Okha Ltd. & Rybnovskii Losos Ltd. Salmon Fishery (Northern Sakhalin)

Remote FIP Site Visit: September 13-16, 2021

Conducted by ForSea Solutions LLC

The purpose of the 2021 FIP site visit was to review the 4th year of the FIP activities being implemented by Okha Ltd. and Rybnovskii Losos Ltd. for their Pink and Chum salmon fisheries located in the Okhinskii District of the North Sakhalin Island. Due to the Covid-19 travel restrictions, the site visit was conducted by the ForSea Solutions team both on-site and remotely. The FSS team held meetings with the client representatives from SakhNIRO, Sakhrybvod, SKTU, Sakhalin Forestry Service, and with the expert on the Amur salmon and Kaluga species.

MINUTES OF MEETINGS AND VIDEOCONFERENCES

September 13, 2021

Interview with staff members of the Okhinskii Department of Fish Protection and Organization of State Control in Sakhalin-Kuril Territorial Administration Federal Agency for Fishery (personal meeting in Yuzhno-Sakhalinsk).

Attended by:

Lyudmila Fedorova, Fisheries Eco-Certification Consultant (representative of the companies Okha and Rybnovskii Losos) and representatives of the Okhinskii Department of SKTU

Goal:

Gathering information on the damage from poaching and organization of fishery protection measures in 2021.

Question 1: How many staff members are engaged in river inspection from the side of SKTU, and from the side of the companies Okha and Rybnovskii Losos?
SKTU: In 2021 the Okhinskii Department of SKTU consisted of 5 staff members. We were assisted by 4 people hired as part of the protection unit who carried non-staff fishery inspector authorizations.

Question 2: How many materials have been provided to the governmental inspection agencies in 2021?
SKTU: In 2021, the level of poaching dropped by a large amount. Successful protection activities of the previous years resulted in elimination of organized poaching brigades from the district. The remaining poachers in the region represent locally residing individuals, not capable of

yielding significant amounts of fish at a time. In total, 8 criminal cases were initiated against 7 people. The calculated damage is estimated at 3.2 mil. rubles.

Question 3: What is the number of confiscated nets, fish, roe, and floating devices in 2021?
SKTU: We confiscated 189 kg of Pink Salmon, 20 kg of Chum Salmon, and 60 kg of brined salmon roe. 8 nets and 7 floating devices were also confiscated during the past season.

Fig. 1 A net and a rubber boat confiscated from poachers

Fig. 2. Confiscated Pink Salmon brined caviar and a boat motor

Fig. 3. Confiscated fish (Pink and Chum Salmons)


Fig. 4. Boat confiscation and Pink Salmon.

Question 4: Have there been instances of Kaluga and Taimen entanglement into poachers' nets (if so, more detailed information is needed: dates, number of fish, fishing gear, etc.)?
SKTU: No, we have not observed such instances. We are dealing with river protection, while Kaluga rear in the coastal marine waters where fisheries are under the control of the border patrol (the area of border guard units' engagement). Taimen also hasn't been registered in the poachers' nets found in the rivers of our region.

Question 5: What decisions are being made by the external fisheries management system in 2021 and do companies like Okha Ltd. and Rybnovskii Losos Ltd. abide by those decisions?
SKTU: Okha Ltd. and Rybnovskii Losos Ltd. are strictly following all the requirements set forth by the Sakhalin Region Anadromous Fishes Commission. Fishery rules violations on the part of these companies have not been detected either.

Question 6: What actions do the Okhinskii District companies undertake to reduce poaching in the region?
SKTU: The companies Okha and Rybnovskii Losos are providing invaluable assistance with river protection tasks. As in the previous years, there were stationary bases organized on the main large rivers for consistent monitoring. Those operated along with several mobile brigades monitoring river channels. Several people in the protection unit carry the "Non-staff member" authorizations and take part in our inspection raids.

Question 7: Have there been occurrences of oil spills into the region's rivers in 2021?
SKTU: No, there have been no oil spill occurrences in 2021 in the rivers of the Okhinskii District. The company Rosneft that has worn out pipelines in this area, has decreased its extraction volumes in the Okhinskii District by a significant amount. The other oil company, Exxon, is keeping a close watch over its activities and makes sure to avoid such incidents; they have strong environmental programs.

September 14, 2021

First session - Client opening meeting (video conference)

Attended by:

Representatives from ForSea Solutions:
Natalia Novikova
Mark Chilcote
Randy Ericsen
Vanda Chernyshova

Representatives of Okha Ltd. and Rybnovskii Losos Ltd.:
Dmitry Kurbatov
Lyudmila Fedorova

Dmitry: Currently, on September 14, we caught 613 tons of Pink Salmon and Chum Salmon (in total, for both companies). This is less than usual, based on the experience of past years, but Chum Salmon fishery is still operating.

Question 1: This year was really bad for spawner returns / catch of Pink Salmon. Has there ever been a year as bad as this, or even worse in the past?
Dmitry: Traditionally, we started fishing on July 1 (on the northwestern coast), a little later we started fishing on the east coast (according to scientific data, small runs and low catch were expected). The fishing strategy of the Sakhalin Region presupposes a mandatory escapement to spawning grounds. Unfortunately, the intensity of the Pink Salmon runs on Sakhalin was really not as high as in previous years. Compared to Sakhalin, Kamchatka had a more abundant run than expected (more than 400 thousand tons of Pink Salmon were caught). We have kept the fishing to a minimum due to very poor forecasts in the areas we fish (in the Rybnovsk area, Severny Bay and on the east coast). In order to save money and for reasons of profitability, we decided not to install (or to install not everywhere) fishing gear in poorly fished areas. At some sites, fishing gear was removed long before the end of the official fishing dates. For example, we took a trap net near the village of Rybnovsk and the village of Muzma. Setting the trap nets requires a lot of time and large financial investments. So we have reduced our fishing efforts by about 20% (meaning the number of fishing sites).

Question 2: Do you have any thoughts on what reasons might have caused low spawners return / catch in 2021?
Dmitry: Summer on Sakhalin was abnormally hot (the water was highly heated), the rains were poor, so the fish did not enter the rivers.

Mark: In your or fishermen's opinion, did the salmon die when entering the rivers, or did it just return in smaller numbers?
Dmitry: The salmon entered, but changed their migration routes due to rising water temperatures.
Lyudmila: We are talking about the coastal area. The fishermen saw the fish, which were there, but the fish could not overcome the barrier between the sea and the river due to temperature anomalies.

Mark: Do we understand correctly that there was no massive fish suffocation, and the fish were just waiting and looking for ways to enter the rivers?
Dmitry: Yes, that is right: the fish waited and seeked for cold currents. There was no mass suffocation.

Randy: So, it turns out the fishermen were seeing the fish waiting for better conditions to go upstream and return. In your opinion, was there any tendency of that same fish entering your nets? Were they getting caught in any way?
Dmitry: Well, yes, we caught some. In general, there were various rumors, including that the fish were coming along the Amur Estuary closer to the mainland, but this turned out to be rumors. The fishing was taking place, something was caught into the nets, but the fishing intensity was weak. In general, everything was delayed in this fishing season. The intensive run of Chum Salmon along the west coast typically begins in late August, but this year we did not observe it until yesterday (09/13). Yesterday we caught 138 tons (good amount) – it is the largest catch of the whole fishing season. In previous years, by September 14, such intensive catches occurred more than once (2-3 times).

Lyudmila: Even now I, as a specialist, have a feeling that nature itself "protected salmon", because we observed a massive run on August 26-28, when the rains started and it was getting colder (the temperature in the coastal area leveled off), i.e. the fish got the opportunity to enter the rivers. As early as August 24-25, I reported on a severe drought taking place in the area, and then the conditions changed in a positive direction – a unique situation developed. On September 14, the average spawner density in the rivers of the Okhinskii District, considering the Sakhalin branch of FSBI Glavrybvod (Sakhrybvod) target of 200 fish/100 m2, was 52%, although the escapement exceeded 100% according to the optimum calculated by A. Antonov. No matter what formulas we use, nature does its job. At present, (as Dmitry said) the companies have reduced their fishing pressure, thus they gave the Pink Salmon an opportunity to enter the rivers.

Mark: So, there was no interception of fish that were supposed to return to the Amur. You also showed a high level of the management system response with a responsible and careful approach to fishing by implementing a reduction of your fishing efforts and closing some fishing camps.
Dmitry: This year's fishing season did not leave us a choice: low runs, lack of fishing in the east. Moreover, it was impractical to install fishing gear in some places for economic reasons.
Lyudmila: If we evaluate the entire chain of the management system, the right decisions were made. Back in the winter, scientists predicted weak runs, and the management of Okha Ltd. and Rybnovskii Losos Ltd. decided to reduce the number of their trap nets in advance. Also, already during the fishing season, the company again decided to reduce the fishing pressure. All this shows a good reaction of the management system (on the client's part).

Question 3: Has the price offered by fish buyers increased, or has the product price per kg increased as a result of fewer fish, supply and demand problems, or has the price per kg / ton of catch remained approximately the same?
Mark: It's impressive how your company has been adapting to the conditions. Tell me, when such a situation develops and companies expect lower returns and lower catches, are fish prices expected to increase? Is it possible to sell it at a higher price due to its reduced quantity?
Dmitry: Yes, this year the cost is somewhat higher, and this keeps us from sustaining serious losses. We have seen over the years that all our efforts to preserve fish give us confidence in the stability of the fishery in the future.

Randy: We see that your careful attitude to resources and anti-poaching activities on your rivers give good results (and escapement is the main indicator of it). And this means that there will be no problems with the update of your FIP in December. We hope next year we will not discuss such a problem as the absence of returning fish.

Second session - Interview with researchers (video conference)

Attended by:

Representatives from ForSea Solutions:
Natalia Novikova
Mark Chilcote
Randy Ericsen
Vanda Chernyshova

Representatives of scientific institutions:
Aleksander Antonov, SakhNIRO
Tatiana Tochilina, VNIRO employee (does not officially represent the interests of VNIRO in this FIP)

Representatives of Okha Ltd. and Rybnovskii Losos Ltd.:
Lyudmila Fedorova

Goals:

1) To obtain information on how scientific data on the targeted populations of Pink Salmon and Chum Salmon in the Okhinskii District in 2021 is collected. To obtain information on the specifics of work in 2021 and salmon fishing in 2021.
2) What are the actions of the management system?

Mark: How much did the companies' catches decrease with the reduced number of fishing gear (when trap nets were removed before fishing began) but still good escapement? Is this year indicative?
Lyudmila: It has definitely decreased by 2 times, and maybe even by 3 times for Pink Salmon. There were wide-reaching reasons: weather and climate conditions in the coastal zone did not allow for a larger catch. Possibly, it is a delayed run, but it also might be some other phenomenon. After all, fish are escaping to the lower and mid reaches (yesterday Grizhebovsky confirmed that the upper river sections have not had any escapement yet). So, this is quite a powerful ending to the run rather than a delay of the start of the run (this is my opinion, but Aleksander will express his opinion). This year is not indicative. In September we need to process the collected scientific data, because we were not expecting such a heat wave. Regardless of all the actions taken by the company, their catches are still unpredictable for reasons beyond our control (e.g., climate).

Aleksander: Briefly about this year's situation: we did not expect such a run. We were initially preparing for restriction measures, that is, fishing was not recommended at all in some areas. In the Okhinskii District (west coast) the allowable catch was set at 300 tons, barely. In this regard, fishing on the east coast was generally not recommended. The fishery setup requires the total smolt count, which is calculated for the entire region, and the rate of the expected return. The expected return did not allow us to start fishing in the Smirnykhovsky and Poronaysky districts, but the fish returned at the rate above the expected amount.
Our main task was to facilitate the salmon runs sufficient for reproduction, and the fishing opened only when fish began to enter the rivers. The task of allowing the needed escapement was completed. The Okhinskii District is not as significant in terms of reproduction as the regions further south – Smirnykhovsky and Poronaysky, where the main spawning grounds are concentrated. There is oil production in the Okhinskii District and, in this regard, the frequent leaks of oil products (even of natural origin) complicate the opportunities for good spawning – the rivers are of poor quality. Despite the fact that Pink Salmon is not a very demanding fish, the conditions for its reproduction are still not as important here as in other regions. When the main

rivers were 50% filled, only then the fishery started. And in this regard, I believe that the fishery in the Okhinskii District along the east coast was not so significant. However, the low number of trap nets and low fishing pressure allowed us to achieve escapement even into those rivers, which fish had not entered in previous years. And this gives us hope that in the future the number of odd-year Pink Salmon will recover in this area.
In the northwest, there is the following situation: the abundance of Japanese Pink Salmon (which overwinters in the Sea of Japan) was extremely low, so it did not run to Okha. The fish that came there were from the ocean (both Japanese and Pacific populations) and had rather high numbers, thus it was decided to increase harvest to 600 tons, instead of the 300 tons initially recommended for the northwest.

Mark: How was the catch increased from 300 to 600 tons: by reducing the passing days, opening additional field camps, etc.?
Aleksander: The passing days are still the same. Based on the dynamics of fishing (for five day periods), the level of escapement to spawning grounds, and appropriate calculations, we assumed that the possible catch could be 600 tons. We do not have the right or ability to regulate the amount of fishing gear - we only limit either the amount of allowable catch or the time. It is an Olympic system.

Mark: I. e. was the Japanese Pink Salmon population depressed and the increase in catch was allowed based on good returns from other populations?
Aleksander: Japanese Pink Salmon has been in a depressed state for a long time. It usually goes along the western coast of Sakhalin. However, for the last 10-15 years, the Pacific population has made up 90-95% of the western and northwestern catches; it does not go to the south.

Randy: So the quota was increased from 300 to 600 tons, but due to the weather conditions the fish came later and the catch was bad. Did you see a large number of fish returning to spawn at the start of the run or not?
Aleksander: In fact, the temperature regime was crazy, and there was no rain – the rivers dried up. The temperature in the rivers was very high, even critical, and reached 25 degrees Celsius. In the beginning of the run, the fish stayed for quite a long time in the coastal area near the estuaries and did not enter the rivers until better conditions (when temperatures dropped). Fish began to enter 5-10 days later than usual. In the south, we recorded suffocations due to high temperatures and low oxygen levels. Later, another danger occurred in the south (the Okhinskii District was not particularly affected): due to a dramatic water level rise, unspawned fish was washed away, and some mudflows occurred. We will go out there to inspect the redds in the affected southern regions; we will not go to Okha.

Lyudmila: Due to the fact that high temperatures were observed along the Okha coast for a long time (of 18 and 20 degrees Celsius), could the Okha Pink Salmon be delayed for a bit in the southern waters and get caught in the Smirnykhovsky and Poronaysky districts?
Mark: Do you mean, can the reduced catches of Okha Ltd. and Rybnovskii Losos Ltd. be explained by the interception of fish by other fisheries along the way of their migration?
Lyudmila: Yes, I would like to clarify specifically, could someone catch fish along the migration route from both the northeast and the northwest?
Aleksander: I reckon they could, because in theory, such a possibility exists. However, there is no evidence of this. It is necessary to carry out a tagging study. It was shown in previous years that southern populations of salmon did occur in the Smirnykhovsky district (from the Aniva Bay, southeast, etc.), but no one tags fish originating from the north, which means that there is no way to prove its interception.

Lyudmila: Have you observed a decrease in the weight of Pink Salmon this year? Tatiana Tochilina has data that the weight was 200 g lower than in the year of the parent generation.

Aleksander: Data were collected, but they are still being processed. Comparisons to previous years will be available later. This may be a consequence of poor ocean feeding due to competition with more active Kamchatka populations during the rearing season.
Randy: This year there is also a much smaller size range of returned fish in Alaska. The trend is the same.
Aleksander: I see. In previous years, declines in both abundance and biomass were recorded. In some years, when the biomass of organisms is quite large, it happens that highly abundant generations have a large biomass. Well, this is overall .
Lyudmila: This year Kamchatka and Chukotka "ate" everything there was to eat! As well as the Okhotskii District of the Khabarovsk Region.

Mark: All in all, what is going on with Okha? There are good returns, good escapements, but poor catches. Whereas in the south there is a bad situation with both the return and the escapement, but their catches are good. So, what is at the bottom of it all? And what is going on with Okha?
Aleksander: This phenomenon is based on natural and climatic conditions. The south is represented by mountainous terrain, where the rivers were originally characterized by Pink Salmon spawning grounds (the Smirnykhovsky and Poronaysky districts are the main salmon reproduction areas in the northeast). The conditions for reproduction of Pink Salmon in the Okhinskii District (except for the Schmidt Peninsula) have never been good. Initially, this area was not intended for highly efficient reproduction of Pink Salmon. The bulk of catches is fish migrating to other areas, the local populations are reproductively quite weak. After all, the Okhinskii District is one of the main areas for the reproduction of Chum Salmon, and the conditions for natural reproduction of Chum Salmon in particular are excellent here (especially on the northwestern coast), this is the unique feature of this area. In the northeast, there are hatchery Chum Salmon.

Mark: Again, regarding the reproduction of Pink Salmon in Okha: yes, some fish were intercepted, some did not return due to unfavorable weather conditions, but the recorded escapement in Okha is normal, and even better in some places. Are there any signs that something could have changed in the ocean and influenced these populations' reproduction? More precisely, do we understand correctly that this year the ocean did not cause such results, it happened under the influence of other factors?
Aleksander: The question is very difficult. It is hardly possible to find any one main factor here. Most likely, there is a combination of factors: the natural conditions forming in rivers during spawning, wintering and downstream migration are one thing. The second thing is the coastal habitat conditions, which make fish relocate northward. Climatic conditions both here and in America are changing markedly. These changes also affect rearing in the open ocean waters during the wintering season. So far, I cannot say that the ocean is the main factor; most likely it is a combination of factors or cyclicity. Now the peak of the Pink Salmon run has passed the historical high point for Sakhalin, but I cannot say how the situation will develop.
Mark: Thank you for your opinion. Indeed, this is a complex and controversial issue. In Oregon, we see that return is clearly dependent on downstream migration for Coho Salmon. In your case, it is difficult to determine the reasons and predict the dynamics.

Meeting with a staff member of the Okhinskii division of Sakhalin Forestry Service (on-site meeting in Okha).

Attended by:

Lyudmila Fedorova, Fisheries Eco-Certification Consultant (representative of the companies Okha and Rybnovskii Losos)
Victoria Usova, Okhinskii District Forest Ranger of the Sakhalin Forestry Service)

Goal:

Gather opinions of one of the stakeholders about the Okha and Rybnovski Losos companies' operations in the Okhinskii district

Question 1: How did the weather conditions of the past season affect the Okhinskii district ecosystems? Have there been any forest fires?
Victoria: Salmon reproduction in north Sakhalin is impacted by oil mining activities, oil spills occurs periodically on the territory of Rosneft operations, which is detrimental to the ecology of our area. Exxon is pro-environment; they have no incidents of spills.
In 2021, we have observed very warm weather even in places like Schmidt Peninsula, where typically cold mountain rivers got significantly warmer. In September, I observed fish even in the river with natural oil seeps near the town of Okha.
There have been some minor forest fires, but they occurred at the end of August with two in September. The Forestry Service put them out within several hours. Over the course of the season our staff literally walked around and poured water to extinguish people's barbecue grills. We had smog in our area, but that turned out to have come from burns in Yakutia and Komsomolsk; smog stayed a few days and was gone. Fires in Yakutia – on one side, and in California – on the other side, make a huge impact on the climate in general.

Question 2: How do you evaluate the impact of Okha and Rybnovski Losos activities on the regional ecosystem?
Victoria: Their fishery parcels are located in the ocean, there is no negative impact on the forests. They take apart and remove their seasonal structures, clearing everything, including all their nets. At times, their household waste gets left behind here and there; those are not large quantities. They react to criticism right away, clean up everything. It is difficult to monitor everyone, so they respond to all our requests absolutely adequately and clean things up in a timely fashion. They do not engage in logging. There is no damage from their operations.
I assess their river protection activities as a positive influence on the region. Take their monitoring base on the Pilvo river, - it has a very positive effect. People (local residents – Ludmila's add-n) make sure to behave neatly and conscientiously in the preserve, they are less likely to do harm. Companies Okha and Rybnovskii Losos are actively taking part in rescue operations, such as this year's whale rescue effort, for which they provided machinery and people. I am sure that in case of fires they would pitch in assistance without any hesitation.

Question 3: Is there positive dynamics in Pink and Chum salmon escapement as a result of these companies' river protection work?
Victoria: The fishery inspection staff is too small to be in "three places at once" to monitor East and West coast rivers simultaneously. Under such circumstances it helps a lot to have additional river protection. They, too, cannot see and catch everything, but it is a big help giving us more instances of detection and detention of poachers, although the volumes are not measured in tons, but maybe just several fish.
We need better assessments, scientific research to figure out what happened to salmon. Thus far, all we can do is guess whether it is the effect of climate or something else. The fishing companies should be receiving governmental support in this.

Question 4: Is there any collaboration between the inspection unit employees and the Forestry Service staff?
Victoria: Yes. Sometimes we ask for assistance. There is a collaboration plan and when necessary, we go to the fishery inspectors who in turn are able to provide their non-staff personnel for escort through a certain route, since there are a lot of bears here.

Question 5: Do the Forestry agency inspectors participate in river protection work?
Victoria: We do not conduct fishery inspection activities directly, but there are regulations regarding Severny Preserve, where fishing is prohibited, and we do monitor for that. If poaching is detected, we report it to the fishery inspection and work closely with them.

Question 6: Are there any updates regarding the Severny Preserve case?
Victoria: Things have been stagnant there; they continue paying fines.

Question 7: Do you know anything about the plans for a hatchery construction on the Volchanka river? What is the Forestry Service personnel's reaction to the prospect of a hatchery project in the Okhinskii district (positive, negative)?
Victoria: Yes, we know about the hatchery construction plans for the Volchanka river, since the allocation of land from the state forestry reserves takes place in our head office in Yuzhno-Sakhalinsk. At this time, no lands under such designation are incorporated in this project. The documentation goes through the approval process in Yuzhno-Sakhalinsk; we are just an overseeing agency. If they do receive all the proper approvals, or vice versa – if they start work without approvals, that's where we will be monitoring the situation. This question has not been discussed at the level of the Okhinskii branch of Sakhalin Forestry Service.

Fig. 5. Victoria Usova

September 15, 2021

First session - Interview with an Amur fish expert, including Kaluga and Taimen (video conference)

Attended by:

Representatives from ForSea Solutions:
Natalia Novikova
Mark Chilcote
Randy Ericsen
Vanda Chernyshova

Representatives of Okha Ltd. and Rybnovskii Losos Ltd.:
Dmitry Kurbatov
Lyudmila Fedorova

Invited Expert:
Zolotukhin Sergei, an Amur fish expert, including Kaluga and Taimen

Goal:

Discussion of new scientific data on the state of the Kaluga and Taimen populations found in the Okha salmon fisheries area.

Dmitry: Yesterday (09/14) we caught 200 tons of Chum Salmon!

Question 1: We have scientific data on the status of the Kaluga population in the fishing area of our companies from 2011. Has any new research been carried out?
Sergei: There is no new data on sturgeon species yet. I received data from the Amur Estuary that there is no sturgeon bycatch in that area. But the following situation is unfolding: there is no Chum Salmon either. That is, Kaluga, which follows Chum Salmon, has not congregated in the area because there is no Chum Salmon – that is the problem!

Lyudmila: Can you tell us what work was carried out by KhabarovskNIRO in the summer of 2021?
Sergei: People are in the following places along the Amur: the village of Oremif , the village of Bogorodskaya (100 km upstream from the Amur Estuary) and other locations, but so far there is no data on any intensive Chum Salmon run. The reports say that there are no sturgeons in the river this year either. I have no data on KhabarovskNIRO work plan. There is no communication with the employees (everyone is now in the field), so I cannot confirm any particular type of work.

Mark: When your colleagues return from the field work and you can get information, what do you think it will be about? Are these studies on the effects of fishing on the Kaluga population or studies of the biological parameters of Kaluga (for example, size, weight, etc.). What will research focus on this year?
Sergei: Now I cannot say for sure. This year there is no bycatch, and there is a powerful flood on the Amur (highest water levels since 2013, when the water height was 8.06 m), now the water level near Khabarovsk reaches 5 m. This is an unusually big flood. I do not have any connection with the employees who work with sturgeon species.

Natalia: Are these studies performed annually or is it the first time since 2011?
Sergei: They are performed in different ways. Research is carried out every 3 years – these are studies of juvenile tracking, bycatch, etc. They are not published and not included in reports, but remain with specialists. I am hardly able to get even small pieces of information from my colleagues.

Natalia: That is, in 2011, a serious research was completed and published, and then there were small individual studies, "field notes".
Lyudmila: As I understood from the meeting with D. Kotsyuk in early June, this kind of research is carried out once every 5 years. The last one was carried out in 2016, but its scope was small due to weak funding. In 2021, the results of that 2016 work should be published. A large-scale study was planned for 2021, and moreover, employees of the Okha company (Evgeny Medvid and Valery Malykh) confirmed that they know about a KhabarovskNIRO vessel in the Amur Estuary, which was performing some work this July.
Natalia: We hope to get access to the latest information, at least for 2016.
Sergei: Today I called Olga Vershinina (near the village of Oremif): according to her, the last influx of Chum Salmon into the Amur was on September 3. In the last 10 days there was no Chum Salmon, although the peak of its run should be going on right now.

Question 2: What is the state of the whole population and its grouping that rears in the fishing area of Okha Ltd. and Rybnovskii Losos Ltd.?
Sergei: I think this year there is a powerful outflow of fresh waters from the Amur River, so Kaluga may stay in the Sakhalin Bay, where there are brackish and fresh waters. There is no sturgeon bycatch – this phenomenon can be explained by desalination. With the increase in freshwater volumes, the number of Kaluga declined. It goes towards Sakhalin Bay, where the water is saltier. For this reason, I think, Kaluga was not observed in the northwest, where the camps of Okha Ltd. are located. I'm not an expert, but that's the only logical reason.
Mark: It is a very interesting point. We have a difficulty – we need not only to assess the interaction with the fishery, but also to look at the effect of desalination.

Question 4: Are there any changes in the legislation regarding species listed in the Red Data Books of various levels (Red Data Book of the Russian Federation, Red Data Book of the Sakhalin Region and Red Data Book of the Khabarovsk Region)?
Sergei: There are no changes in the Khabarovsk Region. However, changes are expected to be made in the Red Data Book of the Russian Federation, but so far there is no precise information on this topic.
Lyudmila: There are no changes in the Sakhalin Region, I checked it.

Mark: Will the changes in the Red Data Book of the Russian Federation affect regional books?
Sergei: I think that no radical changes are expected to take place. According to the rules, regional Red Data Books should refer to the federal ones. Some positions were discussed with Aleksander Antonov.

Mark: Does the Chum Salmon have any opportunity to get the Red Book status?
Sergei: No, Chum Salmon has no chance. In conclusion: if there is any up-to-date information, I will share it with you.

Second session - Interview with the head of security unit at Okha, Ltd. (video conference)

Attended by:

Representatives from ForSea Solutions:
Natalia Novikova
Mark Chilcote
Randy Ericsen
Vanda Chernyshova

Representatives of Okha Ltd. and Rybnovskii Losos Ltd.:
Dmitry Kurbatov
Andrey Androsov
Lyudmila Fedorova

Goal:

Discussion of river protection activities in 2021, interaction with government agencies, etc., everything related to companies' anti-poaching activities

Question 1: What are the security costs in 2021?
Andrey: As of today (09/15/21), 12 to 15 million rubles have been allocated; all the necessary supplies have been provided: cars, boats, motors.

Question 2: What is the number of employees involved in river protection?
Andrey: 33 people.

Question 3: What is the number of freelance fisheries inspectors?
Andrey: 4 contractors from SKTU, as well as employees of the Ministry of Internal Affairs' Okha department.

Question 4: Please list the protected rivers.
Andrey: 12 most protected rivers: Bolshaya, Volchanka, Glukharka, Kobzak, Nelma, Kadylany, Bulkunar, Gilyako-Abunan, Slavyanka, Batareyka, Pilvo and Chingai. Most of the fish enter these mentioned rivers and most of the arrests and crime prevention activities took place there (removal of nets, removal of boats). This list covers the entire range of our fishery.

Question 5: What is the number of guard posts and the rivers they are located on?
Andrey: The stationary posts operate on the Bolshaya River (6 people, there is a car, a boat, the inspectors control access to the territory by land and water), Zubataya, Chingai, Karibul and Pilvo, Severny Nature Reserve (Shmidt Peninsula) and Rybnovsk. The post on the Pilvo River was already removed (since Pink Salmon finished escaping and everything is fine – there was no evidence of poaching this year). The rest of the posts are operating until the end – October, November.
Lyudmila: Pilvo River is not "abandoned", it is now guarded by the state inspectors of the SKTU fishery protection department (they confirmed it).

Question 6: What is the number of reports made to the law enforcement authorities?
Andrey: 8 criminal cases/crimes for 7 people.

Question 7: What is the number of seized nets, watercraft, fish (separately by species – Pink Salmon, Chum Salmon, Kaluga, Taimen), caviar (separately by species – salmon roe, brined roe)?
Andrey: 8 nets were removed, 7 units of watercraft, Chum Salmon – 20 kg, Pink Salmon – 189 kg, brined salmon roe 60.8 kg (there were no raw salmon eggs). The total damage amounted to 3.223 million roubles.

Question 8: We need photo/video materials confirming the work of the inspection unit.
Lyudmila: Evidence has already been provided in the volume of 11 Gb *(Lyudmila promised to share)*
Andrey: There is a report for each river (totally 12 rivers).

Question 9: Please provide a description of Taimen and Kaluga entering the poachers' nets (dates, number of fish, fishing gear, etc.) – if there were any such cases.
Andrey: The border guards control this fishery (GMI and FSB), however, we have not seen any Kaluga or Taimen. There is no information on intercepting these fish.

Andrey: Poaching is declining (we have been working here since 2017). Usually poaching activities are carried out by "loners" in the dark, because everything is quiet and calm during the day – everyone is afraid.

Mark: Was it easier for poachers to catch fish this year which had to accumulate due to the low water level?
Andrey: Poachers are local people who know well the nuances of the river and all the places. The rivers dried up because of the weather conditions, and the fish entered the rivers poorly, there were no big precedents or detentions. We have worked out our protection actions – we are conducting raids, looking for evidence, collecting information inside the town. The town is small, everything is in sight, the same people get caught for poaching.

Mark: So the lack of fish led to the lack of poaching.
Natalia: In spite of any conditions, you continue to guard your rivers.
Andrey: Poaching is diminishing, the fines are heavy, people are afraid, patrols are underway. We call representatives of law enforcement agencies, documents are drawn up, cases are brought up and sent to court. This year, 8 criminal cases were opened, the damage amounted to 3.223 million rubles. SKTU confiscated 60.8 kg of brined caviar, 189 kg of Pink Salmon, 20 kg of Chum Salmon.
Lyudmila: I do not agree with Mark – the poachers themselves have also changed: organized groups left the area, whereas some loners appeared. Yesterday we discussed that rivers are filled with fish, but poaching decreased.

Mark: And how do the local courts work with the detained local poachers: are there more severe punishments being used or, on the contrary, familiarities soften the punishment?
Andrey: Everyone works within the framework of the law, there is no prejudice, the trial is carried out in a standard and competent manner. When material damage is assessed (serious process, as a rule), people are afraid of it; watercrafts, cars, instruments of crime are also immediately confiscated – poachers are left with nothing. Compared to 2017, the indicators are good: everything has changed for the better.

Natalia: As far as I understand, there are no such egregious cases of poaching this year, as we saw in the videos sent by Artyom last year.
Andrey: The border guards also work well, they move all around the coast. But we do not interact with them (they have a secret service unit), we cooperate with the Ministry of Internal

Affairs and the SKTU. We do not work in the sea, only in rivers. We tried, but it turned out that we are prohibited from carrying out security activities at sea.
Lyudmila: It turns out that Kaluga habitat areas are not within their competence. There was no Taimen in the rivers, and they do not have information about Kaluga, because its habitats are under the jurisdiction of certain authorities, which do not provide access to information, so information is unavailable.

September 16, 2021

First session - Interview with fish biologists of FSBI Sakhrybvod in Okha (video conference)

Attended by:

Representatives from ForSea Solutions:
Natalia Novikova
Mark Chilcote
Randy Ericsen
Vanda Chernyshova

Representatives of Sakhrybvod:
Oleg Grizhebovsky

Representatives of scientific institutions:
Tatiana Tochilina, VNIRO employee (does not officially represent the interests of VNIRO in this FIP)

Representatives of Okha Ltd. and Rybnovskii Losos Ltd.:
Lyudmila Fedorova

Question 1: How was monitoring of spawner escapement carried out?
Oleg: We use a unified methodology on selection of monitoring sites: we usually conduct monitoring in the northwest, and we started monitoring in the Northeast last year and continued in 2021 with the help of fishermen. As a budgetary organization, I think we are doing our job actively, exceeding the plan by 50%. By the beginning of September, 22 survey reports were to be produced according to our plan, instead we completed 38 reports, covering about 10 main spawning rivers in the northwest and northeast: Pilvo (Pink Salmon, 3 reports), Bolshiye and Malyye Longi (generally they are not in the monitoring plans, but due to the dry season we had to get there too), the rivers of Tomi, Kadylany, Romanovka, and Langry.

Mark: As a rule, what is the principle used for compiling the list of rivers that are monitored on a long-term basis? And what mechanism was used to add new rivers to the monitoring list?
Oleg: The index rivers and the scope of work remained the same. And as far as the east, the new rivers were added for fishermen's sake, but I do not think we will continue this work next year. Both we and the Anadromous Fish Commission pay more attention to the escapement and the information we get from the Smirnykhovsky area from the Sakhrybvod, because that's where a larger fishing pressure and bigger harvest volumes come from. We make a greater emphasis on the northwest, where we have 5 people on staff, each trip usually takes a full day. We monitor Pink Salmon from the beginning of the run season (end of June) until mid-September. Then, during the same period, we start observations of the Chum Salmon returns, and then we examine spawning grounds up until October 31 and even to the beginning of November, if the conditions allow. Count as much as you want!

Mark: How do you do monitoring (visual estimate, sampling or something else)?
Oleg: Usually these are on foot trips, especially on those rivers where we have been conducting long-term observations (visual method). But to assess the intensity of the fish movement from the sea to the rivers and vice versa, we conduct control fishing (set nets for a certain time period, an hour or two). We block about ⅓ of the river width, because it is forbidden by law to block the entire river channel, then we multiply our number by 3 and get an approximate intensity (used

for statistical assessments). We get special fishing permits – we catch about 300 fish of both species, usually at the beginning and in the middle of the run.

Randy: Since you are collecting biological statistics, could you please provide any comparative data on the size range and other types of data for Pink and Chum Salmons for the last and this year?
Oleg: Yes, but the work has not been completed yet. Preliminarily, I can note that Pink Salmon in the west is smaller (both in weight and in size). As for Chum Salmon (now only for the beginning of the run), we already see larger individuals than last year.

Randy: Is the Chum Salmon seen last year historically considered normal, large or small?
Oleg: Historically, Chum Salmon has been showing a tendency of diminishing its size, we have seen this in the last 8 years.

Mark: Regarding Chum Salmon, do you think you are seeing fewer adults, or are the fish really getting smaller?
Oleg: Rather, there is a general tendency towards smaller size, we find this in older age groups. Regarding how old the fish is, I can say that I have collected statistics for 25 years: for example, in 1996-97 we registered 6+ year old Chum Salmon, but we have not seen any 6-year-olds since then (the maximum age is 5+ and they are single fish, comprising less than 1%), and in recent years there have been no 5-year-olds.

Question 2: Have any signs of degradation of Pink and Chum Salmon spawning grounds been observed in 2021, etc.?
Oleg: In an overall sense, I would not talk about degradation. The only thing is that this year we had an abnormal year, Pink Salmon spawning grounds experienced an especially big impact. Up to 50% of Pink Salmon spawning grounds became shallow and dried up, there is not enough water. As of today (09/16/21), the situation has not changed, despite the latest rainfall. There was no characteristic light steady rain, which then feeds the underground rivers. Only short heavy rainfalls occurred, which raised the water level of mountain rivers for an hour or two, which then decreased again. There was heavy algae growth and bloom in the West, which is not usually seen on this scale. During the last expedition, we even noted the appearance of a pungent smell of hydrogen sulfide. So far, it is not a disaster, but it is not a good symptom either. In general, there is no degradation of spawning grounds, except for this drought. Yes, some spawning grounds may be washed out in mountain rivers, or a fallen tree may disturb them, but this is within the limits of natural processes.

Mark: Have you seen this kind of abnormal summer before? Does something like this happen at some regular intervals, like every 20 years?
Oleg: Yes, it happens about every 20 years. As a native of Okha, I can say with confidence that I have observed such cases. For example, in 1998 (though I was young and not too well engaged in these issues) and in 1989, but the rainfall back then was still higher. I face such a drought for the first time.

Randy: This year there were very low water levels in the rivers and the fish could not come to spawn and reach the spawning grounds. So how did you calculate the target escapement to the spawning grounds this year? Did you take this fact into account or did you calculate it by the standard formula?
Oleg: No, we did not reduce the target escapement and did not take into account the drought. We used the standard formula and did not change it.

Mark: If you used the standard formula, then explain how you used it, since the area of spawning grounds has decreased? What area did you take?

Oleg: Yes, we understand that the figure doesn't look good. We provide the calculations to our officials, who are not very knowledgeable in these matters, but they need to be shown the figure, which we did.
Lyudmila: There is a certain trick here meaning that the situation with reproduction will be better if such an inflated number is provided. We understand that the more fish enter the rivers, the better it is. First of all, it is better to let the fish enter the rivers, and only then to open the fishery. This allowed more spawners to enter the rivers.

Question 3: What is the escapement to the spawning grounds in 2021?
Oleg: I believe that the spawning grounds will be filled at the optimum level. Let us see what happens next. If such a drought continues, then the risk of rivers freezing all the way through will be added to the drought. For Pink Salmon, the escapement itself is not bad, spawning went well. Despite the drought, the temperatures observed in the rivers were optimal, so the process went generally well. I also should note that an active stand against poaching was carried out, so no large cases (such high-profile violations as those in the Makarovsky District) were identified.

Mark and Randy expressed the hope that there will be no problems with survival, and future generations will return. They expressed their appreciation to Oleg and Tatiana for their work.

Second session - Closing the audit and discussing the preliminary results (video conference)

Attended by:

Representatives from ForSea Solutions:
Natalia Novikova
Mark Chilcote
Randy Ericsen
Vanda Chernyshova

Representatives of Okha Ltd. and Rybnovskii Losos Ltd.:
Dmitry Kurbatov
Oksana Borisenko
Lyudmila Fedorova

Natalia summarized the results of the meetings with the experts: 1) The spawning grounds of Pink Salmon were filled well, the escapement targets were fulfilled; 2) River monitoring continues this year and northeast was included in this work; 3) Anti-poaching activities of the company show good results.

Dmitry: Yesterday (09/15/21) we caught a little over 60 tons.

Natalia: Construction of a new salmon hatchery on the Volchanka River is a cause for concern. We hope that their activities will not expand, and we will monitor the situation together with Lyudmila. We are also waiting for a report from S.F. Zolotukhin on populations of Kaluga and Taimen.
Dmitry: Actually, there is no plant (it is in its infancy). These are attempts that have no future prospects, so at the moment this does not cause serious concerns.

Natalia: A report on FIP activities will be prepared and published in December of 2021.

Continuation of the discussion of the issues of the first meeting:

Question 4: Has the in-season fishery management by governmental agencies worked well considering the current situation in 2021, or are there things that could have been done better?
Dmitry: It is rather difficult to comment on the actions of state authorities from the perspective of a commercial company. The actions of the Anadromous Fish Commission did not always appear to be consistent with the Sakhalin Region Fishery Strategy, which caused a lot of controversy. We hope that we were heard and that the fishery subsequently proceeded in accordance with our comments. In particular, the strategy determined the opening and closing dates of the fishery, and then they were shortened and changed by separate orders, and additional passing days were introduced. So, everything was ultimately adjusted, taking into account views of the fishing industry and regulations that were originally established in the Strategy.

Mark: In your opinion, were there not enough or too many passing days? Or was the passing day schedule unsatisfactory?
Dmitry: In our opinion, on the west coast, the schedule of passing days was convenient: 2 days a week, which were not put in a row, so it was convenient for us. In the east, in those areas where we fish, passing days are unnecessary, since there are no major spawning rivers. Pink Salmon is a stock migrating through that area. Moreover, in general, the places with trap nets set on the eastern coast are very far from spawning rivers, and in principle they cannot have a significant effect. We say every year that our northeast needs to be regulated separately in terms of passing days.
Lyudmila: A short comment on the situation in the northeast: this year there have been several cases of emergency orders to establish on the day passing days, i.e. there was no stable fishing schedule and it was very difficult to regulate their work within the fishery. As a result, the opinions of fishermen were heard, and passing days were organized differently.

Mark: Do you think the fishermen's opinions will be taken into account by the authorities in the future?
Dmitry: Unfortunately, the situation is complicated by the fact that there are a lot of rivers on Sakhalin, and it is not always possible to carry out escapement monitoring on all rivers. Also, unfortunately, the number of employees of state fisheries authorities (SakhNIRO, Sakhrybvod, etc.) is decreasing, there is a shortage of qualified personnel. On the whole, all of this leads to the fact that the Anadromous Fish Commission does not always have objective data on the state of the rivers for adequate regulation of fishing. If the fishing community tries to objectively defend their position, I think they will listen to us. Fishing companies are currently the only communities with information on the actual state of the fishery.

Question 5: Do you think that if the next year returns become normal, you will continue the certification process? If the next salmon return turns out to be another bad year, will you postpone starting the MSC assessment again or abandon the process altogether?
Dmitry: The main factor in the resumption of our work on obtaining the MSC certificate is, of course, the catch volume. At the moment, our catch is minimal, which does not allow us to continue working on certification for economic reasons. If we reach a consistently high catch rate, we will be able to allocate funds for MSC certification. We cannot reduce the costs of protecting rivers, wages of fishermen and fish processors, etc., and they are always significant. Since such a situation has developed, we will wait for the catches and resume this work.
Natalia agreed: We understand that the investment must be justified, despite the fact that in recent years the cost of MSC certification has significantly decreased.

Oksana: How far do you think this situation will "throw" us back? We are sorry that the process has been dragging for so long. Where do we start if we decide to get back into the process, and how much time and resources can it take?

Randy: We suppose it will not go back to the beginning. All the actions that we have been working on are either already completed, in progress or close to completion. We have all the prerequisites for certification. You can take a break without leaving FIP, which will allow you to stay in the program and preserve all the achievements during this time. The next December update will be pretty much completed. The next June update will require minimal planning effort to continue with your actions. Thus, your FIP remains active until June, and then, by the end of the next season of 2022, you will be able to review the situation and decide on the continuation of the certification process, the closure of the FIP or its continuation or other decisions.

Oksana: We do not quite understand our contractual interactions with MRAG.
Natalia: You do not have contractual obligations with MRAG, and your contractual relationship with FSS is valid until January 2022. I think that by January it is possible to make plans for June, without waiting for April, May – although we can discuss some of this already. In addition, you can try to look for some grants (from FisheryProgress.org, some private grants) and other possible funding options. The customers with whom we keep in touch sometimes express an interest in supporting their suppliers, but of course, we are talking about small amounts.

Oksana expressed her approval of the proposed work path, Natalia said that for us this is another opportunity to find a way out of any situation of any complexity.