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## Final Report to the Conservation Leadership Programme

October 31, 2008

### Conservation Action Planning and Sakhalin Taimen

#### A. What was accomplished through this project?

Through this grant, the Conservation Leadership Programme supported the development of a wild salmon ecosystem conservation plan on Sakhalin Island, Russia, which is home to abundant and diverse salmon runs of global significance and represents many of the best remaining opportunities for the long-term conservation of wild salmonids and their natural ecosystems. Specifically the Sakhalin Salmon Initiative Center (SSIC) adapted Conservation Action Planning methodology developed in partnership with The Nature Conservancy for use in Russia. We prepared a Conservation Action Plan for the Langry basin of Northwest Sakhalin, a river system that is home to 11 species of salmonids, including the endangered Sakhalin and Siberian taimen (*Hucho perryi* and *Hucho taimen*). We gathered baseline data to inform the plan through two summer expeditions, each lasting approximately one month. Based on this, we developed a conservation strategy addressing the most prevalent threat to salmonids in the Langry basin, poaching. Finally, our staff conducted stakeholder outreach in the city of Okha to build support for the project among the local government, citizens and other stakeholders.

Descriptions of specific accomplishments in each area follow.

#### 1. Development of the Langry Watershed Conservation Action Plan

At a Sakhalin River Prioritization Workshop in 2007, a diverse group of Sakhalin and international researchers identified the rivers of Northwestern Sakhalin as a top priority for additional research and protection. This region supports very high salmonid species diversity, unmatched elsewhere on the island, and is the only area in the world where the critically endangered Sakhalin taimen and the closely related Siberian taimen are known to coexist. On the basis of the scientists' recommendations, we began working in 2007 to develop a Conservation Action Plan (CAP) for the most diverse and pristine river of the region, the Langry.

The first step in the process was to create the tools we needed to develop the plan. This involved translating an Excel workbook used for creating Conservation Action Plans that The Nature Conservancy has developed. In late 2007, Anneta Vysotskaya, a Russian translator specializing in natural resources topics, translated the CAP workbook into Russian. We worked with our partners at the Wild Salmon Center and a Nature Conservancy programmer, Warren Lockwood, to make the Russian version of the workbook operable. In early February, the workbook, which guides the project team through the steps of preparing a plan and automates the ranking of threats and strategies, was ready for use.

Dr. Gordie Reeves, a salmon monitoring expert with the USDA Forest Service and Wild Salmon Center, provided input and guidance regarding the application of CAP to salmon ecosystems. The CAP methodology uses monitoring to measure the success of conservation strategies and gauge ecosystem health. Monitoring indicators specific to the ecosystem health component or conservation strategy of interest are chosen, and



Figure 1: A satellite view of the Langry and Bolshaya basins.

the monitoring plan is developed upon the basis of these indicators. Quantitative values for “poor,” “fair,” “good” and “very good” indicator ratings are determined, and the current and desired indicator values are also recorded. A timeline is established for achieving the desired indicator value through one’s conservation measures.

In early 2008, Dr. Reeves reviewed CAP plans for salmon ecosystems already completed in Alaska and California, USA. He identified two groups with plans that were in his judgment based on the best available science, incorporating the results of his and others’ research about the natural variability of potential habitat indicators. The plans he thought would provide the best model for

Sakhalin were plans for the Matanuska-Susitna and Nushagak basins (both in Alaska). This led to a deepening of our partnership with The Nature Conservancy, and in particular with the Alaska chapter. They agreed to share their experience with us and help us in the development of our Langry river CAP.

Tatiana Grizhebovskaya, director of the Russian Federal Fisheries Agency Langry River biostation, began drafting the Langry River CAP in the spring of 2008. Originally we planned to draft a plan for the Langry and the adjacent Bolshaya basin, but upon further analysis, we realized that the region (2,352km<sup>2</sup>) was too large to take on all at once. We

decided that we could not develop and implement conservation measures for both basins in 2008. Instead, we decided to focus upon the Langry river in 2008 due to the greater salmonid biodiversity found there. We did collect data on the Bolshaya river during one of the two expeditions conducted in 2008, and plan to develop and implement a CAP for this basin as well when resources allow it.

Grizhebovskaya worked on the plan throughout the summer of 2008, consulting often with SSIC fisheries biologist Anatoly Semenchenko. She participated in one of the two research expeditions, updating the plan with data obtained during the trip. She also used data obtained during her years of experience working for the Federal Fisheries Agency.

The plan focuses upon the following threats: poaching, oil spills from the Rosneft pipeline which crosses the main stem and tributaries, and phenol pollution in the Amur Strait from the Amur River on the mainland, through which migrating salmon have to swim before returning to spawn in the Langry. Strategies were developed to respond to each of the threats. The anti-poaching strategy consists of an in-river component (enforcement patrols on the river), the effort to create a protected area and support for a coalition that will push for regional and national legislative, administrative and economic measures (see “Conservation Strategy Implementation” for more information). An oil and phenols monitoring program, meanwhile, will generate baseline data and allow for more immediate detection and response to oil and phenol spills. Grizhebovskaya’s monitoring plan includes water quality indicators and others: indicators which can be used to determine poaching levels, habitat quality indicators and fish population health indicators.



Figure 2: Tatiana Grizhebovskaya at the CAP workshop in Anchorage.

In early September, the plan was translated into English and sent to Alaska. The Matanuska-Susitna and Nushagak teams reviewed the plan and made recommendations for editing. On October 5-13, Grizhebovskaya and Semenchenko traveled to Anchorage, Alaska to participate in a workshop organized by the Wild Salmon Center and the Nature Conservancy focusing on CAP for salmon ecosystems. Together with representatives of

Alaskan teams from the Matanuska-Susitna and Nushagak basins, they further revised the plan and noted

additional research needs. For example, Grizhebovskaya will update the plan with citations to Alaskan studies of oil pollution and effects upon salmon and revise indicator values on the basis of these studies. Furthermore, the computer program NetMap will be employed in 2009 to analyze satellite imagery of the Langry basin. Using data on the

geomorphologic characteristics of areas where Sakhalin and Siberian taimen prefer to spawn, the program analysis will suggest likely areas where these species would spawn in the Langry, which will be confirmed through field work.

These revisions, as well as updating of the plan to reflect data from the field expeditions, will continue for the remainder of 2008.

## 2. Field Expeditions

In late 2007, we developed an ichthyology research plan for the Langry-Bolshaya region in partnership with Valeriy Yefanov of Sakhalin State University. Yefanov submitted the plan to the Federal Fisheries Agency in Moscow and, in spring 2008, gained official approval for scientific sampling of fish populations in the area during the summer of 2008.

The first of two field expeditions took place over a three week period in June-July. An international team assessed salmonid abundance, species diversity and habitat quality on the Langry and Bolshaya rivers through netting and snorkel diving surveys. Semenchenko served as the expedition lead, and was joined by Vladimir Tabunkov (aquatic biologist from Sakhalin State University), Devona Ensmenger (ichthyologist, Wild Salmon Center),



Figure 3: Snorkel surveys were an important part of the expeditions to assess fish biodiversity and abundance.

Nicole Portley (Sakhalin project manager, Wild Salmon Center), two representatives of the local branch of the Federal Fisheries Agency and three university students. The expedition team also included a cameraman who gathered video material for a film about the ecological value of this area and the work of SSIC to conserve its biodiversity.

The assessment team confirmed extremely high salmonid species diversity in the rivers, but also found evidence of poaching. Two adult Siberian taimen were sampled on the Langry river, confirming the existence of this species in northwest Sakhalin. However, we did not sample any Sakhalin taimen. Neither could the team document the presence of Sakhalin taimen redds through snorkel surveys due to high turbidity. As a result we decided that the second expedition would focus on the effort to locate Sakhalin taimen juveniles and adults.

The second expedition, which took place August 25-September 15, provided additional salmonid abundance and run diversity data, and also confirmed the existence of Sakhalin taimen in the Langry river. The group, led by SSIC vice director Dmitry



Figure 4: Siberian taimen on the Langry River. Taimen caught during expeditions were released unharmed after data (length, weight, fin clips, scales) was collected.

Didenko, spent significant time in the upper portion of the Langry basin, where they hoped to find Sakhalin taimen fry that had recently emerged from redds through the use of traps. While taimen fry were not found, a mature Sakhalin taimen was sampled on the Bolshoi Komulan tributary of the Langry, confirming that Sakhalin taimen populations still reside in the river, albeit likely in very small numbers.

During the second expedition, the 13-member team, which included a local hydrobiologist, zoologist and botanist, gathered hydrobiology, botany, zoological and ornithological data.

These data will be included in the official nomination document to create the Langry protected area, which our team plans to prepare and submit to the Oblast Administration by the end of 2009. While we originally planned to prepare and submit this document by the end of 2008, we soon realized upon undertaking the project that this timeline did not allow sufficient time for analysis of data, preparation of the nomination document, revision of the CAP and development of support for the protected area among Okha region and Sakhalin Oblast government officials. The new timeline is more realistic, and will allow our team to more thoroughly complete the plan and nomination document, and to build stakeholder support.

### 3. Conservation Strategy Implementation

All local stakeholders, including the mayor of the Okha region, stressed from the beginning phase of our project that poaching represents the most serious threat to salmonid health in the Langry and Bolshaya basins. Although poaching targets chum and pink species, Sakhalin and Siberian taimen populations also fall prey to poachers' nets, and drops in these species' abundances are directly correlated to poaching activities. Through the CAP development process, we drafted a strategy to combat poaching, and implementation of one portion of the strategy took place this summer.

Poaching in Russia is a multi-faceted problem rooted in the socio-economic troubles of the 1990s. It



Figure 5: Poachers' camp on the Langry River.

has continued in the more prosperous twenty-first century due to outdated laws and

government corruption. Our team has decided that, in order to successfully defeat poaching, we must take the lead in protecting our priority basin from poaching and in monitoring the level of poaching in the river over time, and we must also support coalition efforts to bring about administrative and legislative change.

Current Russian legislation hampers the efforts of private companies and NGOs to support the government in its mandate to protect rivers from poaching. NGOs and private citizens cannot make direct contributions to government budgets, and they do not have the right to accomplish government mandates. Meanwhile, all stakeholders agree that the government budget does not sufficiently address the problem of poaching: for the entire region of Okha, only two government inspectors were employed at the beginning of the 2008 season.

Only through negotiation with multiple parties can NGOs contribute to the effort to fight poaching on the ground. We worked with the Okha Mayor's office and the local branch of the "Kazachestvo" (the Russian Cossacks – a quasi-independent military unit of the Russian Army) in order to achieve an agreement dispatching a patrol of Cossacks onto the Langry river during the summer chum and pink runs. The Cossack unit worked under the supervision of SSIC and the mayor's office, and also collaborated with the Federal Fisheries Agency Enforcement Unit. During the second expedition, our team noted that the quantity of poacher's nets in the Langry River had decreased in comparison to the quantity uncovered during the first expedition.

As the Cossacks could also fall prey to corruption, we need a means of assessing the success of their work more quantitatively beginning in 2009. We decided that monitoring of escapement and redd counts will provide the most accurate means of quantifying the amount of fish that have entered the river to spawn and been poached before reaching their spawning grounds. In 2009, we hope to, in partnership with the Federal Fisheries Agency, set up a floating weir at the mouth of the river, where all fish entering the Langry will be counted. Then, following summer chum and pink spawning, we will dispatch a team of field workers to count the number of redds in the basin. In the early fall, the water levels drop to lower levels, at which redds are easily visible. We must monitor these indicators over several years of the Cossacks' work in order to achieve a better understanding of whether or not their efforts are achieving success.

Establishment of a protected area will also contribute to stopping poaching in the area, as it will provide an official government mandate to protect the region's biodiversity. Although the government currently invests few resources in the management of protected areas, every contribution, however small, makes a difference.

Meanwhile, we have joined our efforts with a new coalition of Russian and international NGOs that is developing a strategy to combat poaching on a regional and national level. This coalition has already developed a list of legislative, administrative and economic measures necessary to limit poaching in the Russian Far East. The creation of a working group in the city of Yuzhno-Sakhalinsk, where a middle-class, potential anti-poaching constituency resides, which will address implementation of the strategy at the Sakhalin region level, will occur early next year with our support.

#### **4. Stakeholder Engagement**

SSI Center staff members have traveled several times to Okha in 2008 in order to consult with key stakeholders in the region, including Okha mayor Sergey Pakulin, Oleg Grizhebovskiy (Okha Region Director, Federal Committee for Commercial Fishing), and local indigenous representatives, regarding the protected area initiative and conservation plan. Pakulin has expressed his official support for creation of the protected area through a letter to SSIC. Meanwhile, we have also worked closely with the Sakhalin Oblast Administration to advance the protected area initiative, and have achieved the verbal support of the vice governor responsible for fisheries, Sergey Karepkin. We are currently evaluating the question of which protected area type will best suit our needs: regional reserve, Oblast reserve, or federal fish protection zone.

Through another project, the watershed councils initiative, we are working with Governor Pakulin's office to create a local watershed council, which will gather local stakeholders from various sectors to discuss watershed and salmon-focused issues. We foresee that this council will officially form by the end of 2008.

As we have not yet finalized the conservation plan and protected area nomination documents, we have not conducted public hearings about the CAP project in the city of Okha. The Okha watershed council will organize and conduct the hearings in 2009 with our participation and assistance. During the hearings and at general watershed council meetings, stakeholders will discuss the conservation plan and potential for further community involvement in its implementation.

#### **B. Expenditure of Grant Funds**

Please see the attached financial report for a detailed accounting of expenditure of funds received from the Conservation Leadership Programme for the accomplishment of this project. We thank you for your valuable support.

#### **C. Attachments**

- Financial report
- Report from first expedition