

IUCN WGW RANGE-WIDE WORKSHOP

21 -24 September 2008

Tokyo, Japan

**WESTERN GRAY WHALES: STATUS, THREATS AND THE POTENTIAL FOR
RECOVERY**

CONVENED BY IUCN

The following section includes the conclusions and recommendations section of the workshop report. This section was agreed by the workshop at the end of the meeting in Tokyo.

CONCLUSIONS AND RECOMMENDATIONS

Status and monitoring

As reported in section 2.9, the population¹ of western gray whales is extremely small (around 130-150 animals, of which fewer than 30 are mature females) and remains at only a small fraction of its pre-whaling level, although it is encouraging that the population appears to have been increasing, at least up to 2005. Based on the data from 1994-2007, it is projected that if current environmental conditions persist, and in the absence of additional mortality, the population will continue to increase. However, such an extremely small population is vulnerable and the projections also indicate that even low levels of additional mortality, particularly of females, could substantially reduce the prospects for recovery. According to model projections, the recent (2005-2007) level of additional mortality may be unsustainable and, if continued, could cause the population to decline.

The workshop accordingly **emphasises** the importance of reducing human-caused mortality to zero and **recommends** that such reduction be a core goal of the conservation plan being developed for western gray whales.

The importance of continued population monitoring to determine if mitigation measures are working cannot be over-emphasised. A fundamental requirement is that annual monitoring effort in the field, using both photo-identification and the collection of biopsies from new animals, be maintained at a level adequate to support analyses using an appropriate population assessment model (e.g. that of Cooke *et al.*). Any adverse demographic changes must be detected as early as possible, and preferably while there is still time for remedial action. The workshop therefore **strongly recommends** that research effort off Sakhalin Island, in support of annual population assessment through modelling, be continued as the highest-priority monitoring tool for this population.

The recent observations of gray whales along the south-eastern and south-western coasts of Kamchatka and in the northern Sea of Okhotsk demonstrate the importance of obtaining photo-identification data from other areas in addition to the north-eastern Sakhalin Shelf. Therefore, the workshop **recommends** that photo-identification effort be continued or expanded in other areas where western gray whales are known to occur, such as off Kamchatka and Magadan. It further **recommends** that all photographs from Kamchatka be compared to the Sakhalin catalogues maintained by the Institute of Marine Biology (IMB) and the Russia-US program.

Photo-identification studies form an essential component of a number of elements of the conservation effort for western gray whales. The workshop **strongly endorses** the recommendations made previously by the WGWAP and the IWC Scientific Committee concerning joint analyses of the Russia-US and IMB catalogues. It further **recommends** that the photographs from Kamchatka and other parts of the population's range be

¹ Genetic analyses have confirmed that the western population is discrete from the eastern population of gray whales. Despite its low absolute abundance, it appears that the western population has retained sufficient genetic diversity to allay concerns about inbreeding.

included in any such joint analyses and notes the importance of continuing efforts to identify additional feeding areas of western gray whales.

Threats and improved mitigation

Essential scientific knowledge for mitigation

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 them 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 **stresses** that the most efficient (and probably only) way to achieve the necessary knowledge is to undertake a carefully planned satellite tagging programme. A successful programme will provide essential 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.

In short, satellite tagging of western gray whales will address the following critical objectives:

- (1) *Identification of all feeding habitats of western gray whales.* This would (a) lead to photographic identifications of whales in feeding areas other than Sakhalin and Kamchatka, allowing improved population assessment, and (b) point to additional areas in need of protection from harmful human activities.
- (2) *Identification of migratory timing and routes between summer feeding and winter breeding areas* to improve assessment of threats along the migration routes and identify where mitigation is most critically needed.
- (3) *Identification of the winter breeding area(s)* so that threats there can be identified and mitigated.

As noted by other groups that have considered the need for such information, the workshop stressed the importance of an extensive cost-benefit review of telemetry studies in terms of how they would be expected to contribute to conservation versus how they might pose risks to individual western gray whales. After a full discussion of the work of other international groups, and especially a careful consideration of the review of telemetry studies and potential health effects commissioned by the US Marine Mammal Commission (the ‘Weller report’), the workshop **strongly endorses** the previous recommendations by the IWC Scientific Committee and various IUCN panels that a satellite tagging programme be designed and undertaken as soon as possible. It **stresses** that initiation of the satellite-tagging programme should not be further delayed, and the workshop **recommends** that every effort be made to attempt tagging at the end of the 2009 field season. That being said, it is essential that every safeguard be undertaken to minimise risks to the health of individual animals and to the population’s recovery (see Section XX) and it **endorses** the approach and recommendations of the IWC Scientific Committee and the WGWAP in this regard. It **emphasises** that the potential for achieving a key precautionary element within the tagging effort, i.e. selecting candidate whales for tagging based on their sex, relative age, health status and other factors, is diminishing

with time as it depends on the Russia-US team's availability and that team's ability to keep current with the individual whales.

In parallel with the telemetry programme on western gray whales, and in view of the general need to obtain further data on any potential effects of satellite tagging on the health of individual whales (see Section X of workshop report), the workshop also **recommends** that an evaluation study be undertaken as soon as possible using the well-studied Pacific Coast feeding aggregation of eastern gray whales regularly seen off Washington and British Columbia in which resightings of the same individuals are frequent (Weller 2008).

Entrapment and mortality

Release of entangled whales

Entrapment in set nets in Japan has caused several deaths of western gray whales in recent years. Given the critically endangered status of the population, the workshop **strongly recommends** that every effort be made to release entrapped animals as expeditiously as possible. In order to encourage this, the workshop **recommends** that a suitable reward scheme be introduced for all gray whales that are released alive and free of fishing gear. This scheme would be expected to involve a requirement for appropriate documentation to confirm species identification and that the release was successful. It would also ensure the collection of basic information, such as approximate length of the animal, date, location, photographs etc. Such information is important in helping to fill gaps in information on migration timing and routes. Information on such releases should be reported to the IWC Scientific Committee annually.

In this regard, the workshop, welcoming the measures that have already been implemented by Japan, also **encourages** the appropriate Japanese authorities to initiate a campaign immediately to educate all set-net fishing cooperatives concerning (a) the critically endangered status of western gray whales, (b) the historical role of set nets in bycatches of gray whales and (c) the need to make every effort to release any entrapped or entangled western gray whale.

In addition, the workshop **encourages** authorising agencies to identify appropriate individuals who can make up a rapid-response team to assist fishermen in the event that a badly entangled gray whale is found and specialised assistance is needed to release it. The team should consist of individuals with experience in whale biology and behaviour, handling ropes under stress, and small vessel safety, and be trained and equipped with custom-designed tools. The team should receive training and equipment from appropriate, established disentanglement experts (e.g. from either North America or Australia) who have extensive experience dealing with free-swimming, entangled whales or with otherwise complicated entanglements of large whales. Such a team could be used to release entangled, but free-swimming, gray whales if any are reported.

When safe and appropriate, the scientific members of the team could help to collect specific information from such events (e.g. photographs for use in photo-identification,

tissue samples, estimates or measurements of animal size, health assessment etc.). They could also be involved in specialised necropsy work (see below).

Although the recent entanglements have occurred in Japanese waters, the workshop recognised that the potential for such entanglement exists in all range states. The workshop was pleased to learn that three rescue (response) teams had been established in the Republic of Korea and that these teams are designated to release any marine animals, including gray whales, either live-stranded or accidentally caught in fishing gear. The workshop **encourages** the further development of these teams through communication with experienced response teams elsewhere in the world.

The workshop **recommends** that the appropriate authorities in the other range states (Russia, Democratic People's Republic of Korea and China) initiate educational campaigns specifically targeted at fishermen who use the types of fishing gear that could entrap or entangle western gray whales. These campaigns should explain the critically endangered status of the population, the risks of entrapment or entanglement, and the necessity to report any gray whale found in gear (alive or dead) and to release any live gray whales found.

The workshop noted that the results of the recommended telemetry programme will greatly assist in focussing the above efforts on areas where gray whales are most likely to occur.

Necropsy data

The workshop was pleased to receive from Japanese scientists detailed information from their examinations of dead gray whales, either in set nets or found stranded, and it commended those investigators for their efforts in this regard. It noted that necropsies conducted in an expeditious manner by experts have great value in determining cause of death, assessing pre-mortem animal health, and improving mitigation measures. The workshop **recommends** that facilitation of such necropsies be made a priority in all range states, involving all relevant qualified individuals and organizations. It also **recommends** that a detailed protocol be developed by IUCN (under Finn Larsen), taking due account of experience elsewhere in the world (e.g. with North Atlantic right whales), and distributed widely to maximise the amount of data and information obtained from dead western gray whales. The workshop **endorses** previous recommendations by the IWC Scientific Committee that range states should submit necropsy reports on western gray whales to the IWC Scientific Committee for review.

Improved information from outside the known feeding grounds

Although a great deal of new information on western gray whales has become available since the previous workshop in 2002 (IWC 2004), almost all of it has come from the feeding grounds near Sakhalin Island. In addition to the work carried out there, some recent photo-identification data has been collected from the southern Kamchatka region in Russia and there is recent information on sightings, bycatches and strandings in Japan. Despite dedicated research effort to find gray whales in waters of the Republic of Korea since 2003, no sightings have been made and no new bycatches or strandings have been

reported. There is very little new information of any kind on gray whales in China, where research and monitoring remains a major challenge. No information of any kind is available from the Democratic People's Republic of Korea.

The workshop therefore **recommends** that arrangements for detecting, reporting and investigating occurrences of gray whales, for example through stranding and sighting networks, be enhanced in all range states and particularly in China. It **emphasises** that this should be accompanied by efforts to improve the capacity and ability of researchers in the range states to investigate and validate reports of gray whales, e.g. through photography or tissue sampling. Importantly, as recommended by the IWC Scientific Committee, any tissue samples should be made available for genotype matching with the biopsy archive of the Russia-US programme.

Recognising the difficulty of detecting individuals away from the known concentrations on the feeding grounds, and given that the total number of animals is so small and information on breeding grounds and migration is so poor, the workshop **recommends** that high priority be given to developing accurate and effective public awareness campaigns in the range states, involving use of *inter alia* the internet, newspapers, radio and, if possible, television. The workshop **encourages** IUCN and IWC to assist relevant authorities in each of the range states in this regard.