seas from Alaska to Mexico ever since.

"Seeing what was out there on the water—it was an absolute epiphany," she says.

Her existing love of nature turned into a deep passion for oceans, especially in Alaska and her native Canada. After meeting her rancher-sailor husband, Bill—who was cruising in Canada—she settled with him on his ranch in Nevada. But they were never far from a boat. Every year, they took their children, Jason and Leah, fishing and exploring the inlets of Alaska and Canada for the entire summer. Thanks to those experiences, love of nature and the oceans is a shared family passion. Both children still fish with Judy when they can; Jason is a well-known humpback whale photographer, and Leah is a director and producer with feature films to her credit.

Judy's concern for the future of the natural world has kept her active in conservation. From serving on local boards to supporting the restoration of salmon spawning rivers in Canada, she follows her heart. As a WWF National Council member, she has supported different projects, but is especially excited about WWF's work on the Northern Great Plains and in the Arctic.

"The Arctic is phenomenal, and so many animals rely on it—nesting birds, migrating whales," she says. "I am so glad WWF is working there."

WWF's strong science-based approach appeals to her, as does the dedicated staff—many of whom she has met while traveling on WWF-sponsored trips (most recently, fishing on the Onon River in Mongolia!). "I admire the way WWF is willing to take a stand for nature," she says. "They choose carefully, and then they really step up to the plate."

That willingness to take things on certainly resonates with Judy's fearless and adventurous spirit. Today, armed with her 100-ton captain's Coast Guard license, she sets off every summer on her 50-foot boat and doesn't look back for months. She'll be off navigating the changing Alaska tides, laying her crab traps or salmon lines, picking berries on land, and getting acquainted with the local "characters" in remote villages.

"I am quite happy on the boat; it's an adventure every day," she declares.

Along the way, she will see black and grizzly bears, pods of orcas, humpback whales, sea lions, bald eagles and other breathtaking natural wonders. These encounters reinforce her continuing commitment to nature and to WWF.

"Somebody has to speak for the animals," she says. "We are the voice of the rivers and the seas and all the natural places that are home to our wildlife." ■



About WWF

For more than 50 years, WWF has been protecting the future of nature. The world's leading conservation organization, WWF works in 100 countries and is supported by 1.2 million members in the United States and more than 5 million supporters globally. WWF's unique way of working combines global reach with a foundation in science, involves action at every level from local to global, and ensures the delivery of innovative solutions that meet the needs of both people and nature. Visit worldwildlife.org to learn more.

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