

**WESTERN GRAY WHALE ADVISORY PANEL**  
**5<sup>th</sup> Meeting**

**WGWAP-5**  
**3-6 December 2008**  
**Lausanne, Switzerland**

**REPORT OF THE WESTERN GRAY WHALE ADVISORY PANEL**  
**AT ITS FIFTH MEETING**

**CONVENED BY THE INTERNATIONAL UNION FOR CONSERVATION OF NATURE**



12.2	UPDATE ON IMPLEMENTATION OF RECOMMENDATIONS.....	22
12.3	UPDATE ON COMPLETION OF INTERSESSIONAL TASKS.....	23
12.3.1	REAL-TIME CALIBRATION .....	23
12.3.2	RESULTS OF THE JASCO MODELLING WORK .....	24
12.3.3	RESULTS OF THE 95% KERNEL ANALYSIS .....	25
12.3.4	RESULTS OF ANALYSIS OF INCLUSION OF NON-SYSTEMATIC SIGHTINGS.....	26
12.3.5	REVISED MAPS AND PERIMETER MONITORING LINE.....	26
12.3.6	FINAL COORDINATES FOR MONITORING LINE .....	27
12.3.7	TERMS OF REFERENCE FOR SEISMIC SURVEY EXPERT GROUP.....	27
<b>13</b>	<b>OIL SPILL PREVENTION, PREPAREDNESS AND RESPONSE.....</b>	<b>27</b>
13.1	UPDATE ON IMPLEMENTATION OF RECOMMENDATIONS.....	27
13.2	UPDATE ON COMPLETION OF INTERSESSIONAL TASKS.....	27
<b>14</b>	<b>FUTURE SAKHALIN ENERGY PLANS FOR WESTERN GRAY WHALE MONITORING AND RESEARCH .....</b>	<b>28</b>
14.1	PRESENTATION BY THE PANEL ON WHAT IS NEEDED FOR AN ADEQUATE SAKHALIN ENERGY RESEARCH AND MONITORING PLAN.....	28
14.2	UPDATE ON JIP PROPOSAL ON CONTROLLED EXPOSURE EXPERIMENTS ON GRAY WHALES.....	30
<b>15</b>	<b>NON-SAKHALIN ENERGY GROUPS MONITORING.....</b>	<b>30</b>
15.1	RUSSIA-US TEAM.....	31
15.2	WWF, IFAW.....	31
15.3	UPDATE ON PROPOSED PILTUN PROTECTED AREA.....	31
<b>16</b>	<b>ACTIVITY BY OTHER COMPANIES .....</b>	<b>31</b>
<b>17</b>	<b>UPDATE ON PROPOSED ACTIVITY ON THE SAKHALIN SHELF.....</b>	<b>32</b>
<b>18</b>	<b>EXPLICIT DISCUSSION OF WGWAP <i>MODUS OPERANDI</i>, POTENTIAL REVISION OF TOR, STRUCTURE AND SCHEDULE OF PANEL MEETINGS .....</b>	<b>33</b>
<b>19</b>	<b>ANY OTHER BUSINESS.....</b>	<b>36</b>
<b>20</b>	<b>REFERENCES .....</b>	<b>36</b>
	<b>SUMMARY OF RECOMMENDATIONS FROM THE 5<sup>TH</sup> MEETING OF THE WGWAP .....</b>	<b>38</b>



many instances information available to the Panel at this meeting was insufficient to support detailed discussion and deliberation. Prior to the start of the GWAP meeting, Sakhalin Energy had emphasised that it did not intend to present preliminary reports of fieldwork at autumn or early winter Panel meetings, as it had done at least occasionally in the past. Rather, the company's current position is that the Panel should not have access to results of fieldwork until the scientists involved in the research have completed their analyses. Therefore, at this meeting, Sakhalin Energy provided only verbal summaries of the nature and amount of effort in the various categories of fieldwork. The Panel **stressed** that it expected full reports including results to be made available well in advance of the next GWAP meeting.

### **1.3 Documents**

As mentioned under item 1.1, much of the information that IUCN and the Panel had expected to be available for this meeting was either not produced at all or was provided only at the last minute. Several of the documen

and as a result, the types of recommendations have varied. Some of them apply to particular activities in particular years and, once those activities (*e.g.* platform construction, pipeline placement) are completed and the year has gone by, the recommendation is either implemented or moot and thus should be closed. In order to signify the difference between outdated recommendations that were implemented to the Panel's satisfaction and those that were only partially implemented or not implemented in a satisfactory manner, the Panel has established the category 'Closed – no longer relevant but had not been implemented satisfactorily at the time it became moot'.

The list is expected to be a valuable tracking tool for all stakeholders. As such, the Panel wished to emphasize four things. First, it is the responsibility of IUCN to manage the list and ensure that all formal recommendations from the Panel as well as all formal responses by Sakhalin Energy are included in it. Second, although other parties including Sakhalin Energy and IUCN are encouraged to provide advice and suggest changes, the designation of current status for each recommendation (*i.e.* closed vs. open etc.) is for the Panel to decide and the final determination rests with the Panel chair. Third, status designations can be changed at any time, *i.e.* the list is meant to be a living document. However, changes must be made according to a set procedure that involves consultation by IUCN with the Panel chair, who will be responsible for ensuring Panel concurrence. Finally, it is the Panel's expectation that those who use the list will do so with respect for the process, bearing in mind the limitations of any such list, including the fact that at a given point in time, many of the recommendations will not fit exactly into only one status category and some status designations may not be entirely up to date. In other words, the list should not be treated as a precisely kept scorecard of performance but rather as a mechanism to ensure that nothing important 'falls through the cracks' and that progress is always being made towards full compliance with the WGWAP Terms of Reference.

### **3 POPULATION ASSESSMENT**

#### **3.1 Progress on update of population assessment**

An updated population assessment (WGWAP-5/Inf.2) had been presented to the Rangewide Workshop held in Tokyo in September 2008. The assessment, an update of those previously presented by the Independent Scientific Review Panel (Reeves *et al.* 2005) and to the WGWAP and the International Whaling Commission (IWC) Scientific Committee, used data from the Russia-US research programme, which has been conducting research off Sakhalin every year since 1997 (some additional data from the 1994 and 1995 seasons were also used).

The photo-identification and biopsy data (for sex determination) collected up to and including the 2007 season were used to fit a stage-structured population model. This model provides a profile of the population by sex, age and reproductive status. An advantage of fitting a population model is that it interpolates gaps in the data in a 'natural' way and avoids the assumption that all whales are seen in each year (which is known not to be the case, as individuals can 'reappear' in the photographic record after an absence of several years).

The estimated number of non-calves alive in 2008 was 130 (90% confidence interval 120-142). The estimated average annual mortality rate over the data period is 22% (14-31%) for 'calves' (*i.e.*



the local facilitator, Tadasu Yamada, of the National Museum of Nature and Science. All of the funding for the workshop came from Sakhalin Energy. It is anticipated that the final workshop report will be submitted to the IWC Scientific Committee in June 2009. In addition, the draft conservation plan will be developed following the guidelines given by Donovan *et al.* (2008; see also WGWAP-5/8), and discussed widely by stakeholders over the coming year and more under the auspices of the IUCN Global Marine Programme; this is complementary to the ongoing work of the Panel.

## **5 PRELIMINARY RESULTS OF 2008 WESTERN GRAY WHALE DISTRIBUTION AND BEHAVIOUR MONITORING**

### **5.1 Results from Sakhalin Energy/ENL shore and vessel survey program**

Sakhalin Energy reported that shore-based monitoring of gray whale behaviour in 2008 began on 1 August and ended on 3 October. Total effort consisted of 55 days (including both behaviour teams, spanning 29 actual calendar days) and 381 hours spent at the six shore-based stations in the northern spit region of north-eastern Sakhalin Island. The first day of data collection was 7 August at 1





completing the work (WGWAP-4, Annex 4). Progress on each of the tasks, as of WGWAP-5, was as follows:

Task (1): Update of the cross-matching of the catalogues through the 2007 season.

Each team was to send its catalogue through 2007 to Larsen at IUCN, for forwarding to the other team. The teams would then cross-match their respective catalogues to examine additions and review changes made in 2006 and 2007.

*Progress*: Catalogue update to 2007 received from Russia-US team in August 2008. Still awaiting catalogue update from IBM team.

Task (2): Design and undertake a comparison exercise on a subset of the annual sighting histories.

*Progress*: A proposal for design and procedure was circulated to the Task Force in August 2008. Based on comments received from Task Force members, a revised proposal and data request was circulated to the Task Force in October 2008. An initial sub-sample of the requested data has been received only from the Russia-US team.

Task (3): Develop protocols for ID-photos from dead animals and whale-watching vessels.

*Progress*: Weller is working on a protocol.

Task (4)

*Progress:* A request for a small sample of effort data was sent to the two teams. Based on data received from the Russia-US team, a template for data tabulation was prepared and sent to the two teams. Data have been received from the Russia-US team. When data from both teams are received, an analysis of the overlap will be performed. It is assumed that the same data

not been seen in this area with a calf previously was accompanied by a calf in 2008 and therefore was added to the total of known reproductively active females. Only three of the 26 whales identified as calves from 2004-2007 were re-identified in 2008; based on previous years' experience, 6-10 individual calf re-identifications would have been expected.

Three peer-reviewed papers containing results from previous years' research, using photo-ID data, were published recently (Bradford *et al.* 2008a, b; Weller *et al.* 2008).

The number of whales identified in 2008 was unexpectedly low. The counts from the lighthouse scans were particularly low in July but increased in August. This seemed consistent with the lower number of whales seen in August, when the Sakhalin Energy/ENL shore-based teams started their observations. As discussed under Agenda Item 5, there is concern that the patterns may be the result of anthropogenic disturbances, but definitive conclusions must await further analysis and presentation of the respective datasets.

The Panel emphasised the great importance of the Russia-US photo-ID team's work, which to date has formed the sole basis for the Panel's annual assessments of the demography and status of the western gray whale population.

#### **6.4 Review of the continuation and functioning of the Photo-ID Task Force**

Although Sakhalin Energy nominated two members to the Task Force following WGWAP-4, no responses had been received from them during the year and no input from the company or the IBM team had been received by the time of WGWAP-5. The Russia-US team responded to all requests and communications during the intersessional period (between WGWAP-4 and WGWAP-5) but indicated that it would continue to attach priority to the Task Force only if a clear sign of reciprocal interest is received from Sakhalin Energy or the IBM team. Bell explained that there were a number of reasons for the lack of responsiveness on the part of Sakhalin Energy and the IBM team, including staffing issues and extensive focus on commissioning activities.

After discussion of the situation and expressions of considerable disappointment over the lack of progress, the Panel and Sakhalin Energy **agreed** that the list of tasks agreed at WGWAP-4 (Annex 4 of WGWAP-4 report) should stand, but that a revised timetable would be drawn up. Bell committed to provide a revised timetable after consulting with Tyurneva and others, before the WGWAP-5 report is finalised.

After the meeting, and following consultation with both photo-ID teams, the Panel and Sakhalin Energy **agreed** on the revised timetable given in Annex 4. Provided that Tasks (1) and (2) are completed on time, it was **agreed** that the Task Force would try to meet for a day or more immediately prior to WGWAP-6, with at least one member of each photo-ID team present. The Panel **reiterates** the great importance it attaches to the work of this Task Force. It sees the timely co-operation of Sakhalin Energy in this work as symbolic of Sakhalin Energy's commitment or otherwise to the Panel process. Without effective participation from Sakhalin Energy, the Task Force will fail.

#### **6.5 Review of progress on comparison of Kamchatka photos to both the Russian and the Russia-US catalogues**

There was no progress on this item since WGWAP-4.

## **7 MMO PROGRAMME AND CARCASS DETECTION**

### **7.1 2008 MMO programme preliminary report**

Although no preliminary report of the 2008 MMO programme was available, Bell provided some general information. Twelve individuals were deployed in the field, and all had been involved in the programme in previous years. Most of the MMO activity was on crew change vessels, three of which were active making approximately 500 trips in 2008 (to the PA-A, PA-B and Lunskeye platforms). In addition, one vessel engaged in monitoring and sampling sediment around the offshore pipeline carried MMOs on two trips. Total MMO effort averaged approximately 460 hours per month, totalling approximately 2800 hours for the entire season. Eight gray whales were reported in six sightings on four days. Approximately 4,000 other marine mammals, more than 85% of them pinnipeds, were sighted throughout the season.

Sakhalin Energy provided document WGWAP-5/6 in response to the Panel's previous request for clear explanations for inshore movements by the crew change vessel *Miss Sybil* on 6 and 21 September, 1 and 13 October and 2, 3 and 5 November 2007 (recommendation WGWAP 4/001). The Panel was satisfied with the company's response and considers that



to the proposed MVA workshop, as these invo









In other words, 65% of the overlapping scan counts compared by Gailey differed by at least one whale; 13% of the scan counts differed by  $\geq 4$  whales. That said, the majority of the discrepancies were  $\leq 2$  whales. In the data examined for both 2006 and 2007, whale counts did not differ significantly between the teams ( $t = -1.429$ ,  $P = 0.163$ ) although the sample sizes precluded proper analytical testing. Gailey attributed the differences in counts between the two teams primarily to how a pod was defined. For example, the distribution team was more likely to ‘split’ sightings of multiple whales with minor differences in bearing, reporting them as multiple pods, whereas the behaviour team was more likely to ‘lump’ such sightings and report them as one pod with a single bearing and group size. Gailey offered to examine the matter more closely but indicated that he would not expect there to be major differences in total counts between the two teams. It remained uncertain how differences between the two datasets would be accounted for in combined analyses (*e.g.* density estimation).

Regarding the implications of Gailey’s findings for mitigation planning for the 2009 seismic survey, Muir noted that the bias in distance estimates increased with distance. She acknowledged that the analyses in WGWAP-5/18 were a valuable contribution towards standardizing behaviour and distribution scan survey protocols and subsequent calculation of whale sighting locations, and would enhance her efforts using the combined datasets to plot whale density and distribution. Bell pointed out that although the insights provided by WGWAP-5/18 were valuable and would allow some improvements to be made in the analyses, an experimental approach specifically designed to examine differences between the two teams would have been preferable.

The Panel welcomed this analysis and thanked Gailey for his work. It emphasised that the analyses in WGWAP-5/18 had demonstrated the importance of standardising data-collection protocols between the two teams, especially with regard to environmental and sightings data. Such standardisation is essential if integrated analyses combining datasets from both teams are to be conducted now and in the future. Despite their preliminary nature, the results highlighted a number of concerns: distance was underestimated by both of the shore-based teams and there was substantial inconsistency in the number of whales counted during overlapping scans. Both issues are directly related to analyses that attempt to combine the datasets (*e.g.* MVA, density estimation) and there is particular urgency to address them in the context of design and mitigation planning for the 2009 seismic survey (see Agenda Item 12).

#### **9.4 Progress on development and testing of digital real-time monitoring buoys**

In a verbal summary, Racca reported that Sakhalin Energy was emphasising quality control and moving rapidly towards digital radio telemetry to replace its current use of analogue transmitters. Both commercial radio modems and the latest digital technology coordinated by POI are being investigated. According to Racca, the POI system can achieve a 25 km

For legal and administrative reasons, the technology used in Sakhalin needs to be developed locally (*i.e.* within Russia). Therefore, representatives of JASCO's System Division are visiting the POI testing base to ensure that the required levels of quality control can be integrated with the POI system. They are working on an accelerated schedule for full deployment meant to guarantee a continuous stream of quality data in the 2009 field season. Vedenev is familiar with the POI system and remains sceptical that the 25 km range can be achieved. This range is a critical issue as the digital radio buoys will be the primary

above. The new timeline for EMTF activity related to the site visit will include preliminary reports at WGWAP-7, with the final reports of the EMTF and the OSR evaluation to be submitted electronically to the Panel during the intersessional period between WGWAP-7 and WGWAP-8. This timeline reflects the assumption that WGWAP meetings will continue to be semi-annual, occurring in spring and autumn. The possibility of a workshop of the Task Force some time in 2009 was not ruled out, but planning for such a workshop, should it be deemed necessary, was judged premature.

There is an immediate need to identify and obtain background technical documents on environmental attributes of the Sakhalin II Project Area, as specified in the EMTF draft Terms of Reference. Although the relevant Sakhalin Energy documents are in hand, no effort has yet been made to obtain documents from other sources, including documents produced prior to the initiation of oil and gas activities on the north-eastern Sakhalin shelf and materials published in languages other than English or Russian. It was suggested that the Task Force might wish to co-opt a specialist in geospatial ecology, statistical analyses and Geographic Information Systems to participate in its work. The Panel and Sakhalin Energy **agreed** in principle and VanBlaricom was asked to explore the options in consultation with Larsen and Bell.

## **11 SATELLITE TAGGING**

### **11.1 Progress on recommendation on western gray whale satellite tagging**

As part of the Panel's ongoing dialogue regarding satellite tagging of western gray whales, Donovan presented an overview of this topic as discussed at the rangewide workshop in Tokyo in September 2008. Participants in the workshop agreed that a good spatial and temporal understanding of the migratory routes, breeding areas and movements of western gray whales is essential if effective conservation measures are to be developed and implemented to protect the whales from anthropogenic threats throughout their range, particularly entanglement and entrapment in fishing gear, vessel traffic and industrial activities. At present, there is a severe shortage of such information. The workshop therefore stressed that the most efficient (and probably only) way to obtain the necessary data is through a carefully planned satellite-tagging programme. A successful tagging programme would provide insights on threats (*e.g.* what they are, their spatio-temporal character and severity), reveal new information about the biology and behaviour of the animals to allow the development of effective mitigation measures, and better inform research and conservation planning.

The Tokyo workshop endorsed the previous recommendations by the IWC Scientific Committee and the various IUCN panels that a satellite-tagging programme, designed to ensure that necessary safeguards are in place to minimise risks to the health of individual animals and to the population's recovery, be undertaken as soon as possible. It stressed that initiation of the programme should not



to the possibility that future surveys could be conducted at lower energies, the Task Force had recommended that for the 2009 survey Sakhalin Energy make every effort to secure a vessel with the capability of towing as many streamers as possible in addition to the six used previously. Sakhalin Energy reported that the vessel will probably be the 'Pacific Explorer', and it will operate with only six streamers. This revelation was disappointing as it seems to indicate a lack of effort on the part of Sakhalin Energy to pursue the idea of lowering source levels, and thus reducing risks to whales, in future seismic surveys. Sakhalin Energy reported that it had tendered for vessels with more streamers but concluded that the received bids were commercially unacceptable. It also reported that more streamers would cause artefacts in the seismic image due to changed offset characteristics in the seismic data, and that those artefacts in the seismic amplitudes and times could be in the same order as the 4D signal. No further explanatory information was provided on this matter or on the nature and extent of the company's efforts to secure a vessel with additional streamers.

The Task Force had also made a more general recommendation that Sakhalin Energy fully explore further measures (such as the use of coherent sound coupled with improved analytical techniques) that would allow future surveys to be conducted at lower sound energy levels. Although Sakhalin Energy reported that it had investigated with geophysical contractors some such measures (*e.g.* use of directional sources), it had concluded that these techniques could not be applied in the planned survey. No significant progress on this recommendation was reported at the meeting.

The Task Force had emphasised the lack of information on the potential impact of seismic surveying on gray whales, and stressed the importance of ensuring that we are not still in this situation the next time a survey is planned in or near western gray whale habitat. It therefore had strongly recommended that a group of experts be asked to work with Sakhalin Energy to develop a fully specified field plan and analysis proposal, before the plans for monitoring in 2009 are finalised. The Terms of Reference for such an expert group (Doc. WGWAP-5/12) had been circulated by IUCN in September and agreed by the Task Force.

At WGWAP-4 the Panel had further recommended that Sakhalin Energy investigate the possibility of having an independent observer present on the seismic vessel during the survey. Bell reported that the observer would need to be a Russian national and have the required permit. However, he considered it unlikely that the vessel could accommodate an additional person. The Panel regrets this and notes that there has been positive experience.









### **12.3.6 Final coordinates for monitoring line**

of the task force. The site visit remains a priority for the Panel, however, and it was **agreed** that the site visit to Sakhalin would be scheduled for July or August 2009.

It was noted at WGWAP-4 that PCCI, on behalf of the lenders, had made a comprehensive review of Sakhalin Energy's OSR plans, and the Panel had recommended that the documents be provided for its review and comment (WGWAP 4/021). Sakhalin Energy had indicated that this would be done in or before August 2008, but no documents had been provided by the time of WGWAP-5. Besides expecting Sakhalin Energy to follow through with its agreement to provide these documents, the Panel suggests that the proposed site visit in summer 2009 also involve PCCI in order to facilitate face-to-face discussions of oil spill planning and response issues between the lenders' reviewers and Panel members.

Yablokov and Tsidulko drew the Panel's attention to reports from Russian sources indicating that both Sakhalin Energy and ENL had applied to Russian authorities for pre-approval of dispersant use as an OSR option in Sakhalin waters. Bell explained that it was normal for companies to do this and that any pre-approval would be expected to come with conditions regarding the actual use of these chemicals in the field – *e.g.* they could only be used in waters deeper than a specified depth. After some discussion, Bell reaffirmed that Sakhalin Energy was committed to following a 'common sense' approach and would not use dispersant chemicals in situations where there is any possibility of residue reaching and contaminating western gray whale feeding habitat. The Panel **requested** to see Sakhalin Energy's NEBA (net environmental benefit assessment) documentation presented to the Russian authorities in support of the pre-approval application and Bell **agreed** to provide this.

## **14 FUTURE SAKHALIN ENERGY PLANS FOR WESTERN GRAY WHALE MONITORING AND RESEARCH**

### **14.1 Presentation by the panel on what is needed for an adequate Sakhalin Energy research and monitoring plan**

The Panel's discussions of this item began at WGWAP-3. At that time, both the Panel and Sakhalin Energy had hoped that a co-operative approach would lead to an agreed, comprehensive research and monitoring programme. In that context the Panel provided intersessional advice on a draft scope of work in January 2008 and at WGWAP-4 the Panel received a description of the joint Sakhalin Energy-ENL programme for 2008-2010 (WGWAP-4/INF.19).

The report of WGWAP-4 (section 12.1) clearly illustrates that a suitable *modus operandi* for meaningful input by the Panel into this programme has not been found. In its conclusion of the discussion at WGWAP-4, the Panel reached the following conclusion.

“... although the research and monitoring programme outlined in WGWAP 4/INF.19 appears ambitious, it lacks the necessary technical detail on how the data and information will be collected, analysed and integrated. Some of this detail may be included, explicitly or implicitly, in previous annual reports but it needs to be drawn together in a single document. The Panel reiterates its support for a comprehensive, well-designed research and monitoring programme and its willingness to advise on its design. However, for this to be an efficient process, it is essential that a better-developed draft programme that contains the necessary detail on objectives, data collection protocols and analytical techniques (for both individual components and integrated analyses) be made available for review. Therefore, the Panel **recommends** that Larsen, in cooperation with the Panel and SEIC, coordinates the development of a proposal as to how such a review can be undertaken, to be presented at WGWAP-5.”

The Panel recognises that despite the lack of detail and the consideration of integrated analyses, there are a number of good aspects to the programme. It is extremely unfortunate

that, despite the efforts of Larsen and the Panel, the above recommendation has not been implemented. The Panel had hoped that its participation in the development of the programme would follow the same co-operative and pro-active approach that has been apparent in the work of the task forces. Rather than repeat its recommendation yet again, the Panel believes it is more appropriate that this item not be placed on future meeting agendas unless and until Sakhalin Energy indicates a willingness to participate actively in the process. Meanwhile, the recommendation should remain in the master list of recommendations as 'closed but not implemented satisfactorily'.

The Panel recognises that there may be a number of reasons why this situation has arisen. For example, the primary aim of the companies involved is to satisfy legal requirements in the most cost-effective way (although given the expense already involved in the 2008-2010 programme as specified, it would seem also in the interests of the companies to ensure that the best possible results are obtained from the studies they sponsor). From the Panel's perspective, the primary aims of research and monitoring are to provide a scientific basis for long-term monitoring of the status of western gray whales, particularly in the light of the anthropogenic activities on the feeding grounds, to ensure that appropriate mitigation measures are in place for whatever activities are occurring, and to evaluate the effectiveness of those measures. The Panel's broader perspective therefore has significant implications for such a programme in terms of data collection and analysis. The monitoring effort must be adequate to detect changes in whale abundance and distribution over time, should they occur, and, where possible, to link such changes to environmental and anthropogenic factors.

Whilst the companies indicate that they will develop additional programme components for specific circumstances, the short-term expansion of monitoring during a particular activity may not be sufficient to allow adequate evaluation of effects or ensure the success of mitigation measures. The recent reduction of the field season from 90 to 75 days is a case in point. Also, the lack of specificity with respect to anthropogenic activities expected even within the three-year period is particularly disappointing as this information is essential to help determine effectiveness or otherwise of the programme; this is not the first time the Panel has requested such information.

The Panel recognises that the two companies involved (*i.e.* Sakhalin Energy and ENL) do not see why the sole monitoring and research burden should be placed upon them. However, the task of the Panel is to provide the best advice with respect to the conservation of western gray whales.

Despite the above comments, there are a number of ways in which the current activities of the Panel and others can improve the situation:

- Active participation in fulfilling the agreed recommendations of the Photo-identification Task Force (see Item 6);
- Co-operation in the non-panel proposal for a workshop on integrated analyses arising out of discussions of MVA analyses (see Item 8);
- Active participation in the expert group recommended by the Seismic Survey Task Force (see Item 12);
- Active participation in the Environmental Monitoring Task Force (see Item 10).

Without some progress on these matters, the value of the Panel approach (and the commitment of Sakhalin Energy to it) will be severely compromised.

## **14.2 Update on JIP proposal on controlled exposure experiments on gray whales**

Roger Gentry, program manager of the Sound and Marine Life component of the Joint Industry Program (JIP) organised under the auspices of the International Association of Oil and Gas Producers (OGP), reported (via Nowacek) that neither of the two proposals submitted in response to the JIP request for proposals had focussed on gray whales. In fact, Nowacek and several colleagues had submitted materials to the JIP proposing to include eastern gray whales in a behavioural response study using airguns as one of the stimuli.

JIP was negotiating with a study team (coordinated by Nick Gales) to develop a proposal to expose humpback whales off the east coast of Australia to airgun sounds, compare their behavioural responses to the long-term baseline established by other Australian researchers, and then expose animals on the opposite (west) coast of Australia and compare their responses. Experimental design, including tags to be used and data outputs, had yet to be decided. If the JIP decides to support this project, funding would extend through 2011 or 2012.

Gentry further noted (via Nowacek) that the JIP support and evaluation process incorporates the views of member companies on the relevance of a given topic and that none of the partner companies in the JIP (Sakhalin Energy is not a member) had made the case for a study of feeding gray whales.

The Panel had recommended previously (Recommendation WGWAP 4/025) that Sakhalin Energy support (*e.g.* financially, logistically), through a well-established program such as the JIP, one or more controlled exposure experiments involving airgun noise and eastern gray whales in a feeding area. At WGWAP-5, Sakhalin Energy confirmed that it had a clear interest in improved understanding of the effects of seismic airgun activity on the behaviour of feeding gray whales. The Panel reaffirms its previous recommendation that Sakhalin Energy should support relevant studies, whether they take place under the aegis of the JIP or some other programme. As Sakhalin Energy and other companies have plans for periodic seismic surveys on the Sakhalin shelf over approximately the next 50 years, it remains incumbent on those companies to support efforts to improve understanding of the effects of airgun noise on feeding gray whales. The monitoring and sampling efforts being designed to accompany the 2009 Astokh 4-D survey will be extremely valuable but should not be seen as a substitute for a rigorous scientific study of such effects.

## **15 NON-SAKHALIN ENERGY GROUPS MONITORING**

Groups independent of the oil companies have conducted research and monitoring of gray whales off north-eastern Sakhalin Island in recent years, and the Panel reaffirms its position (as stated in section 15 of the WGWAP-2 report) that it welcomes opportunities to comment on those groups' plans

the issue of overlap in survey coverage and to begin evaluating potential disturbance effects. However, as no progress has yet been made regarding these tasks, the matter remains unresolved. In addition to the outstanding tasks of the Photo-ID Task Force, the Panel **recommends** that Gailey carry out an analysis that compares the disturbance caused by boats of the IBM photo-ID team vs. the boat of the Russia-US team. Such an analysis would help assess whether the approach strategy of one boat or another elicits different types or degrees of response by the whales. It was hoped that Gailey would be able to report the results of this analysis at WGWAP-6.

Coordination of effort in the 2009 field season is important both to avoid unnecessary disturbance to the whales and to optimise data collection before, during and immediately following the seismic survey. This matter is referred to the Seismic Survey Task Force for further consideration.

### **15.1 Russia-US Team**

Information on the Russia-US team's work in 2008 is summarized under Agenda Items 5.2 and 6.3. The discussion under this item focused on plans for 2009.

Weller and Tsidulko reported that the current plan was to conduct a programme similar to that in 2008, with the possible additions (pending funding) of: (i) resumed biopsy work targeting newly identified individuals as well







matters, primarily as a result of inadequate provision of data and information, has led Panel members to question whether the process is serving its central purpose: to promote the necessary protection for this critically endangered whale population and thus improve its chances for full recovery. As a result, unless there is significant and immediate improvement, members are increasingly reluctant to continue investing their time and energies in a process that seems to be of questionable effectiveness.



and until this issue is resolved, the effectiveness of the Panel and Sakhalin Energy's stated commitment to western gray whale conservation will be severely compromised.

In conclusion, the Panel **urgently requests** that government agencies and officials in Russia, IUCN, Sakhalin Energy, other companies active in all aspects of the oil and gas industry on the north-eastern Sakhalin shelf, lending institutions, the Group for Strategic Planning on Western Gray Whales, non-governmental conservation organizations, and all other interested parties make a commitment to cooperate and collaborate with the Panel by providing the types of information and data as outlined above.

## **19 ANY OTHER BUSINESS**

There was a brief discussion of the response received (via IUCN) to the Panel's open letter to Prime Minister Vladimir Putin of the Russian Federation last July concerning the need

Madsen, P.T., Johnson, M., Miller, P.J.O., Aguilar Soto, N., Lynch, J. and Tyack, P. 2006. Quantitative measures of air-gun pulses recorded on sperm whales (*Physeter macrocephalus*) using acoustic tags during controlled exposure experiments. *Journal of the Acoustical Society of America* 120:2366-2379.

Moore, S.E., Ljungblad, D.K. and Schmidt, D.R. 1984. Ambient, industrial and biological sounds recorded in the northern Bering, eastern Chukchi and Alaskan Beaufort seas during the seasonal migrations of the bowhead whale (*Balaena mysticetus*), 1979-1982. Report from SEACO Inc., San Diego, CA, for U.S. Minerals Management Service, Anchorage, AK. 111 p. NTIS PB86-168887.

Reeves, R.R., Brownell, R.L., Burdin, A., Cooke, J.G., Darling, J.D., Donovan, G.P., Gulland, F., Moore, S.E., Nowacek, D.P., Ragen, T.J., Steiner, R., VanBlaricom, G., Vedenev, A. and Yablokov, A.V. 2005. Report of the Independent Scientific Review Panel on the impacts of Sakhalin II Phase 2 on western North Pacific gray whales and related biodiversity. IUCN, Gland, Switzerland and Cambridge, UK.

Richardson, W.J., Green, C.R., Malme, C.I. and Thomson, D.H. 1995. *Marine Mammals and Noise*. Academic Press, San Diego, California. xvi+576.

Rutenko, A.N., Borisov, S.V., Gritsenko, A.V. and Jenkerson, M.R. 2007. Calibrating and monitoring the western gray whale mitigation zone and estimating acoustic transmission during a 3D seismic survey, Sakhalin Island, Russia. *Environmental Monitoring and Assessment* 134:21-44.

Weller, D.W., Bradford, A.L., Kato, H., Bando, T., Ohtani, S., Burdin, A.M. and Brownell, R.L., Jr. 2008. Photographic match of a western gray whale between Sakhalin Island, Russia, and Honshu, Japan: First link between feeding ground and migratory corridor. *Journal of Cetacean Research and Management* 10:89-91.

Weller, D.W., Würsig, B., Bradford, A.L., Burdin, A.M., Blokhin, S.A., Minakuchi, H. and Brownell, R. L. Jr. 1999. Gray whales (*Eschrichtius robustus*) off Sakhalin Island, Russia: seasonal and annual patterns of occurrence. *Marine Mammal Science* 15:1208-1227.

## **SUMMARY OF RECOMMENDATIONS FROM THE 5<sup>TH</sup> MEETING OF THE WGWAP**

**Recommendation  
number**

Recommendation number	Cross-Reference	WGWAP Recommendation & Requests	Responsible Party	Target Completion Date	Sakhalin Energy Response
<b>ITEM 13: OIL SPILL PREVENTION, PREPAREDNESS AND RESPONSE</b>					
WGWAP-5/008	Section 13.2	The Panel <b>requested</b> to see Sakhalin Energy’s NEBA (net environmental benefit assessment) documentation presented to the Russian authorities in support of the pre-approval application and Bell <b>agreed</b> to provide this.	Sakhalin Energy	End of January 2009	
<b>ITEM 15: NON-SAKHALIN ENERGY GROUPS MONITORING</b>					
WGWAP-5/009	Section 15	In addition to the outstanding tasks of the Photo-ID Task Force, the Panel <b>recommends</b> that Gailey carry out an analysis that compares the disturbance caused by boats of the IBM photo-ID team vs. the boat of the Russia-US team.	Sakhalin Energy	End of March 2009	
<b>ITEM 17: UPDATE ON PROPOSED ACTIVITY ON THE SAKHALIN SHELF</b>					
WGWAP-5/010	Section 17	... the Panel <b>recommends</b> that Sakhalin Energy work with relevant parties, including but not necessarily limited to Russian authorities and other oil and gas companies operating on the Sakhalin shelf, to jointly establish a western gray whale management plan.	Sakhalin Energy	None specified	
WGWAP-5/011	Section 17	The Panel further <b>recommends</b> that a moratorium be implemented on industrial activities, carried out by Sakhalin Energy and all other Sakhalin-based oil and gas companies, that might be expected, in the absence of <i>independently</i> verified mitigation measures (such as those developed by the Seismic Survey Task Force for seismic surveys), to disturb gray whales in and near their main feeding areas during the primary summer/autumn feeding season (July through October), This moratorium should remain in place until: (i) a satisfactory management plan is in place and (ii) the information flows required for its successful operation are functioning.	Sakhalin Energy	None specified	
WGWAP-5/012	Section 17	The Panel <b>requests</b> that Sakhalin Energy provide a realistic estimate of when it expects to complete the survey, and list the factors (other than the obvious ones such as ice and weather conditions) that could contribute to a delay, and that this information be submitted to the Seismic Survey Task Force workshop at the end of January 2009.	Sakhalin Energy	End of January 2009	
WGWAP-5/013	Section 17	Further, and also in the event that Sakhalin Energy is contractually committed to conduct the Astokh survey in 2009, the Panel <b>requests</b> that Sakhalin Energy obtain from the contractor information on whether it has scheduled further seismic surveys on the Sakhalin shelf in 2009 after the Sakhalin	Sakhalin Energy	None specified	

Recommendation number	Cross-Reference	GWAP Recommendation & Requests	Responsible Party	Target Completion Date	
-----------------------	-----------------	--------------------------------	-------------------	------------------------	--



## **Annex 1. List of participants**

### **Panel Members**

Robert L. BROWNELL Jr.  
Senior Scientist  
Southwest Fisheries Science Center  
National Marine Fisheries Service  
1352 Lighthouse Ave.  
Pacific Grove  
California 93950  
USA

Brian DICKS  
7 High Street  
Hadleigh IP7 5AH  
Suffolk  
UK

Douglas P. NOWACEK  
Associate Professor  
Division of Marine Science and Conservation,  
Nicholas School of the Environment &  
Department of Electrical and Computer  
Engineering, Pratt School of Engineering  
Duke University  
135 Duke Marine Lab Rd.  
Beaufort, NC 28516  
USA

Grigory TSIDULKO  
Marine Mammal Programs Coordinator  
International Fund for Animal Welfare  
19B Khlebny pereulok  
121069 Moscow  
Russia

Justin G. COOKE  
Centre for Ecosystem Management Studies  
Alexanderstrasse 10  
79261 Gutach  
Germany

Greg DONOVAN  
Head of Science  
International Whaling Commission  
The Red House, 135 Station Road  
Impington, Cambridge CB24 9NP  
UK

Randall R. REEVES (Chairman)  
Okapi Wildlife Associates  
27 Chandler Lane  
Hudson  
Québec J0P 1H0  
Canada

Glenn R. VANBLARICOM  
School of Aquatic and Fishery Sciences  
Fishery Sciences Building, Rm. 116  
1122 NE Boat Street

**Sakhalin Energy Investment Company Ltd.**

Doug BELL

Glen GAILEY

Roberto RACCA

Koen BROKER

Judith MUIR

Christina TOMBACH-WRIGHT

**IUCN**

Giulia CARBONE

Julie GRIFFIN

Finn LARSEN

Carole DURUSSEL

Sarah HUMPHREY

**Observer NGOs**

Doug NORLEN

Pacific Environment

**Observer Lenders**

Jon HANCOX

Bruce MATE

AEA Group

AEA Group

**Observer External Evaluator**

Stephen TURNER

## **Annex 2. Final meeting agenda**

1. Opening
  - 1.1. Introduction and logistics
  - 1.2. Adoption of agenda
  - 1.3. Documents
  - 1.4. Report drafting procedures
2. Review recommendations from previous meetings
3. Population assessment
  - 3.1. Progress on update of population assessment
  - 3.2. Analysis of data on body condition from Russia-US team
  - 3.3. Data on body condition incorporated into a population assessment
4. Conclusions and recommendations from the rangewide workshop
5. Preliminary results of 2008 WGW distribution and behavior monitoring
  - 5.1. Results from Sakhalin Energy/ENL shore and vessel survey program
  - 5.2. Results from observational effort by non-industry groups
6. Photo-ID
  - 6.1. Progress report from Photo-ID Task Force
  - 6.2. Photo-ID of WGWs in Sakhalin and Kamchatka
  - 6.3. Photo-ID of WGWs in Sakhalin
  - 6.4. Review the continuation and functioning of the Photo-ID TF
  - 6.5. Review of progress on comparison of Kamchatka photos to both the Russian and the Russian-US catalogues (per recommendation by IWC-SC)
7. MMO programme and carcass detection
  - 7.1. 2008 MMO programme preliminary report (refer to WGWAP-3/002 and /003)
  - 7.2. Update concerning annual revision of MMPP (specifically in relation to traffic management for current operations in Aniva Bay, and crew change vessels)
  - 7.3. Update on Sakhalin Energy authorization to collect tissue samples
  - 7.4. Update on necropsy manual (refer to WGWAP-4/003)
  - 7.5. Update on necropsy kit
8. Multivariate analysis
  - 8.1. MVA of 2006 data (taking recommendations WGWAP-4/006 and /007 into consideration)



**Annex 3. List of documents**

<b>Document number</b>	<b>Title</b>	<b>STATUS</b>	<b>Notes</b>
----------------------------	--------------	---------------	--------------

	energy exposure at locations of WGW sightings for input to the 2006 MVA study		
<i>For information documents</i>			
WGWAP-5/Inf.1	Seasonal and annual variation in body condition of western gray whales off north-eastern Sakhalin Island, Russia (IWC/SC/60/BRG16)	Public	

WGWAP-5/Inf.2 Seas09ETEnf.1

## **Annex 4. Revised work plan for the Photo-ID Task Force**

### **Background**

The report of the Photo-ID Task Force presented at the WGWAP-3 meeti

(b) Protocol for obtaining ID-quality photos, for circulation to whale-watching vessels within the range.

*Time line.*

Draft protocols to be developed by Weller and circulated by Larsen to Task Force by **28 February 2009**. Further action to be discussed at the proposed Task Force meeting.

(4) Review the criteria for judging mother-calf pairs and, if appropriate, develop a scoring system (e.g. as used for southern right whales)

(5) Review the criteria for identifying unaccompanied calves and, if appropriate, develop revised criteria for use by each team

*Time line.* It makes sense to treat these two items together. A proposal should be elaborated by Cooke and Donovan when results of the comparison exercise under (2) are available. This should be circulated by Larsen to the Task Force by **15 March 2009**, provided the data requested under (2) have been received. Further action to be agreed at the proposed Task Force meeting

(6) Compare the criteria used by each team for recording body condition ('skinny whales') and agree on a coding system that would allow analyses of the combined datasets

*Time line.* Work on this task will await the availability of the major body condition analysis that is nearing completion by the Russia-US team. Based upon this analysis, Cooke and Donovan will develop an initial proposal to be circulated to the Task Force by Larsen by **28 February 2009**. Further action to be agreed at the proposed Task Force meeting.

(7) Draw up specifications for population analyses using the combined data (on annual







- Behavioural monitoring

(2) outside experts with practical experience in (1) the collection and (2) the analysis of acoustic, distributional and behavioural monitoring data. In terms of analysts, this needs to include experts with experience in integrated analysis not simply the individual topics.

#### **4. MODUS OPERANDII**

A 3-day workshop will be held in Vancouver, 31 January – 2 February 2009. At a minimum, the participants should receive the latest plans developed by Sakhalin Energy as soon as possible, and the results of the tasks identified under 12.3.4 and 12.3.5 of this report. The steering group (Donovan, Bell, Cooke, Gailey, Nowacek and Weller) will develop a draft agenda. Invitations have been issued to those experts nominated by the steering group.