

**2nd CMS Workshop on Conservation Implications
of Animal Culture and Social Complexity**

Part I, online, 6 October 2022

UNEP/CMS/Culture-2/Report Part I

REPORT – Part I

The purpose of the workshop was to identify priority species and populations on the CMS Appendices, and to provide advice to Parties on rapid assessment techniques and how to augment existing conservation efforts using insights on aspects of sociality. The objective was to assist the Expert Group to fulfill its mandate given in Decision 13.103.

1. Opening of the Meeting

Heidrun Frisch-Nwakanma (Secretariat) welcomed participants, then left the floor to the chair of the CMS Culture Expert Group, Philippa Brakes (WDC).

The Chair warmly welcomed all participants, noting participation from around the globe and both new and familiar faces of those who had been involved in this group for some time. She emphasized that this work under CMS would not be possible without the help from people willing to share their knowledge and volunteer their time, and thanked everyone for their generosity with both. She added that the focus of the meeting should be on processes of social learning and distilling the practical conservation advice that the expert group, as part of CMS, was asked to provide.

A list of participants can be found in Annex 1.

2. Adoption of the Agenda and Schedule

The Chair briefly outlined the agenda, which was adopted without amendments (see Annex 2).

Tine Lindberg-Roncari (Secretariat) drew attention to some housekeeping rules.

3. Background and Mandates

Ms Frisch-Nwakanma gave a brief presentation, outlining how CMS first started considering the conservation implications of animal culture and social complexity in 2011, with an initial focus mostly on cetaceans. In 2017, this work area was officially expanded to include all taxonomic groups relevant to CMS.

The CMS Expert Group on the Conservation Implications of Animal Culture and Social Complexity, mostly composed of external experts and reporting to the CMS Scientific Council, was established in 2015.

In a workshop in 2018, significant progress was made and its recommendations were included in the Expert Group's report to the Scientific Council and the mandates agreed by Parties in 2020. These were [Decisions 13.102-13.105](#). Ms Frisch-Nwakanma explained that Decisions were time-bound mandates given by the Parties to themselves or bodies within the framework of the convention (i.e. our tasks for the period between two COPs), and there were Decisions on animal culture directed to Parties, the Culture Expert Group, the Secretariat and the Scientific Council.

Specifically, Decision 13.104 b) directed the Secretariat, *subject to the availability of resources, [to] convene a workshop to assist the Expert Working Group on Animal Culture and Social Complexity with identifying priority species and populations on the CMS Appendices [...] provide advice to Parties on rapid assessment techniques and how to augment existing conservation efforts using insights on aspects of sociality.*

This workshop had originally been planned for 2020, and like many other meetings, had to be postponed until it was finally decided to go ahead with this online format and a possible in-person meeting for the second part of the workshop.

For reference, Ms Frisch-Nwakanma also showed Decision 13.103 directed to the Expert Group. Once the sub-groups to be established at this workshop would have completed their work and Part II had been convened, most of these mandates would have been dealt with. The resulting reports and recommendations would then go to Scientific Council and then to COP, where new mandates might be agreed.

4. Meeting Structure

The Chair outlined the process foreseen for this workshop and the intersessional work:

- Establishment of sub-groups/working groups during this workshop on 6 October 2022
- Sub-groups work intersessionally
- Sub-groups report back with first drafts by 28 February, and final outputs by 30 March 2023
- Workshop Part II to take place in April 2023 (exact dates tbd), to review and agree recommendations
- Sessional Committee of the Scientific Council to meet (mid-2023, dates tbd), consider recommendations
- Report back to Conference of the Parties (October 2023, dates tbd)

Mark Simmonds (COP-Appointed Councillor for Marine Pollution / OceanCare) asked whether people could join in more than one sub-group since the groups would run for some time. The Chair replied that the objective was that people stay in the same group during the workshop, but afterwards could join as many sub-groups as they wanted.

Fernando Spina (COP-Appointed Councillor for Connectivity) announced that the Appennino Tosco-Emiliano National Park had reconfirmed their interest in hosting the second part of this workshop in-person in Parma, Italy, in April 2023.

The Chair proposed that nine taxonomic sub-groups be established covering birds, fish, reptiles, primates, mysticetes, odontocetes, elephants, ungulates, and other mammals. In addition, three issue-based sub-groups were agreed, dealing with reintroductions/translocations, rapid assessment, and human wildlife interactions/conflict. Finally, two sub-groups would discuss the ongoing Concerted Actions on ETP sperm whales and chimpanzees.

5. Definitions and Criteria for Assessment

The Chair reminded participants of definitions and criteria agreed previously, presenting the following overview:

- 'Migratory species' means the entire population or any geographically separate part of the population of any species or lower taxon of wild animals, a significant proportion of which whose members cyclically and predictably cross one or more national jurisdictional boundaries.
- Social learning: any learning process that is influenced by the observation of, or interaction with, another animal or its products (Whitehead & Rendell (2015) University of Chicago Press; Hoppitt & Laland (2008) *Adv. Study Behav*; Heyes (1994) *Biol Rev Camb Philos Soc*)
- Culture: information or behaviour-shared within a community – which is acquired from conspecifics through some form of social learning (Whitehead & Rendell (2015) University of Chicago Press)

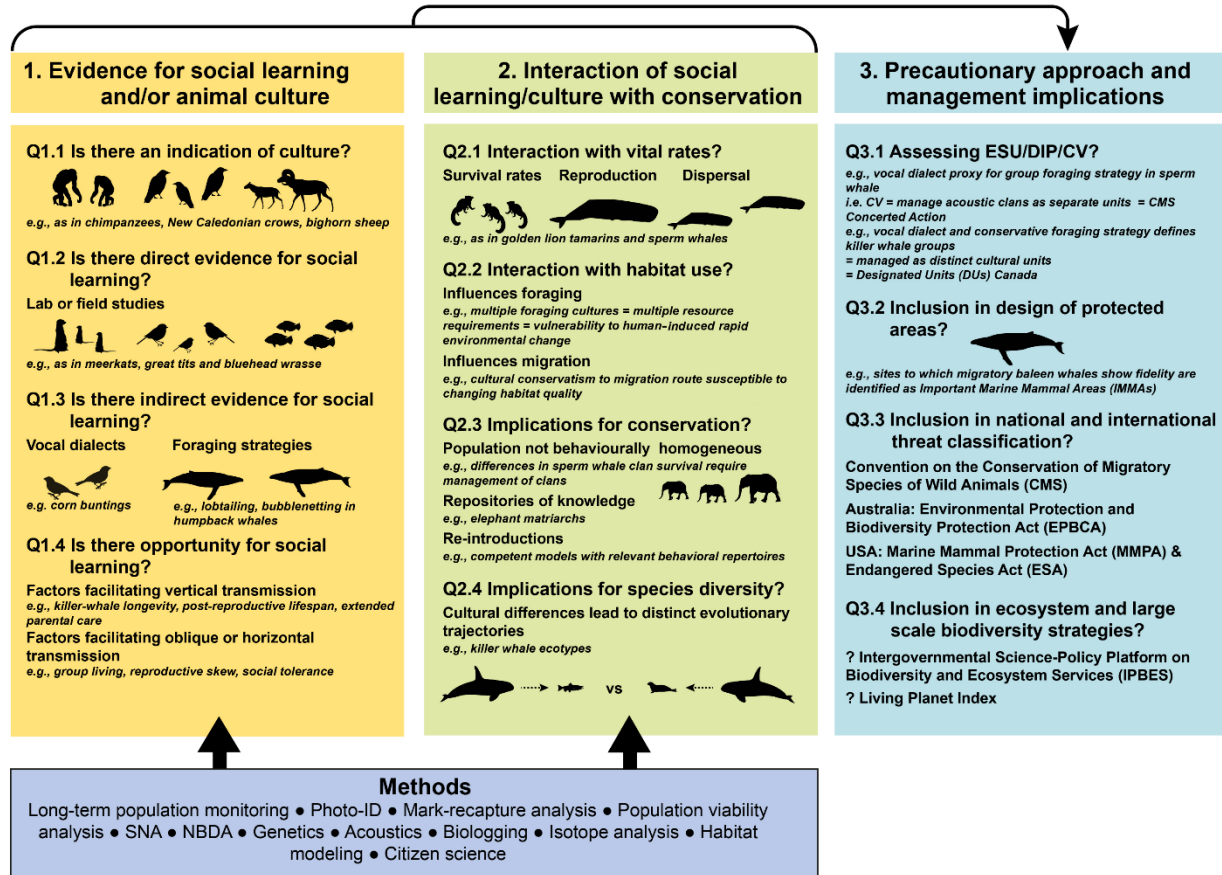


Fig.1: A conceptual framework for identifying evidence on social learning and animal culture and incorporating this evidence into conservation policy and practice was developed by participants following the 2018 workshop. The published framework (Brakes et al. 2021)¹ is reproduced here and was presented to this workshop to help guide deliberations.

She also presented a ‘straw offering’ of criteria the taxonomic sub-groups could use for assessment of the taxa they would look at. This was refined in the discussion, with the agreed criteria as follows:

- Are the main range states for the species or population Parties to CMS or Parties/Signatories to daughter agreements?² [map of CMS Parties and Range States: <https://www.cms.int/en/parties-range-states>]
- Is the species or population on CMS Appendix I and/or II?² [at individual species level, not higher taxa]
- Is there evidence of social learning in this species or population, or can phylogenetic or other inference for potential social learning plausibly be made?

¹ Brakes P et al. 2021 A deepening understanding of animal culture suggests lessons for conservation. *Proc. R. Soc. B* 288: 20202718. <https://doi.org/10.1098/rspb.2020.2718>

² Where cultural units of concern fall outside of criteria 1 or 2, the Expert Group is still encouraged to bring these forward for the attention of the Scientific Council or other relevant bodies.

- Is there evidence for - or a likelihood - that social learning or culture in this species or population interfaces with conservation through one of the following channels:
 - Evaluating the 'unit to conserve'
 - Reintroductions/translocations
 - Human wildlife interactions or conflict
 - Mitigation of anthropogenic threats
 - Others? [also consider interactions between channels]
- Details to be included in any request for prioritisation, where possible:
 - evidence for social learning or culture
 - evidence for potential Influence on vital rates, or
 - evidence for interaction with habitat use, or
 - evidence for interface with conservation efforts (current or future)

6. Appointment of Sub-Group Leaders

The following people agreed to lead the sub-groups during and/or after the meeting:

Taxonomic

- Birds – Peter McGregor and Lucy Aplin
- Fish – Culum Brown
- Reptiles – Anna Wilkinson
- Primates – Martha Robbins (intersessionally)
- Mysticetes – Emma Carrol and Ellen Garland
- Odontocetes – Luke Rendell (during workshop)/Hal Whitehead (intersessionally)
- Elephants – Vicki Fishlock
- Ungulates – Brett Jesmer
- Other mammals – Philippa Brakes

Issues

- Reintroductions/translocations – Thomas Mueller and Alison Greggor
- Rapid assessment – Mark Simmonds
- Human wildlife interactions/conflicts – Sarah Mesnick (during workshop)/Hannah Mumby (intersessionally)

Concerted Actions

- ETP sperm whales – Ana Eguiguren
- Chimpanzees – Erin Wessling

7. Work in Sub-Groups

The Chair advised the sub-group leaders to stimulate discussions and report back what the group has decided in terms of objectives to be attained in the following months. The Secretariat mentioned that sub-groups were free to decide their mode of work, which could be through joint editing of documents on Teams or offline, or through calls. The documents should preferably be shared on the files tab of each sub-group to allow other Expert Group members to contribute.

8. Reports Back from Sub-Groups

Birds

Peter McGregor (ISPA – Instituto Universitário) reported that participants had started by identifying three aspects that drive culture and could impact bird conservation, namely movement (e.g., migration), vocalization (e.g., bird songs) and foraging (e.g., learnt feeding specialisations). Each aspect had good case studies and examples with positive and negative impacts on conservation. The focus was on conserving the capacity for culture rather than culture *per se*. For example, the concern was not that a specific vocalization would become extinct, but to conserve the conditions which allowed birds to learn the appropriate vocalization in an appropriate time that ultimately allowed breeding to occur. The approach taken was to, first, decide whether the species would fit CMS criteria and, decide if there were cultural aspects of migration with conservation implications (e.g., juveniles learning migration routes from adults). There might also be other migration-related cultural influences (e.g. food sources on wintering grounds). Regarding vocalization, they discussed recent case studies that exemplified the consequences of a population not having the right bird song in Australia, as well as the impacts of releasing captive-bred birds into the wild. With regards to foraging culture, specialists for various food sources were contrasted with adaptability and the idea of adaptability being a buffer against environmental pressures. They added that the sub- group should consider both social learning itself, and social learning that leads to animal culture development, in following discussions and meetings.

Fish

Culum Brown (Macquarie University) highlighted how important social learning and culture was likely to be in fishes, despite there not being sufficient information about the vast majority of them. There seemed to be connections with migrations, foraging, mate-choice, competitive behaviour etc. Tuna and salmon might have social components in their migration. Not much was known about culture and social networks in the few species listed (including sharks and rays).

Reptiles

Anna Wilkinson (University of Lincoln) explained that after revising the listed species and available articles and reviews on the topic (approximately ten), there seemed to be no evidence of social learning in those species of interest. However, there was strong evidence of social learning in other reptiles, so this was a huge knowledge gap that needed to be filled. They suggested to get the perspective of a population ecologist to get a better grasp of the potential for social learning in turtle populations.

Primates

This sub-group would start its work in the intersessional period.

Mysticetes

Emma Carroll (University of Auckland – Waipapa Taumata Rau) reported that some species had been identified that had potential for being future case studies. Within the discussion, there had been a focus on migration, foraging and vocal dialects, and the scales at which they should be studied and reported. A relevant conclusion was that there was a need to recruit more people into the group to develop case studies, and advance towards the establishment of indicators. She also

mentioned the importance of aligning with other conservation-focused institutions and their products, such as the IUCN Red List.

Odontocetes

Luke Rendell (University of St Andrews) said that participants had decided to list out considerations that they wanted to apply against the CMS-listed species in a matrix structure. He added that the sub-group would examine what kind of criteria they wanted to use, which should include direct evidence in the form of experiments, censusing behaviour, or documenting behavioral change in the wild. Rendell stated that the identified points would be turned into a series of questions, and then a prioritization mechanism would be created.

Elephants

Vicki Fishlock (Amboseli Trust for Elephants) noted that this group considered only a couple of species that had already been well studied. While there was quite a lot of evidence on social learning in elephants, culture had not yet been pinned down. The sub-group had discussed relevant publications and found some lines of evidence. For elephants, culture was likely to be very significant and social learning impacted how they interact with the people that they share a space with. The sub-group would put together a meta-analysis of the threads of evidence, and then see how that affected practices like translocations and strategies for dealing with conflict in the context of changing habitats. Asian elephant experts would be contacted to assist with the work of the sub-group.

Ungulates

Brett Jesmer (Virginia Tech) reported that in ungulates, there was to date little evidence of social learning or cultural transmission. However, they were also long-lived mammals with high levels of maternal care and were often quite gregarious, so there was high potential for social learning in all ungulate species. He explained that migratory ungulate conservation work had so far been focused on the mitigation of anthropogenic threats, and that maintaining capacity for social learning in species was linked to maintaining large landscape connectivity, and limiting or reducing barriers. The sub-group would look into developing a global risk assessment using recently compiled information on the migratory status of ungulates, presence of resource waves, anthropogenic disturbance, and IUCN status. Additional experts would be contacted to assist with the work of the sub-group.

Other mammals

Philippa Brakes was reporting back on discussions with Alex Thornton (University of Exeter). Many mammal species did not fall into the other sub-group categories, such as carnivores including cheetahs and polar bears. She added that there had not yet been evidence for social learning in some of these taxa. However, there was evidence that some bat species are social learners. The evaluation of the sub-group would also feature a matrix structure to compare evidence with the Appendices, and it was considered necessary to bring in further expertise (such as bat experts) to carry out this work.

Reintroductions/translocations

Alison Greggor (San Diego Zoo Wildlife Alliance) stated that this was a cross cutting topic that would apply to many of the species considered in other sub-groups, therefore the present experts

were invited to support the work of this group intersessionally. She added that there might be different tactics for translocations in each sub-group, and translocations might be captive to wild, or wild to wild translocations. The sub-group would also work on feasibility and cost effectiveness. They would develop a “nice-to-have” list versus a “need-to-have” list in a species conservation programme.

Rapid Assessments

Mark Simmonds reported that the sub-group had reviewed the tools and techniques provided by the previous workshop and noted that an additional approach might be population modelling, for example ‘vulnerability assessment’ based on loss of cultural traits. The sub-group also recommended the development of a triage for rapid assessment. The group identified a number of points that should be considered in this and noted that the triage would include points such as whether the units to conserve were knowledge-led or behavior-led, and the timeline. He added that the sub-group would like other people to join the group to help develop the triage and to help determine the best approach to making rapid assessments.

Human-Wildlife Interactions

Sarah Mesnick (Southwest Fisheries Science Center, NOAA Fisheries) shared that the subgroup began by re-evaluating the vision and scope of the group’s previous report and decided to expand on both. They discussed how the choice of terms used to describe human wildlife interactions (conflict, coexistence) could shape outcomes and the importance of bi-directional knowledge exchange with local and indigenous experts. They decided to proceed with a focused comparative review and highlight species that intersect with other groups, and then develop one or two case studies. Lastly, they discussed a plan to develop key recommendations of the last report, including the relationship between human culture and human-wildlife interactions and elevating the inclusion of locals as part of implementation plans.

CA Eastern Tropical Pacific Sperm Whales

Ana Eguiguren (Dalhousie University) explained that the sub-group looked at the status of implementation of the Concerted Action agreed by COP13. Focus had been on the workshop on research techniques and collaborate on data acquisition planned for November 2022. The sub-group would have a report ready in time for the second workshop, but she would not be able to attend the second workshop herself due to fieldwork.

CA Chimpanzees

Erin Wessling (Harvard University) stated that the sub-group discussed how this Concerted Action could fit into existing initiatives within the IUCN Primate Specialist Group, namely the Western Chimpanzee Action Plan and the the Working Group for Chimpanzee Cultures. They also considered how activities like organizing a workshop related to the Concerted Action would fit into the scope of ongoing and extensive chimpanzee conservation. The sub-group would report back from an upcoming workshop in Liberia that would bring stakeholders together to create a biomonitoring scheme for chimpanzees, and create a Concerted Action Committee that could help articulate the next steps.

9. Closing of the Meeting

The Chair said that there were cross-cutting issues among the groups, and those should be discussed at the next workshop. She thanked everyone and ended the meeting.

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Agenda

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