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Commentary

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Withdrawal of Japan from the International Convention for the Regulation of Whaling: implications for the whale research conducted by the Institute of Cetacean Research

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INTRODUCTION

On 26 December 2018, Japan announced its withdrawal from the International Convention for the Regulation of Whaling (ICRW), which came into effect on 30 June 2019. From this same date Japan ceased its two whale research programs under special scientific permit conducted under Article VIII of the ICRW, the NEWREP-A (New Scientific Whale Research Program in the Antarctic Ocean) and the NEWREP-NP (New Scientific Whale Research Program in the western North Pacific). From 1 July 2019, Japan started commercial whaling on common minke, Bryde's and sei whales within its territorial sea and Exclusive Economic Zone (EEZ).

As reported by Tamura *et al.* (2017), the Institute of Cetacean Research (ICR) was in charge of designing and implementing both NEWREP-A and NEWREP-NP, and research under these two programs was the main and first priority of the ICR. Now that these research programs have ceased, what is the future of the ICR and its research on whales? This note attempts to respond to this question.

This author's view is that the basis for responding to the question above can be found i) in the statement from Japan at the International Whaling Commission Scientific Committee (IWC SC) in 2019 regarding Japan's withdrawal from the IWC; and ii) in Japan's research activities aimed to calculate sustainable catch limits for commercial whaling in its EEZ.

STATEMENT FROM JAPAN AT THE IWC SCIENTIFIC COMMITTEE REGARDING JAPAN'S WITHDRAWAL FROM THE IWC

At the 2019 annual meeting of the IWC SC, Japan made a statement regarding its future involvement in the work of the IWC SC (IWC, 2019). The main points of the statement are summarized below:

- Japan will continue research programs with non-lethal methods in both the North Pacific and the Antarctic Ocean.
- Japan will collect fisheries-dependent scientific data through commercial whaling within its EEZ.
- Japan will provide the IWC SC scientific findings derived from the activities described above.
- Japan will provide the IWC SC standard statistics in relation to its commercial whaling.
- As for the data collected through its special permit programs (JARPA/JARPAII, NEWREP-A, JARPN/JARPNII, NEWREP-NP), Japan will continue to be engaged in their analyses and provide the IWC SC with scientific findings thereon.
- Japan will continue to provide information on its DNA register for large whales on a voluntary basis.
- Japan is prepared to continue the IWC-POWER (Pacific Ocean Whale and Ecosystem Research) in the North Pacific.

Given their previous experience with NEWREP-A and NEWREP-NP, this author considers that ICR scientists have the potential to play a substantial future role in the research activities listed above.

CATCH LIMIT CALCULATION FOR SUSTAINABLE WHALING IN THE WESTERN NORTH PACIFIC

In its IWC SC statement, Japan noted that catch limits of common minke, Bryde's and sei whales will be calculated in line with the Revised Management Procedure (RMP), 'taking into account relevant scientific progress achieved by the IWC SC such as outputs from *Implementation Reviews* and *In-depth Assessment*.' While such scientific progress should be taken into account, Japan's withdrawal from the ICRW means that it is now the sole mandate and responsibility of Japan to calculate sustainable catch limits for the target whale species in the western North Pacific, and to allocate such quotas internally within Japan.

In fact, Japan established an *ad-hoc* domestic group

composed of scientists from several Japanese research organizations and officials from the Fisheries Agency of Japan (FAJ) with the aim to carrying out the calculations of catch limits of common minke, Bryde's and sei whales in line with the RMP. The main work of the *ad-hoc* group was:

i) to summarize the key information on stock structure (required to define management areas), abundance and catch history of the three species of baleen whales;
ii) to run the Norwegian Catch Limit Algorithm (CLA) computer code for a tuning level of 0.6;
iii) to investigate the robustness of the catch limits calculated by the CLA to some uncertainties by the so-called *Implementation Simulation Trials* (*ISTs*) process (in the case of common minke and Bryde's whales where stock structure is complex).

The final catch quotas were determined by the FAJ after the calculations of catch limits by the domestic *ad-hoc* group were reviewed by a team of international experts. Based on those catch quotas, which were lower than the calculated catch limits, commercial whaling operations started from 1 July 2019 in Japan's EEZ. Participation of ICR scientists was key in the successful work of the *ad-hoc* group.

Japan's work on catch limits (including the *ISTs*) will continue to be based on the best available science; hence, the catch limits will be revised from time to time to reflect the latest scientific information. In this context, a domestic Steering Group was recently established to deal with the required data and analyses associated with future updates of the calculations of catch limits. The Terms of References (TORs) of this Steering Group involve among others, i) the identification of relevant input data to update the catch limit calculations in line with the RMP (i.e. abundance estimates, genetic and non-genetic data for refining the current stock structure hypotheses, etc.); ii) the identification of biological data (i.e. age, reproductive data) and the process required to improve/optimize the use of the current RMP and; iii) the research of alternative management procedures to the RMP.

This author considers that, given the contribution and experience acquired by ICR scientists during the work of the previous *ad-hoc* group, the contribution of ICR scientists to the work of the new Steering Group would remain substantial.

IMPLICATIONS FOR THE WHALE RESEARCH CONDUCTED BY THE ICR

From the points made in Japan's statement at the IWC SC and the TORs and activities proposed for the domestic Steering Group on sustainable whaling in the western North Pacific it is possible to highlight some research activities relevant for the future work of the ICR.

1. Research programs with non-lethal methods in both the North Pacific and the Antarctic Ocean

Japan presented the outline of a new research program in the Indo-Pacific region of the Antarctic at the 2019 IWC SC (GOJ, 2019a) and at the Convention on the Conservation of Antarctic Marine Living Resources's Working Group on Ecosystem Monitoring and Management (CCAMLR EMM) (GOJ, 2019b) meetings. The research program, called JASS-A (Japanese Abundance and Stock structure Surveys in the Antarctic), has two main research objectives i) the study of the abundance and abundance trends of large whale species, and ii) the study of the distribution, movement and stock structure of large whale species. JASS-A also has several secondary research objectives related to oceanographic conditions, marine debris and whale biology. The research program will be based on systematic sighting surveys utilizing the line transect method, to be conducted alternatively in IWC Areas III, IV, V and VI, south of 60°S by one or two specialized vessels, during a tentative period of eight austral summer seasons. Analyses related to main and secondary objectives will be conducted based on new as well previous data collected by JARPA/JARPAII and NEWREP-A in the same research area.

In the western North Pacific, dedicated sighting surveys are being planned with the aim of obtaining sighting data for abundance estimation of large whale species, with emphasis given to common minke, Bryde's and sei whales, the species that are the current target of commercial whaling. Also the surveys will collect biopsy samples, which are important for genetic analyses to elucidate/refine stock structure hypotheses.

Surveys of the IWC-POWER program have been conducted successfully until 2019. Japan in consultation with the IWC should decide on the survey plan for 2020, and on the future of the POWER after 2020. The importance of such surveys is that they provide sighting data (and biopsy samples) from areas not covered by the Japanese dedicated sighting surveys.

The ICR could play a key role in the research activities based on non-lethal methods given the substantial experience of its scientific staff in both field sighting surveys and in analytical procedures related to abundance estimates and stock structure research.

2. Collection of fisheries-dependent scientific data through commercial whaling

Japanese scientists have already identified the data and samples to be collected during commercial whaling operations. The data involve data/samples relevant for applying/optimizing the RMP as explained above (genetic samples for stock structure analyses, biological samples for age and reproductive status determination), and other data/samples for more generic use.

As is the case for non-lethal research noted above, ICR scientists also have substantial experience in collecting data and biological samples during past whale research programs under special permit. To keep consistency and the quality of the sampling process, ICR scientists should be involved in sampling during commercial whaling operations in collaboration with scientists from the National Research Institute of Far Seas Fisheries and government inspectors.

3. Analyses of data and samples from previous whale research programs under special permit

In the case of the Antarctic the analyses by JASS-A under its main and secondary objectives will be conducted on pooled data with those data/samples collected by JARPA/JARPAII and NEWREP-A. The analyses of pooled data will contribute with important information not only for the assessment of several large whale species but also for studies on the ecosystem.

The analyses of samples and data obtained by JARPN, JARPNII and NEWREP-NP in the western North Pacific will be continued, and those analyses should be conducted in conjunction with data and samples collected during commercial whaling operations. In this case emphasis should be given to analyses relevant for assessment and management of common minke, Bryde's and sei whales.

Because the whale research programs under special permit were designed and implemented by the ICR, it is natural to assume that the ICR would play an important role in this particular research activity in the future.

4. DNA registry of large whales

Given the expertise and accumulated experience, the ICR should continue developing and implementing the DNA registry of large whales for monitoring of the domestic market under the supervision of the FAJ. Technical updates of the registry should be presented by the ICR to the annual meetings of the IWC SC on a voluntary basis.

5. Catch limit calculations for sustainable whaling

ICR scientists have the potential to contribute to the work of the Steering Group in areas of their expertise such as, i) the design of dedicated sighting surveys; ii) the estimates of abundance; iii) collection and analyses of genetic samples to refine the information on stock structure of the key species; and iv) running the CLA and designing/implementing the *ISTs*.

Data accumulated by the ICR through its previous whale research programs are likely to play a key role in the process. Data available involve not only those key for the application of the current RMP (stock structure, abundance, and catch history) but also some biological data such as age and reproductive status, which can be used for the improvement or optimization of the current RMP, and for developing of new catch limit calculation methods.

FUTURE RELATIONSHIP BETWEEN JAPAN AND THE IWC SCIENTIFIC COMMITTEE AND OTHER RESEARCH ORGANIZATIONS

Japan will have observer status for its future participation in the work of the IWC SC. As usual, ICR scientists should continue participating in the annual meetings and intersessional workshops of the IWC SC either as part of Japan's observer delegation or as Invited Participants. Following domestic consultation, ICR scientists may present results of the analyses mentioned above to the annual meetings.

ICR scientists have been engaged in meetings of other international organizations related to the conservation and management of marine living resources i.e. in meetings of the North Atlantic Marine Mammal Commission Scientific Committee (NAMMCO SC), CCAMLR's working groups, North Pacific Marine Science Organization (PICES), etc. Their future participation in these international fora should be encouraged.

CONCLUSION

The ICR and its scientists can play an important role in the future whale research activities of Japan. The basis for this conclusion are given in the research plans and guidelines outlined at Japan's statement regarding its withdrawal from the IWC, and on the TORs of the recently established Steering Group on sustainable commercial whaling in Japan's EEZ. This conclusion is not surprising given the ICR's substantial accumulated experience of approximately 30 years investigating whales and their ecosystem in both the Antarctic and the western North Pacific. The ICR scientists have the field and analytical expertise (based on lethal and non-lethal methods) to continue responding to biological and ecological ques-

tions on whales, and contribute in this way to the future conservation and management of this group of animals.

REFERENCES

Government of Japan. 2019a. Outline of a research program to investigate the abundance, abundance trends and stock structure of large whales in the Indo-Pacific region of the Antarctic, including a survey plan for the 2019/20 austral summer season. Paper SC/68a/ASI08 presented to the IWC Scientific Committee, May 2019 (unpublished). 16 pp. [Available from the IWC Secretariat].

Government of Japan. 2019b. Outline of a research program to investigate the abundance, abundance trends and stock structure of large whales in the Indo-Pacific region of the Antarctic, including a survey plan for the 2019/20 austral summer season. Paper WG-EMM-2019/68 presented to the CCAMLR Working Group on Ecosystem Monitoring and Management, July 2019 (unpublished). 16 pp.

International Whaling Commission. 2019. Report of the Scientific Committee. Annex U: Statement from Japan regarding Japan's withdrawal from the IWC: https://archive.iwc.int/pages/search.php?search=!collection73&bc_from=themes.

Tamura, T., Matsuoka, K. and Pastene, L.A. 2017. An overview of the research programs on large whales conducted by the Institute of Cetacean Research. *Technical Reports of the Institute of Cetacean Research (TEREP-ICR)* No. 1: 1–14.