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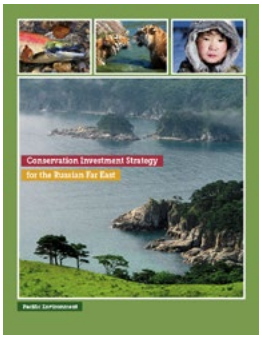
Conservation Investment Strategy for the Russian Far East

EXECUTIVE SUMMARY

Pacific Environment



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Completed with the generous support of the **Margaret A. Cargill Foundation**, **the Gordon and Betty Moore Foundation**, and **the Trust for Mutual Understanding**.

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OCTOBER 2014

Conservation Investment Strategy for the Russian Far East

CONTENTS

Bears taking lunch break in South Kamchatka Federal Reserve. PHOTO by Igor Shpilenok.

Executive Summary

Tigers, Salmon, Storks, and Walruses

TWO DECADES AGO, AS THE POPULATION OF the Oriental white stork was dropping dramatically, conservation science experts from four Asian nations met on a boat on the Amur River between Russia and China, near Khabarovsk. They agreed on a series of initiatives to revive this endangered species—expanding protected areas, improving fire-control practices, and building new nesting platforms. The stork has since rebounded in Russia, and there are efforts underway to reintroduce it in two places where it has gone extinct, Japan and Korea.

EXECUTIVE SUMMARY

In Vladivostok, thousands of spectators lined the sidewalks of Okeansky Avenue for Tiger Day this past September, cheering on dancers, musicians, skateboarders, and people of all ages dressed as tigers. Educational and outreach events like Tiger Day have helped grow support for the endangered Amur tiger, which numbers only about 500 in the wild, but has rebounded in the past decade, returning to three provinces where it had disappeared. Now there are Tiger Day celebrations in Kirovka, Partizansk, Arsenev, Luchegorsk, Novopokrovka, Lazo, Chuguevka, and Terney, as well as across the country at the Moscow Zoo. In 2009, Tiger Day crossed the border and is now celebrated annually in the Chinese city of Hunchun.

In the far northern reaches of Chukotka, scientists have teamed up with indigenous hunters to monitor walrus haulouts, assessing how climate change is affecting walrus behavior and habitat, and working to reduce disturbances from tourist ships approaching too closely and using flash cameras. Project leaders have also successfully lobbied for the creation of a Vanakarem Nature Monument, with a government-funded warden.

On Kamchatka's Kol River Preserve, Nina Zaporotskaya and her organization, Lach, long devoted to preserving indigenous culture and subsistence salmon fishing, have partnered park rangers with indigenous guides, who lead rangers to known poacher

hideouts and patrol remote stretches of the river.

On Sakhalin, Vladimir Smirnov's commercial fishing company is now certified by the Marine Stewardship Council (MSC) and is taking aim at the growing market in Russia and the world for sustainable wild salmon. On Kamchatka, with the launch this year of two new fisheries improvement projects (FIP), commonly known as "fips," half of the peninsula's wild salmon fisheries are now engaged in the MSC program or in a FIP.

Those are but five examples of people, community organizations, businesses, and governments in the Russian Far East taking initiative to protect the natural riches of the region. There are many more examples, and, hopefully, far more to come.

Tiger Day celebrations in Vladivostok and other Russian cities and towns have helped grow support for the endangered Amur tiger, which numbers only about 500 in the wild, but has rebounded in the past decade.
PHOTO by International Fund for Animal Welfare ⓒ Creative Commons.

Bringing Together Stakeholders to Identify Conservation Opportunities

FROM THE STUNNING STEPPES OF DAURIA TO the salmon-filled rivers of Kamchatka to the forbidding tundra of Chukotka, the Russian Far East is full of biologically diverse ecosystems of global significance. It's home to charismatic species like the polar bear and walrus, and big cats like the endangered Amur tiger and Amur leopard.

These important ecosystems face daunting threats—especially from expanding economies in China and elsewhere in Asia looking to Russia's vast wilderness to meet their demand for energy and raw materials. Russia's economic growth of the past decade has largely been driven by the extraction and sale of valuable natural resources from the Russian Far East, compromising the natural environment and public health.

The antidote to corruption and weak government oversight is a vibrant and engaged civil society.

Coalitions of conservation organizations, scientists, businesspeople, and concerned citizens are addressing these impacts by reaching out to government agencies, indigenous communities, and other stakeholder groups. At the same time, international philanthropists, recognizing the opportunity to protect the region's unique biodiversity, have supported a variety of initiatives, such as bringing the Amur tiger back from the brink of extinction.

In producing this conservation assessment, Pacific Environment brought together local and international conservation practitioners to develop the most effective strategies for protecting one of the last great wilds on earth. Conservation leaders in each region prioritized conservation targets to reflect the optimal intersection of (a) value to the ecosystem (and severity of threat), (b) value to local communities and stakeholders, and (c) likelihood of success.

Though the Russian Far East has been studied deeply, most previous assessments have focused on high-value ecosystems in need of conservation. This assessment has done that as well, through a process called "open standards for the practice of conservation," but gave special attention to working with practitioners and stakeholders in Russia and internationally to identify the greatest opportunities for conservation of globally-significant ecosystems over the next five years.

To do this, assessment authors conducted an in-depth review of past and current conservation efforts to identify the most effective and promising conservation strategies, which then informed a set of priority strategic directions and lessons learned for working in the Russian Far East. These strategic directions are presented together with specific conservation opportunities for each target subregion. The primary contributors to this assessment are local stakeholders—scientists and grassroots conservation leaders with decades of experience.

Though this assessment is based on past best practices, it's a living document. Where possible, it lays out the specific conditions necessary for conservation strategies to succeed, while allowing those who implement these plans to adapt to changing local conditions and pursue alternate approaches.

The project began with a head start—the invaluable guidance from Yury Darman of World Wildlife Fund, and other participants in the Conservation Action Plan for the Russian Far East Ecoregion Complex. Published in 2003, this conservation document has been the most successful for the region, resulting in thousands of acres of protected territory and productive relationships among conservationists, scientists, government, and local people. A key element of this plan's success was Darman's effort to engage a large and diverse

The Russian Far East is home to almost half the world's wild Pacific salmon ecosystems, and nothing defines the natural richness of the region and demonstrates its ecosystems' health (or lack thereof) more than salmon. Salmon are central to the diet of the top of the food chain—bears, owls, eagles, and humans—and central to the livelihood/economy of much of the region. PHOTO by Pacific Environment.

group of stakeholders, a lesson that the authors of this assessment took to heart.

Growing the Conservation Movement and Civil Society Together

WHILE THE CONSERVATION MOVEMENT AND vibrant civil society in Russia are still young and growing—both started in the twilight of the Soviet Union—they are built on centuries of reverence for natural landscapes and a vibrant history of citizen engagement to solve problems.

Under the tsars, nobles created protected game reserves for their own enjoyment, which transformed into strictly protected areas under the Soviets. A surge in conservation enthusiasm in the 1990s led to the creation of many more protected areas and environmental protection laws throughout the country. Today, about 12 percent of Russia's enormous territory has protections of some kind, and Russian law provides stringent protections for the environment.

But protected areas and laws on the books are not a guarantee that important ecosystems will be protected. For protected areas to be meaningful, they need to be backed up with sufficient operating funds and committed staff who have authority to take action against potential threats. In many places, like Kamchatka, Sakhalin, and Primorye, they also need to have the support of local stakeholders, including nearby villages and businesses. Laws designed to stop environmental degradation have no impact if their enforcement is not independently monitored.

This is why gaining and maintaining conservation successes always depends in some form on local citizen support and involvement. That's the antidote to corruption and weak government oversight—a vibrant and engaged civil society.

Even during Soviet times, student volunteers across the country patrolled vast nature preserves to stop poachers and collect scientific data, and "dacha communities" of homeowners worked together to protect their gardens and fields from construction and development.

Since the 1990s, a vibrant and diverse environmental conservation movement has grown in Russia, and today conservation organizations work at all levels of society—from tiny "initiative groups" organized by villagers to protect local springs or forests, to indigenous tribes that oversee management of subsistence resources, to industrial fisheries that lobby for rational and fair use of resources. There are also international conservation groups,

Every native village in Chukotka sends a crew to compete in the whaleboat regatta in the village of Lorino, where the Chukchi Sea meets the Bering Sea. PHOTO by Konstantin Savva, National Park Service, Beringia National Park.

large and small, with deep roots in Russia.

Many of the strongest and most effective regional organizations in Russia, including the Phoenix Fund, Sakhalin Environment Watch, and the Chukotka Association of Traditional Marine Mammal Hunters, are part of the Sosnovka Coalition, an alliance of conservation groups from across Russia that organizes collective action and drives the development of new conservation strategies. Efforts by Sosnovka Coalition have helped to reroute an oil pipeline away from Lake Baikal and require that oil drilling operations protect endangered whales off Sakhalin.

International groups, like the World Wildlife Fund, Wild Salmon Center, Wildlife Conservation Society, and Pacific Environment, also conduct a broad range of projects in the Russian Far East, working directly in local communities, supporting NGO partners, and working internationally to support conservation efforts in Russia.

Over the past several decades, these groups have preserved millions of acres in protected areas, organized communities to better care for and manage resources, and built a growing movement to certify timber and fishing industries for sustainability and grow the markets for sustainably produced goods.

These concrete successes are only part of the story. Just as important is that conservation issues are discussed across Russia today, from remote villages to the halls of power in Moscow and the regional capitals. What these environmental leaders have achieved is making significantly more Russians knowledgeable and concerned about environmental issues in their communities and their country, in a way they never were before.

A History of Conservation Philanthropy

NO MATTER HOW TENACIOUS RUSSIAN conservationists may be, their campaigns to protect their homeland's natural riches would not be as strong or effective if not for the financial assistance of donors near and far.

With the collapse of the Soviet Union came new promise for the rise of civil society, for advances in conservation. Recognizing the rich biodiversity of the Russian Far East, Western foundations and international funding agencies began investing in projects like improving the health of salmon ecosystems and establishing new protected areas.

The Trust for Mutual Understanding began supporting cooperation between conservationists before the fall of the Soviet Union. Over the years, TMU has supported network building and knowledge transfer between dozens of Russian and U.S. conservationists. The Rockefeller Brothers Fund also made a major commitment to Russia, focusing first on salmon habitat in the Russian Far East, building on its work in Alaska and British Columbia. Between 1995 and 2005, it made 32 grants totaling more than $3 million, with a heavy focus on civil society development and strategic collaboration. The United Nations Development Project–Global Environment Facility (UNDP-GEF) invested more than $5 million to create and strengthen protected areas in Kamchatka, like the South Kamchatka State Sanctuary. The Gordon and Betty Moore Foundation devoted $27 million over 15 years for wild salmon conservation in Kamchatka, funneling its support through U.S.-based intermediaries like Pacific Environment, World Wildlife Fund, and Wild Salmon Center.

This conservation assessment is a living document, developed by bringing together scientists, local stakeholders, grassroots leaders, and international funders to identify the most promising opportunities over the next five years.

But financial uncertainty has long been the norm for Russian Far East conservation organizations, and today, with Russian authorities tightening screws on groups receiving international funds, even the most well-connected and established organizations struggle to balance their budgets. The need for support exceeds the supply.

There are promising trends that could lead to growth in domestic giving. There's a growing middle class of active, well-educated, and involved people, particularly in large cities, taking an interest in civil society. Technology advances make it easier than ever to share information and mobilize people, to connect community organizations and funders, and to demonstrate results and potential.

Those conservation organizations most likely to succeed have strong roots in the community, successfully engage local people and businesses and governments, and are backed by national or international funders. The need for international funding is as great as ever, and there are concrete opportunities where targeted support can make a significant difference.

Those opportunities will be highlighted in the coming chapters.

Political Challenges

THE RUSSIAN CONSERVATION MOVEMENT IS STRONG, BUT faces serious obstacles. While there have been improvements in recent years, Russia is plagued by corruption, particularly at high levels of industry and government. Experts estimate that Russian companies pay billions each year in kickbacks to receive preferential treatment—overlooking violations of environmental protection legislation, for example. The government has also deliberately

weakened public oversight mechanisms for a wide range of resources.

A majority of Russians are, understandably, cynical about their government. Its inability to effectively deliver government services compounds this distrust.

In 2005, the Russian government changed the rules for domestic organizations receiving funds from outside Russia. One particularly insidious rule, adopted in 2012, requires non-governmental organizations receiving international funding to declare themselves "foreign agents." Though the law is defined broadly, and exempts groups engaging in "protection of flora and fauna," it has had a chilling effect on domestic conservation groups, and scared away some international investors.

But for readers not familiar with Russia, it is important to understand that the country is enormous and complex, with a cumbersome bureaucracy. Conservation, sustainability, and development are overseen by a patchwork of federal and regional agencies, regional and local governments, scientific institutes, businesses, and non-state actors.

While the politicians and agencies in the Far East take cues from the federal government, and have little power to resist direct demands, they are far from the power centers in Moscow, and retain autonomy to make many local decisions. They create protected territories, designate new land-use regulations, and support scientific research. In 2011, on Kamchatka, the local environmental prosecutor sued Gazprom, which had been drilling for oil in the Sea of Okhotsk without the necessary permits.

Scientific institutes in Russia are also branches of the government that exercise significant independence, and have a long history of placing science ahead of politics. On Sakhalin and Kamchatka, experts from the fisheries research institute have served as some of the loudest voices in favor of sustainable salmon management. In fact, many conservation leaders in the Russian Far East hold part-time jobs at government-funded research institutes or universities.

Many of today's conservation leaders have been doing their work since the Soviet period, when the slightest dissent could result in arrest or worse. They understand how to get things done even during the most difficult political times. In spite of Putin's power, rampant corruption, and the rush to exploit the region's mineral riches, there are great people doing great things all over the Russian Far East to protect its invaluable biodiversity.

Such as Dima Lisitsyn, who led the successful campaign to establish the 170,000-acre Vostochny Reserve on Sakhalin Island.

Such as the aforementioned Nina Zaporotskaya, who helped preserve subsistence fishing in Kamchatka, and combated poaching by teaming park rangers with indigenous Ivanovi guides.

Such as Sergei Bereznuk, director of the Phoenix Fund, and Dale Miquelle, director of Wildlife Conservation Society, who have been working to save the Amur tiger for almost 20 years, through anti-poaching brigades, public education, and Tiger Day celebrations.

None of their struggles are easy. But they are essential to a healthy future for the Russian Far East.

Goals of This Document

THE PRIMARY GOAL OF THIS INVESTMENT STRATEGY IS TO identify the best opportunities for achievable conservation goals in the short- and medium-term. Early on, the project steering committee chose to focus on freshwater and marine ecosystems because they have received less attention from conservationists and enjoy fewer protections than terrestrial ecosystems. They are vital for supporting the health of terrestrial systems and human well-being.

In addition to that broad priority, the authors focused on three subregions—Chukotka, the Amur River Basin, and salmon ecosystems—and the conditions necessary for success in each of them. In Icy Riches, the focus is on the subsistence livelihood of the indigenous people in Chukotka. In One River, Three Countries, the focus is on the depth of conservation experience and high capacity in the Amur Basin. And in Salmon Strategies, it's the opportunities for medium- to long-term transformational change possible through markets, sustainable fishing practices, and salmon councils.

Burning crop waste is a deeply ingrained custom in rural Russia, but all too often fires escape to nearby forests. Recent pilot projects combining mobile fire brigades with fire education and community involvement have made dramatic gains. PHOTO by Phoenix Fund.

The authors also identified conservation targets—ecosystem and species priorities that often overlap or cross boundaries, as is the nature of natural systems. These broad conservation targets—for example, subsistence mammals like walruses for Chukotka—are not meant to reflect every single conservation priority in that subregion. Ideally, protecting that target protects the entire ecosystem. Wild salmon is a perfect example—healthy salmon runs depend on healthy ecosystems.

This document starts with an introduction to the geography, people, economy, and politics of the Russian Far East, then zooms in on transboundary cooperation and international and domestic philanthropy. There's a chapter devoted to each of the three target regions—Salmon Strategies; Icy Riches; and One River, Three Countries. Interspersed through these chapters are case studies that illustrate lessons learned, some specific to the region, others that apply more broadly. One chronicles the small but dramatic successes fighting wildfires accidentally set by farmers clearing crops, another how satellite images can help cut pollution from gold mining.

In four of the chapters, there are also Q&As with grassroots conservation leaders.

The last step of the assessment project, after identifying conservation targets and dominant threats, was to develop strategies to protect the most valuable ecosystems and species. Each regional chapter includes specific actions that can be taken to achieve conservation outcomes in the target region. In addition, the authors distilled the recommended strategies into a list of eight broad Strategic Directions that will lead to best results in the Russian Far East. Specific conservation targets may change over time, so the Strategic Directions provide a template for future conservation investment.

Examples include leveraging market mechanisms and engaging broad stakeholder coalitions to stop poaching or wildfires.

Salmon Strategies

THE RUSSIAN FAR EAST IS HOME TO ALMOST half the world's wild Pacific salmon ecosystems, and nothing defines the natural richness of the region and demonstrates its ecosystems' health (or lack thereof) more than salmon. Salmon are central to the diet of the top of the food chain—bears, owls, eagles, and humans—and central to the livelihood and economy of much of the region.

The Karaginsky Bay salmon fishery is the first in Eastern Kamchatka to launch a fisheries improvement project (FIP). Half the peninsula's wild salmon fisheries are now in an MSC-certification process or FIP.
PHOTO © Denis Semenov, courtesy of Wild Salmon Center.

These globally significant salmon ecosystems in the Russian Far East are not one unbroken ecosystem or one contiguous political body, but thousands of square kilometers of territory, extending from the tundra of Chukotka to the rich deciduous forests of Sakhalin and the volcanic peninsula of Kamchatka. Because salmon habitat is stretched across a vast territory controlled by several provincial governments and containing diverse salmon ecosystems and populations, there are major differences in the threats, opportunities, and strategies for long-term salmon ecosystem health.

Rivers flowing through remote and sparsely inhabited areas, like northern Kamchatka and most of Chukotka, are generally healthy and thriving. Rivers that are closer to cities and industries aren't faring as well. It's not necessarily the industries themselves that impact the salmon as much as the roads and other infrastructure that bring with them increased risk of poaching, overfishing, and pollution.

But even the healthiest salmon runs face daunting challenges in the coming years—climate disruption, massive coal and mineral mining projects, oil and gas exploration, gold mining, logging and forest fires, commercial fishing, hatcheries that can dilute the wild genetic pool, tourism, and ineffective fisheries management.

The best opportunities for preserving high-value salmon ecosystems are leveraging the demand for wild, sustainably sourced salmon, and nurturing salmon councils that bring together stakeholders in support of healthy salmon runs for generations to come.

The world's appetite for wild salmon is strong, and growing. With a global middle-class interested in food safety and sustainability, there are huge opportunities for salmon fisheries to make money while keeping the salmon ecosystems healthy.

Key to getting Russia's wild salmon to premium markets are third-party certification programs, like those operated by the

Marine Stewardship Council (MSC). There are also more fisheries improvement projects (FIPs), alliances of fishers, processors, producers, and retailers that develop action plans to make improvements, to fast-track fisheries into sustainability certification.

In September 2014, the Wild Salmon Center reported that two new fisheries improvement projects in Kamchatka now bring half of the peninsula's wild salmon fisheries into an MSC-certification process or a FIP.

The recently launched FIP in Karaginsky Bay, the first in Eastern Kamchatka, produced more than 22,000 tons of salmon in the first eight months of 2014. The Western Kamchatka Regional Salmon FIP expanded to four additional watersheds, doubling the volume of salmon under improved status. These improved Russian salmon fisheries have gained access to high-end markets in North America and Europe, which in turn is driving additional interest in certification and FIPs. Major seafood buyers such as Nestle, Gorton's, and High Liner Foods have become partners in the Wild Salmon Center's FIPs.

Market mechanisms provide an excellent opportunity for improvements in fisheries sustainability, but full, long-term salmon sustainability in the Far East depends on more active citizen and state engagement in enforcing smart salmon management programs. One promising model is the salmon council, also known as a watershed council. Most councils are government-plus-grassroots hybrids that convene all the stakeholders in the river basin and serve as advisory bodies to local and regional governments. The Ust-Bolsheretsk Salmon Council hired local military veterans as public inspectors, gave them basic training and equipment, and provided a spartan camp on the banks of the Bolshaya. Public inspectors have no law enforcement powers of their own, but they partner with local fisheries inspectors, and their presence provides extra security and oversight. They have played a crucial role in reducing poaching on the Bolshaya.

Salmon councils have been active on Sakhalin for many years. Although some salmon councils are self-sustaining, generally they require outside support to implement specific programs. On Sakhalin, for example, salmon councils invite international experts to help with salmon management or post-mining land reclamation. Russia's salmon councils also require support to develop economic alternatives to salmon, such as tourism, and to continue to run anti-poaching campaigns on the river each summer.

In the early years of the Russian Federation, conservationists were successful in campaigning for the creation of new protected territories. In today's environment, the most important efforts are likely to be improving support for existing protected areas. The Kol River Preserve in Kamchatka is a cautionary example. Founded in 2006 as the result of efforts by the Wild Salmon Center, it's the only preserve in Kamchatka created specifically for salmon conservation.

However, without support, the Kol River Salmon Preserve is in danger of losing its protected status. Efforts should be made to ensure the permanence of the Kol River Preserve, and to support a preserve staff that is large enough to protect the territory and facilitate scientific study.

On Sakhalin, there is an opportunity to create a marine protected area off the coast of the island's wildest terrestrial park. The waters off Vostochny Wildlife Refuge are home to sea lions, seals, orcas, and migrating salmon. Sakhalin Environment Watch has built the local and regional support to establish a maritime protected area here.

Scientific institutes in Russia are branches of the government that exercise significant independence, and have a long history of placing science ahead of politics. On Sakhalin and Kamchatka, experts from the fisheries research institute speak out loudly in favor of sustainable salmon management.

Strategy Highlights (Salmon Ecosystems)

1. **ACHIEVE FISHERIES SUSTAINABILITY** by facilitating fishery improvement projects or third-party sustainability certification as a gateway to premium markets.
2. **UNITE SALMON STAKEHOLDERS TO IMPLEMENT BEST MANAGEMENT PRACTICES** and reduce threats to wild salmon populations with the establishment of public salmon councils on high-value rivers.
3. **ESTABLISH OFFICIAL PROTECTIONS FOR HIGH-VALUE SALMON RIVERS** and support existing protected territories to stop poaching and other threats and to implement conservation measures.
4. **INDEPENDENTLY MONITOR MINING AND OTHER DANGEROUS DEVELOPMENT PROJECTS** to prevent impacts to salmon rivers.
5. **PROMOTE SPORT FISHING, TOURISM, AND OTHER SUSTAINABLE DEVELOPMENT** to reduce reliance on poaching and unsustainable resource use.

Reindeer herding is part of the subsistence livelihood of indigenous Chukotkans. PHOTO by Sasha Leahovcenco.

Icy Riches (Chukotka)

CONSERVATION PRIORITIES IN REMOTE AND mostly pristine Chukotka include protecting the polar bear and Pacific walrus, and preventing harmful effects of mineral extraction in the Arctic. But climate disruption is bringing dramatic change.

Chukotka is found at the intersection of three climatic zones, which makes for its rich and unusual diversity of terrain, flora, and fauna. It's also a bridge between continents, between hemispheres. It is the only subregion evaluated in this assessment that is entirely contained in just one federal-level administrative district, providing a consistency of governance that can be advantageous for building stable local relationships with government leaders and agencies.

Almost as large as Texas, it has only 51,000 residents, making it one of the most sparsely populated areas in Russia. Its population has declined since the fall of the Soviet Union, and many of the state-subsidized mining and processing facilities, which were not profitable in Russia's new market economy, have been abandoned. The departure of heavy industry has led to a renewed focus on preserving the subsistence livelihood of the indigenous people, who make up about a third of the population and include the Chukchi, Eskimo, Even, and Chuvan peoples.

Polar bear and Pacific walrus populations have dropped over the past decade. Climate disruption is the primary culprit—the edge of the drifting ice is significantly farther north than in the past and the shrinking ice sheets reduce habitat and hunting ground for the bears and walruses and limit their access to the shore.

There are several partnerships among indigenous communities, scientists, and conservationists that combine research, monitoring, and community education to protect the polar bear and walrus for the long-term. Several bear attacks led to the formation of "bear patrols" to keep villages safer.

Scientific monitoring and data sharing has already proved an effective way to reduce human impacts to these marine mammals. For example, Alaskan officials

Mountain avens *(Dryas octopetala)* grows on the shores of the Chukchi Sea. PHOTO by Konstantin Savva, National Park Service, Beringia National Park.

report that experiences shared by Russian indigenous peoples and scientists during WWF-sponsored exchanges were instrumental in their decision to immediately cease airplane overflights of a haulout of 30,000 walruses in 2014. And polar bear patrols teach non-lethal methods of expelling bears as an alternative to killing hungry animals that enter villages, reducing annual polar bear mortality.

With the melting ice and the opening of the Northern Sea Route, there's also now a rush of activity in the Arctic, notably drilling for oil and minerals. Russia has explicitly stated its commitment to expand the competitiveness of the Russian oil and gas sector, and in 2013, the state oil company Rosneft received rights to multiple blocks along the Russian shelf, including three in the Chukchi Sea. U.S. oil company ExxonMobil has signed on as a partner and investor with Rosneft for this project, though that partnership has been suspended as part of recent U.S. sanctions against Russia.

Oil drilling in the Arctic presents numerous potential threats, from the impact of seismic tomography (part of the exploration and survey process) on marine mammals to oil spills large and small. The Exxon Valdez spill in Alaska more than 20 years ago demonstrated how recovery of some species can take decades. An oil spill in the pristine waters off Wrangel Island would be catastrophic for the whales, polar bears, and walruses that call the region home.

While stopping the drilling is not realistic in the short term, it is important to make sure that any industrial activity north of Chukotka mitigates risks to whales, polar bears, and surrounding ecosystems. The project plans must be shared transparently and conform to all applicable Russian laws and regulations.

Russian conservationists are prepared to undertake a complex study of the risks of an oil drilling project to demand strict safety measures from project operators. Such a study, known as an independent environmental impact assessment, is a common tool used by conservation groups throughout Russia to draw state attention to environmental violations.

Strategy Highlights (Chukotka)

1. **FACILITATE PARTNERSHIPS BETWEEN INDIGENOUS COMMUNITIES, SCIENTISTS, AND CONSERVATION GROUPS** in Chukotka and Alaska to monitor and record climate and anthropogenic impacts to walrus and polar bear populations and to share conservation best practices.
2. **WORK WITH LOCAL VILLAGES TO REDUCE POLAR BEAR DEATHS** resulting from human-bear conflicts.
3. **INTRODUCE NATIONAL AND INTERNATIONAL PROTECTIONS** to safeguard walruses, polar bears, and their habitat from shipping and other human impacts, such as mandatory rules to avoid concentrations of these animals.
4. **INDEPENDENTLY MONITOR OFFSHORE OIL AND GAS ACTIVITY** and onshore minerals development to bring transparency to extraction efforts and hold companies accountable for maintaining high standards required by law.
5. **CREATE FORMAL PROTECTIONS FOR WALRUS AND POLAR BEAR HABITAT** by creating or expanding protected territories, such as Beringia National Park.

One River, Three Countries (Amur Basin)

FROM ITS HEADWATERS IN MONGOLIA AT THE BIRTHPLACE OF Genghis Khan, the Amur River winds 4,444 kilometers before it empties into the Tatar Strait, across from the island of Sakhalin. More significant than its length is its biodiversity. The river basin is home to the largest species in the salmonid family (the Siberian taimen), one of the largest freshwater fish (the kaluga sturgeon), and charismatic species such as the Amur tiger and Amur leopard. Within its watershed is the legendary taiga of Siberia and the Russian Far East and the Daurian steppe, with its unique multi-year climate cycle.

The number of species is not as singular as is the way they meet and mix. Nowhere else in the world do tropical liana vines climb the trunks of boreal conifers, or do northern anadromous salmon stare at Chinese soft-shelled turtles.

Because the Amur watershed is so vast and diverse, home to so many ecosystems and species, the conservation targets are divided into four broad (and interconnected) priorities:

- Keeping the river free-flowing.
- Maintaining the lakes and floodplains of the eastern part of the basin.
- Protecting the Daurian steppe and its dynamic wetlands and grasslands.
- Retaining healthy forests, for their value to the freshwater ecosystems, as well as for habitat for endangered Amur tigers and leopards.

In the western part of the Amur basin lies the Daurian steppe, which boasts a tremendous diversity of plants and animals because multi-year climatic cycles are more pronounced here than any-

Eagle chicks in the steppe. PHOTO by Igor Shpilenok.

where else in the basin. Over a period of 25 to 40 years, the climate alternates between wet, cool periods and dry, hot periods, between floods and droughts. In wet periods, ducks, grebes, and water hens make their homes in the lakes and dirt banks. The sandpipers move in as the drought takes hold. At the height of the dry season, larks nest on the parched lake bottoms.

The drought cycle dictates an unceasing succession in plant and animal communities, which increases the number of ecological niches and sustains a high diversity of species and habitats. Wildlife constantly moves between wetland sites in search of water and food. That's why long-term survival of the area's flora and fauna depends on preserving many wetland sites within the ecosystem.

The species targets in Dauria include the white-naped crane, the swan goose, and the Mongolian gazelle.

Fresh water is key to the area, and while flora and fauna have adapted well to the long-term climatic cycles in the basin, human communities have not. Thus there is a drive to sequester water behind dams instead of adopting more sustainable measures.

The many threats facing the Amur River Basin can be grouped under three categories—colonial patterns of development, driven by actors outside the region; water management practices that attempt to adapt to the climatic cycles with unnecessary dams and reservoirs; and the political and economic competition among Russia, China, and Mongolia.

Today, most of the cooperation among Russia, China, and Mongolia is based on trade and extraction of natural resources. The long-term health of the region depends on expanding that cooperation to conservation matters. The headwaters of the Amur rise in Russia, China, and Mongolia, and for more than two-thirds of its journey to the Pacific Ocean, the river forms the border between Russia and China. Dams and dikes in one country impact water flow in another. The Mongolian gazelle migrates between Russia and Mongolia. Salmon swim thousands of miles from the ocean to their spawning streams, sometimes through Russia and China.

Pollution doesn't stop at border checkpoints. Nor do tigers.

Fishing in the ocean also requires cooperation among nations. Though the Amur River is not part of Japan or South Korea, the fishing economies of those countries depend on the Amur more than many rivers inside their own borders because the nutrient-rich Amur empties into the Sea of Okhotsk and affects the bioproductivity of those fishing grounds.

Creating new protected areas and improving management of existing ones has proven an effective method for conservation of the Amur River Basin's unique ecosystems and endangered species. Expanding protected areas was a key factor in the stork rebound.

There are about ten binational or trinational protected area agreements. The Daurian International Protected Area (DIPA) is considered to be the most successful transboundary nature reserve in Russian Asia. Established by Mongolia, China, and Russia in 1994 to protect and study biodiversity of the region, DIPA united Dalai Lake in China, Mongol-Daguur in Mongolia, and Daursky

The Russian Far East is home to dramatic scenery as well as globally significant ecosystems. PHOTO by Pacific Environment

in Russia. A campaign is under way to name this international protected area a united World Heritage Site.

Strategy Highlights (Amur Basin)

1. **MAINTAIN THE NATURAL STATE OF THE AMUR** and its tributaries by working with local, national, and international communities, conservationists, and state agencies to prevent hydropower development.
2. **EXPAND PROTECTED AREA COVERAGE** to afford greater protections for freshwater and forest resources, including Amur tiger habitat, and support existing protected areas to introduce needed conservation measures.
3. **PROTECT RARE BIRDS AND FISH** by working with regional regulatory bodies to ensure natural flow volumes and to prevent excessive diversion of water for irrigation.
4. **INDEPENDENTLY MONITOR GOLD MINING PROJECTS** to increase transparency of mining operations and stop pollution of waterways.
5. **INVEST IN THE NEXT GENERATION OF CONSERVATION** by supporting scientists, conservationists, and outreach programs to communities in or near high-priority ecosystems.

Conservation Strategies

THE LAST STEP OF THE CONSERVATION ASSESSMENT PROCESS was to develop a set of broad strategies for ecosystem and species protections. These strategic directions are general and were developed based on best practices and recommendations from practitioners and experts in all target regions. Application of these directions presents the best opportunity for conservation success across the Russian Far East. (See the chart on page 15 for strategy highlights, and page 80 for the full list.)

Some of these strategies we have already alluded to above, like building and leveraging public engagement to ensure best practices for natural resource management. Other strategies include piloting sustainable and/or eco-friendly businesses, like tourism and small farms, as alternatives to resource extraction. Another is to build a stronger conservation constituency in the Russian Far East.

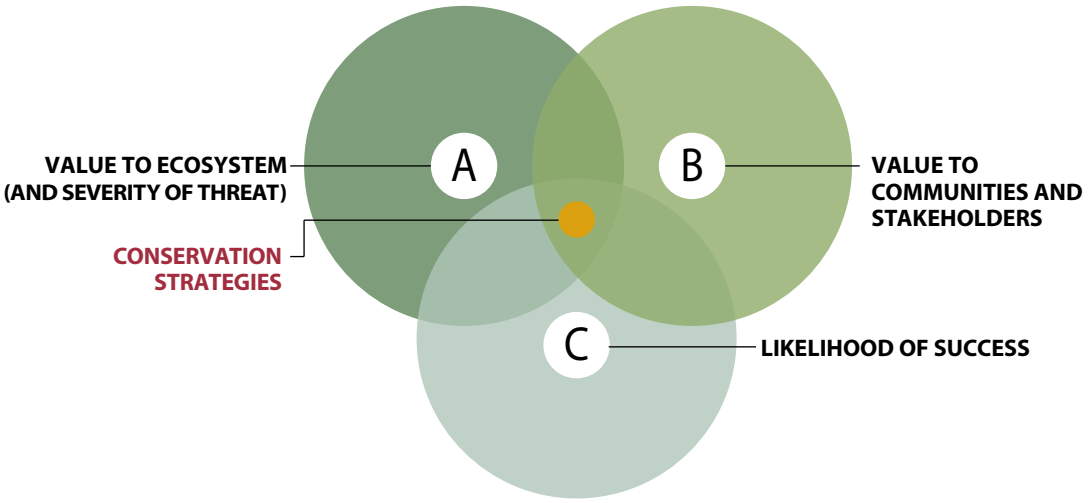
The report also concludes with a series of lessons learned from the past several decades of work in the region. They overlap with the strategies, but are broader recommendations for all regions. They include encouraging transparency by making information widely available, implementing diverse and creative fundraising initiatives, managing conservation projects adaptively and being flexible in response to changing circumstances, and leading from behind, urging government officials to be the face of local conservation initiatives.

The recent expansion of fisheries improvement projects in

Strategic Direction Highlights

TO PRODUCE THIS CONSERVATION ASSESSMENT, Pacific Environment brought together local and international conservation practitioners to develop the most effective strategies for protecting the last great wilds on earth. These conservation leaders chose targets that reflected the sweet spot of (a) value to the ecosystem (and severity of threat), (b) value to local communities and stakeholders, including economic livelihood, and (c) likelihood of success. (See Strategic Directions and Resources for the complete list of strategies.)

Identifying Optimal Conservation Strategies



STRATEGIC DIRECTIONS

1. Build and leverage public engagement to ensure best practices for natural resource management and prevent or mitigate the most damaging impacts of industrial development.
2. Leverage market mechanisms to increase transparency and introduce best conservation practices in Russia.
3. Pilot sustainable and/or eco-friendly businesses such as tourism and small-scale agriculture as an alternative to natural resource dependency.
4. Strengthen and expand protected area coverage of priority ecosystems and territories.
5. Use international and national venues to achieve conservation protections for the Russian Far East.
6. Build a local conservation constituency.
7. Diversify sources of financial support for Russian conservation initiatives.
8. Monitor and adaptively manage impacts of conservation investment across the region.

Kamchatka, bringing half the peninsula's wild salmon fisheries into an MSC-certification process or a FIP, is a testament to conservation leaders seizing emerging opportunities.

Igor Redkin, general director of Vityaz Avto, one of the certified companies, sees a new generation of leaders coming up in Russian salmon fisheries. "Before, people were living day by day," he says, "but now they are thinking about the future—understanding that protecting nature means protecting your business."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