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Report on IUCN Western Gray Whale Advisory Panel (WGWAP) work from June 2019 to May 2020

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INTERNATIONAL
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The Western Gray Whale Advisory Panel (WGWAP)[1], which is convened by the International Union for Conservation of Nature (IUCN), has continued to provide advice to various parties, but particularly to Sakhalin Energy Investment Company (SEIC), concerning the gray whales that feed each summer off Sakhalin Island and southern Kamchatka, Russia. Despite a continued reduction in budgetary support and the disruption caused by the coronavirus pandemic, the Panel maintained its activities over the past year and is planning to continue through the current calendar year and possibly into 2021. The Panel's terms of reference and composition are unchanged since last year's progress report (Reeves et al. 2020).

Three formal meetings took place between June 2019 and May 2020, as follows:

(1) 17th meeting of the Noise Task Force (NTF-17), 4-5 November 2019 in Moscow,
(2) 20th meeting of the Panel (WGWAP-20), 6-8 November 2019 in Moscow,
(3) 18th meeting of the Noise Task Force (NTF-18), 7-9 April 2019 (remote by video).

Reports of all Panel and Task Force meetings are available on the WGWAP website. In addition, all recommendations made by WGWAP and its predecessor IUCN western gray whale panels can be viewed on a searchable database[2]. This database is updated regularly and includes for each recommendation the identity of the party or parties responsible for implementation, target date for implementation, response provided by responsible party or parties, and status (e.g. Closed – implemented/resolved satisfactorily, Open – in progress, Open – no action yet taken).

Seismic-related issues

One objective of the NTF-17 and NTF-18 meetings was to review the preliminary results of 'source reduction tests' conducted immediately following SEIC's 2018 large-scale seismic survey, with the aim of investigating whether the desired geophysical data could be acquired with adequate resolution using an airgun array with a lower source volume (i.e. amplitude). Such capability could significantly mitigate the potential noise impacts of future seismic surveys on whales. The Company's final evaluation of the tests will not be available until later in 2020. Whilst welcoming this work, which was done in response to a previous recommendation, it was suggested that given the large amount of 'legacy' data available from previous seismic surveys of the Piltun and Astokh fields, it should be possible to simulate source strength reductions analytically to determine at what source level image interpretation starts to degrade.

At its two recent meetings, the NTF also began to consider other aspects of mitigation in anticipation of SEIC's next seismic survey, which is unlikely to take place before 2022. One issue is whether it is time to recalculate the seaward border of the near-shore feeding area (previously called the Perimeter Monitoring Line and now called the Feeding Area Boundary, FAB). The existing FAB was defined on the basis of data collected in 2005-2007. Since then, whales in near-shore waters have been occurring farther south, and the population as a whole appears to be using the offshore (Morskoy) feeding area more intensively. In response to a Panel recommendation from 2018, the NTF began at its two most recent meetings to review the relevant data and consider if, and how, to revise the boundary. This is one of several steps towards helping SEIC (and perhaps other companies) to prepare its monitoring and mitigation plan for the next seismic survey.

The NTF also began to revisit an underlying principle of previous seismic survey mitigation plans: that surveys should begin as early in the season as possible and be completed before the number of whales present in the nearshore feeding area reaches a peak (usually around early August). A model of female bioenergetics developed and applied to gray whales by Villegas-Amtmann *et al.* (2017) led those authors to speculate that disturbance later in the feeding season could be less harmful to mother-calf pairs than disturbance near, or soon after, their arrival in the feeding area. This

[1] http://www.iucn.org/western-gray-whale-advisory-panel
[2] http://www.iucn.org/western-gray-whale-advisorypanel/recommendations

would mean it is preferable to postpone disturbance (i.e. seismic survey noise) until closer to the end of lactation when the calves are weaned (mid to late August or early September) and the energy demands on the females are reduced. In the eastern North Pacific, the conventional view has been that pregnant females represent the most vulnerable component of the population and therefore mitigation of disturbance should focus on maximizing their foraging time. It was agreed that the available data should be mined for evidence on the timing of arrival (and departure if possible) of the different sex and age (or at least stage) classes, to be followed by further discussion of how to tailor mitigation to protect the most vulnerable population component(s).

Acoustic monitoring

SEIC and Exxon Neftegas Limited (ENL) terminated their joint annual acoustic monitoring after the 2016 season, arguing that such monitoring is needed only in years when particular activities such as seismic surveys or construction are to take place. However, at the Panel's urging, SEIC agreed in early 2020 to initiate its own, albeit limited, acoustic monitoring programme to ensure that noise levels generated by its operations meet the standards for noise management set out in the Company's Marine Mammal Protection Plan. The Panel welcomed this decision but recognized that as of May 2020, it was uncertain whether any field programme at Sakhalin would be feasible given the measures required to protect employ health during the coronavirus pandemic.

Feeding conditions

For the last several years, the Panel has expressed concern about an apparently steep recent decline in amphipod biomass in the Piltun (nearshore) gray whale feeding area. Based on the results of a benthic sampling programme conducted jointly by SEIC and ENL since 2002, the decline appears to have begun in 2012-13 and was ongoing in 2016, after which the companies eliminated this element of their gray whale monitoring programme. In July 2019, the Panel posted an Open Statement of Concern[3], noting that along with the decline in nearshore amphipod biomass, two other changes had occurred that give rise to concern – (i) a continued decrease in the number of whales using the Piltun feeding area and (ii) a southward shift in whale distribution. Although it was encouraging that 20 calves were observed at Piltun by the International Fund for Animal Welfare (IFAW)-funded Russia Gray Whale Project (RGWP), it was otherwise clear from the 2019 season's results that the changes in habitat use and distribution were continuing. Therefore, the possibility remains that nearshore waters immediately outside the mouth of Piltun Lagoon are being abandoned incrementally by gray whales and this critical feeding area, the only location where mothers with dependent calves are known to forage regularly, could soon no longer be viable. It is important that monitoring of the biomass is resumed along with feeding ecology studies to understand the cause and potential effects of the decline on gray whales and their habitat.

Population studies

The latest population assessment (presented by Cooke at the WGWAP-20 meeting) using long-term photo-identification data indicated that the number of gray whales recorded off Sakhalin has been increasing over the last 25 years at a rate of about 5% p.a., reaching 240 (SE 8) animals (excluding calves) in 2018, although not all of these whales visit Sakhalin every year. This result suggests that the cumulative impact of factors negatively affecting gray whales off Sakhalin has, to date, been within the capacity of the population to increase. The decline in food availability in the Piltun area referred to above, which may have led to a lower residence time of mothers and the earlier weaning of calves, has not yet had a detectable effect on population demography. The Panel once again commended the ongoing work of the RGWP and recommended that those studies, on which the annual population assessments have relied heavily, continue. Also, the Panel again acknowledged the vital support provided to the RGWP by IFAW and encouraged that this continue if at all possible.

The SEIC-ENL joint programme has also undertaken long-term photo-identification studies. The Panel (and the IWC Scientific Committee) has repeatedly emphasized the great value of ensuring that a 'joint catalogue' of western gray whales (together with associated data) is finally established and functioning as intended under the auspices of the International Whaling Commission. Once realized, this photographic (and hopefully genetic) database will be a valuable and enduring legacy of the WGWAP process. A joint western gray whale catalogue and database has long been expected by the IUCN and IWC to be available 'soon', given that a draft potential agreement has been shared and all parties involved have agreed in principle to make their photographs, biopsies and data available under a data-sharing agreement based upon the safeguards incorporated in the IWC's data-sharing agreement and guidelines for catalogues. However, despite the agreement in principle, this initiative has made little or no progress over the last few years and remains in the hands of the two companies. The importance of the 'joint catalogue' remains clear and is re-emphasised.

[3] https://www.iucn.org/sites/dev/files/final_statement_from_wgwap_on_benthos_11july2019_en-ru.pdf

Cumulative effects

At the WGWAP-20 meeting, consideration was given to ways of implementing a cumulative effects framework or integrated management approach for western gray whales, beginning with a focus on threat factors that the whales encounter on the Sakhalin Shelf. This subject becomes ever more salient as companies in addition to SEIC and ENL expand their exploration and development activities in the region (Figure 1). The most recent arrival is GazpromNeft-Sakhalin (GPNS), LLC, a Russia-only company (unlike SEIC and ENL, both of which have international partners) with very large oil and gas concessions on and near the whales' Morskoy feeding area. Representatives of GPNS participated as observers at the WGWAP-20 meeting and as invited experts at the NTF-18 meeting.

Future of the Panel

The agreement between SEIC and its international lenders, which formed the basis for establishment of an independent international oversight panel in 2004, expires at the end of 2021, at which time IUCN will no longer be in a position to support the work of the Panel. During its 15-year tenure, WGWAP and its predecessor IUCN panels have produced a large body of reports, statements and recommendations, all of which are openly accessible on the WGWAP website. Those materials have been supplemented by peer-reviewed documents intended to reflect lessons learned and thereby influence policy and practice more broadly – e.g. Nowacek et al. (2013), Reeves and Donovan (2015-16), Nowacek and Southall (2016), Lowry *et al.* (2018). A number of additional documents of this kind are in preparation and expected to be completed (and hopefully published) before the Panel is dismantled. These include papers on data collection and analysis methods for evaluating the impacts of seismic surveys; defining, assessing and monitoring cumulative effects, with Sakhalin gray whales as a case study; population assessment of western gray whales; and co-occurrence of gray whales and vessels with a qualitative assessment of ship-strike risk.

Recent change in status of western gray whales in Russian Federation

In April 2020, a long-awaited updated "List of the animal species included in the Red Data Book of the Russian Federation" was formally accepted by the State as a new Red Data Book List (Order by the Ministry of Natural Resources and Ecology of Russian Federation #162 on 24.03.2020, ratified by the Ministry of Justice on 02.04.2020, effective from 12.04.2020). In addition to the traditional 'rarity status' designation, the new list includes, for each taxon, two further status designations: 1) threatened status (risk of extinction in the natural environment, analogous to the IUCN Red List categories, but applied to the territory of the Russian Federation) and 2) conservation priority status, which indicates the urgency of current or new conservation actions. The new list includes the 'Okhotsk Sea population of the gray whale' with rarity status category 1 ('in danger of extinction'). The population is assigned a threatened status of Critically Endangered and a conservation status of 'Priority 1', which calls for immediate implementation of comprehensive conservation measures including the development and implementation of a species conservation strategy, species recovery program and an action plan. On the previous list, the 'Okhotsk-Korean gray whale population' had been included with rarity status category 1.

A special list of rare and endangered wildlife taxa that require priority measures for restoration and reintroduction was created by an Executive Order dated 29.08.2019 of the Ministry of Natural Resources and Ecology, in order to implement the federal project "Conservation of biological diversity and the development of ecological tourism" of the national project 'Ecology'. On 23 April 2020 the Marine Mammal Council (Russia), upon request of the Ministry of Natural Resources and Ecology, and with support from WGWAP, submitted a proposal to include western gray whales on this list.

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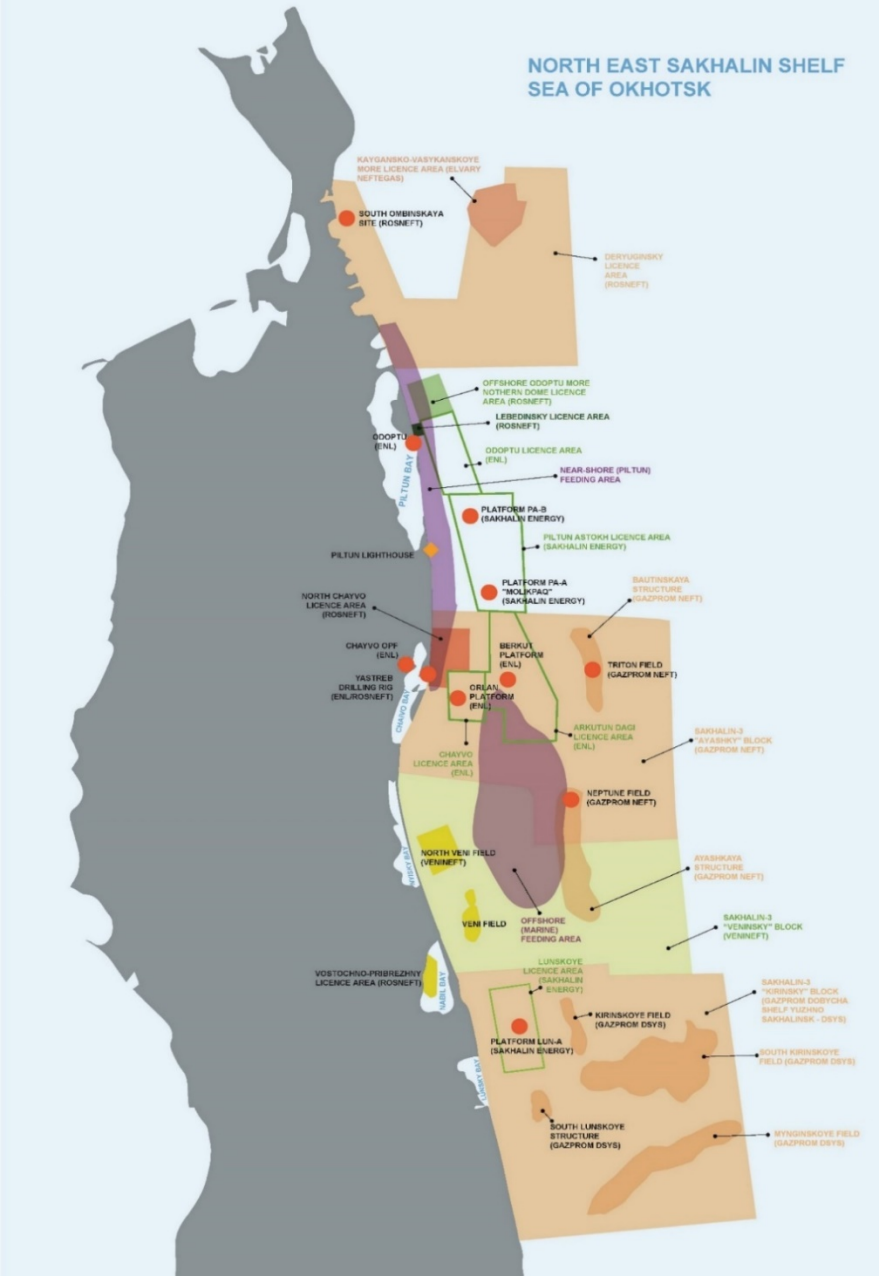

Note: This schematic map is based on publicly available information (including from company websites, Joint Programme reports and other sources) and it is included here only for illustrative purposes. The designation and depiction of areas on this map should not be interpreted as any opinion on the part of IUCN or WGWAP concerning the legal status, authorities or operators, or delimitation of boundaries. Coordinates, boundaries etc. on the map are not exact and therefore should not be used as such.

Figure 1. Schematic map showing the approximate locations and boundaries of oil and gas development areas in or near the gray whale feeding areas off north-eastern Sakhalin and elsewhere on the eastern Sakhalin shelf. (Provided courtesy of Anete Berzina and Ella Diarra of IUCN.)