CCAMLR SYMPOSIUM

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REPORT OF THE CO-CHAIRS

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Australian Antarctic Division

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Contents

Volume 1

- Session 1. CCAMLR: 35 years since the signing of the Canberra Convention. The performance of CCAMLR (1982-2015) within the Antarctic Treaty system and the wider international context.

- Session 2. Article II of the Convention: CCAMLR's objective of Conservation where the definition includes rational use. Can we achieve a shared understanding?

- Session 3. The implementation of ecosystem and area protection in the framework for managing CCAMLR fisheries

- Session 4. Climate Change: The role CCAMLR can play and projections and CCAMLR response options.

- Session 5. CCAMLR: which are the most effective/efficient means for the Scientific Committee and the Commission to do their business?

- Session 6. The next steps: Challenges, response options and strategic priorities

- Appendices:

    - Appendix A: Session questions
    - Appendix B: Opening speech by Alfredo Labbé Villa, Acting Vice-Minister of Foreign Affairs Ministry of Foreign Affairs of Chile: Setting the Scene
    - Appendix C: Co-Chairs Summary

Volume 2

- CCAMLR Symposium presentations and papers

Introduction

This Symposium, co-sponsored by Australia, Chile and the United States, marked the 35th Anniversary of the signing of the Convention on the Conservation of Antarctic Marine Living Resources (the CAMLR Convention). Originally planned to be held in the city of Puerto Varas, the CCAMLR Symposium faced a last minute change of location to Santiago due to the unforeseen eruption of the Calbuco Volcano.

The Symposium took place at the Sheraton Hotel, from May 5 – 8, 2015. Organization was jointly carried out by the Australian Antarctic Division of the Department of the Environment, the Chilean Antarctic Directorate of the Ministry Of Foreign Affairs, and the Office of Ocean and Polar Affairs of the U.S. Department of State. The Symposium was opened by the acting Vice-Minister of Foreign Affairs of Chile, Ambassador Alfredo Labbé. His full speech is reproduced in Appendix B.

Participants from several member countries, organizations, and the Secretariat met under the Chatham House rule to take stock of the work done by the Commission until now, and to exchange views regarding the future challenges of the organization. In order to encourage discussion, co-sponsors identified six thematic modules, distributed a list of guiding questions (Appendix A) prior to the Symposium and invited at least two key speakers per session. Each presentation provided perspectives that stimulated discussion between participants. Two sessions each were chaired by the co-sponsors.

At the conclusion of the Symposium, the organizers presented a list of issues that were raised during the discussions. Although these issues were not necessarily endorsed by participants or the co-chairs, they could be considered by the Commission in the coming years. Participants were encouraged to provide feedback on the prioritization of those issues. The co-chairs of the Symposium, Jason Mundy (Australia), Francisco Berguño (Chile), and Evan Bloom (USA) agreed to present a detailed report of the Symposium to the Commission Meeting in October 2015.

This report contains an abstract of the presentations made available by each of the presenters and a general overview of the main elements that were discussed in the six sessions.

Session 1

CCAMLR: 35 years since the signing of the Canberra Convention. The performance of CCAMLR (1982-2015) within the Antarctic Treaty system and the wider international context.

Chair: Francisco Berguño

Presenter: Enrique Marschoff

Resource management is characterized by the peculiar juridical situation of natural resources which are either "common property" or "res nullius", and also by the history and diversity of the regulatory system.

From very early times, it has been recognized that some form of regulation is required to prevent the "tragedy of the commons", since in the absence of an accepted system of regulations, natural resources become *res nullius*. As a fisherman once pointed out regarding common hake: *"I know they will disappear. But I want to catch the last one"*.

Fisheries regulations have even been found on Babylonian tablets dated back to 5000 BC. There are also examples of medieval measures which covered all aspects of the fishery concerned. Many societies developed regulatory systems based on cultural or religious principles applied by self-governing communities, but these were not always able to ensure long term sustainability and appealing to an external authority was required to solve conflicts.

In the late 19th Century the question of how fisheries impact on the resources were still under discussion; but the general view, in spite of evidence to the contrary, was that resources were to be used to maximize the benefits obtained.

In the southern hemisphere, seals were depleted in the 19th Century followed by whales in the early 20th Century. Throughout the late 19th Century, South American countries proposed different alternatives to expand their jurisdictions through regional commissions, not recognized by long distance fleets.

Great concern was raised at the time in scientific circles and in 1924 José León Suárez, proposed to the League of Nations that a commission composed by representatives of all interested governments be appointed so as to draft common regulations for “marine industries”, noting the growing need for food resources and the fact that existing treaties were insufficient because of their regional approaches directed to balance political and commercial interests.

The concept of MSY (maximum sustainable yield) was introduced in the 1940s carrying the idea that overfishing is economically unsound while fishing below MSY is a waste. The priority of management became the discovery of new grounds and resources; long-range fleets expanded due to the support of subsidies and research programmes as well as the fishing capacity of developing countries. The idea of imposing catch limits progressed but the regulation of fishing capacity was considered unfeasible. In the period from 1973 to 1982 UNCLOS was negotiated expanding national jurisdictions to cover 40% of the world’s most productive waters.

During this period, CCAMLR pioneered the introduction of conservation as a goal per se and the concept of ecosystem management. Since it is included within the framework of the Antarctic Treaty, the resources are managed without “owners” that can decide the fate of the resources satisfying their own needs. The CAMLR Convention and its operation became a leading organization with widespread recognition.

Article II of CCAMLR imposes on members the commitment of returning the Antarctic ecosystem to the state “as they found it”. While the CCAMLR Scientific Committee has provided operational solutions to the question of reversibility in 20 to 30 years, critical juridical and practical problems still remain: a definition for “rational use” and a method for effort control (and allocation).

Rational use might be characterized by examples of irrational use: shark finning and olympic fishing. Effort control requires finding a juridical solution to effort allocation preventing both, the exclusion of non-contracting parties and the creation of rights.

A copy of this presentation is available in Volume 2.

Presenter: Osvaldo Urrutia

CCAMLR IN THE WIDER INTERNATIONAL CONTEXT: INTERACTIONS WITH THE LAW OF THE SEA AND SOME CHALLENGES AHEAD

By law of the sea we understand the international set of rules that governs the oceans, marine jurisdictional zones and all –or almost all– economic activities at sea, and of course national implementations of these rules. This includes UNCLOS two implementing agreements; one of them touches directly upon fisheries: the 1995 UNFSA; multilateral regimes and treaties related to specific areas of the law of the sea: environment (e.g., MARPOL and London Convention and Protocol), safety at sea and in general IMO rules in this regard and fisheries (e.g. the FSA or the FAO 1993 Compliance Agreement), as well as rules applying to RFMOs and regional agreements on marine pollution.

Jurisdiction is the key word in the law of the sea. Who has the right to regulate and to enforce, and where. There is a carefully agreed balanced between coastal States and third-flag states in every single maritime area.

In Antarctica, as part of the AT, seven original States claim sovereignty and also other founding States and many that followed do not recognize those territorial claims. Under Article IV of the AT, the famous “agreement to disagree” that this provision entails, States have been able to freeze and set aside this issue, to move forward and to cooperate for the administration of this vast continent on constructive terms.

When in a given territory there is no agreement about which the sovereign is, the rule that “the land dominates the sea” does not work. Therefore, the legal construction of maritime spaces –the key to regulate the oceans– does not apply here. In practical terms there is no coastal State jurisdiction in Antarctic waters.

However, the ATS and CCAMLR are regarded as having been a success in facilitating harmonious international cooperation in Antarctic waters. The obvious threat to ATS/CCAMLR from the LoS is the potential that the ATS/CCAMLR are overtaken by the global regime addressing oceans issues ahead of them as a regional regime (or indeed impinging upon the agreement to disagree). As a result CCAMLR has needed to stay “ahead of the game” by addressing new issues in an effective manner.

There are several topics in which CCAMLR has been indeed at the forefront, such as the ecosystem approach to management and IUU measures including regulations for

VMS, CDS, etc. ATS and CCAMLR have achieved a legal and political framework reasonably successful not only for peaceful coexistence but also for a constructive environment to develop the rules for the Antarctic and the Antarctic Ocean. So even if in practical terms there is no coastal State jurisdiction, there is yet a regulated area under the terms of the ATS and the CAMLR Convention. This means firstly and mostly Flag state jurisdiction, but it is not necessarily the only jurisdiction to apply. For the purpose of CCAMLR, Flag state is not, nowadays, the only applicable jurisdiction. For instance: regulations for the trade in toothfish and the CDS, trade measures and Port State jurisdiction for the purpose of combating IUU fishing.

In the context of the interaction with UNCLOS, CCAMLR has currently a lot of challenges. IUU fishing is probably the main area where CCAMLR could make a difference. There is a need of a more assertive and hopefully common approach to inspection, boarding and detention of FoC / IUU vessels. CCAMLR is in a suitable position to push the limits further, especially when it comes to FoC which may be regarded as having no nationality or having no genuine link with a given vessel. Regarding non-members which do not cooperate with the CDS, trade sanctions should be consider and eventually imposed.

Another challenge to be addressed is safety at sea. CCAMLR should not work apart from the IMO trends, but should not wait for regulations for fishing vessels to come from a different forum either – even IMO. Safety and environmental operational standards are important too. CCAMLR should search for a regional approach in order to strengthen safety for fisherman as a regulatory regime.

A copy of this presentation is available in Volume 2.

Session 1: Discussions

The interaction of CCAMLR with other legal agreements was one of the main topics discussed in this session. Amongst other international fora, the Ad Hoc Open-ended Informal Working Group to study issues related to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction (BBNJ) was discussed. Despite the early stages of the BBNJ discussion, some participants noted that it is likely to have an impact on CCAMLR, especially if it deals with fisheries and overlapping jurisdictions.

Some offered the view that there could be opportunities for CCAMLR to benefit if there was an agreement for cooperation with BBNJ (or other bodies), since it can open a dialogue between them.

Some participants considered that CCAMLR members should have a common approach in the BBNJ negotiations, especially for any activities that relate to the CCAMLR mandate. On the other hand, some felt that moving forward with a common view would be difficult to achieve since CCAMLR members may have different approaches in other international fora due to divergent interests. It was noted that where discussions in other fora have implications for Antarctic marine living resources, CCAMLR had a mandate to participate and address these issues.

Some participants referred to the inevitability of discussions in other fora impacting on the business of CCAMLR, and the need for CCAMLR to have an outreach program in order to interact with other relevant international fora and non-contracting parties.

Some participants noted that CCAMLR is seen by many as a proactive body, with the capacity and potential to move ahead compared with other legal bodies on several matters. Participants pointed out the priority given to science within CCAMLR, and to the importance of the construction of policy based on the best available scientific advice.

Some participants raised the point that CCAMLR faces several challenges today including the lack of a common understanding of what is rational use, allocation of effort and its relationship with non-contracting parties. Some participants considered there were several areas in which CCAMLR could take a more assertive approach, such as improving the System of Inspection, and market-related measures to eradicate IUU fishing. Safety of vessels at sea was also raised as an issue that should be addressed by CCAMLR. In this

regard it was suggested that an area of potential growth for CCAMLR cooperation was with the International Maritime Organization.

Furthermore, participants referred to climate change, noting that the changing patterns of fish stocks moving south may also affect CCAMLR. Some noted that CCAMLR should give more consideration to straddling stocks as their movement will become more relevant with climate change. Some suggested that it would be beneficial for CCAMLR to have an ongoing dialogue with relevant coastal states outside of the Convention Area.

Some participants expressed concern that CCAMLR was at risk of having its mandate eroded. Some also suggested that whilst 10 years ago CCAMLR was one of the better organizations with regards to making decisions on the basis of the best available scientific advice, the same could not be said today.

It was noted that many of the issues raised in this session are generally not discussed during annual CCAMLR meetings; some participants suggested that it is important to take more time to discuss these issues at the Commission meetings. Some called for proactivity within the Commission, and the Antarctic Treaty system more broadly.

Session 2

Article II of the Convention: CCAMLR's objective of Conservation where the definition includes rational use. Can we achieve a shared understanding?

Chair: Jason Mundy

Presenter: Wensheng Qu

Given the analysis of the wording of Article II, other relevant provisions in the Preamble and substantive articles of the Convention and its negotiation history, it is clear that the objective of the Convention is the conservation of Antarctic marine living resources, not the conservation of Antarctic marine ecosystem. There is a clear intention of the Contracting Parties to give a special meaning to the term "conservation", which includes "rational use" as an integral part of the objective of the Convention and aims at striking a balance between preservation and utilization of marine living resources in the Convention area. The contracting parties to the Convention bear the responsibilities to protect Antarctic marine living resources and, at the same time, also enjoy rights to conduct activities of rational use of those resources subject to the provisions of the Convention.

The three principles contained in paragraph 3 of Article II establishes clear and concrete goals for the achievement of the objective of the Convention and also provides operative guidance and criteria for determining the scope of the term "rational use". Any harvesting and associated activities which are consistent with the three principles shall be regarded as rational use. The precautionary principle and the ecosystem approach are embodied in the three principles of conservation. However, distinction should be made between the objective of the Convention and the approach applied to achieve such objective. The three principles are intended to apply to harvesting and associated activities only. Therefore the objective of the Convention is to be achieved through regulating and managing harvesting and associated activities. When considering any conservation measure which may restrict or prohibit harvesting and associated activities, the Commission is required to ascertain, on the basis of the best scientific evidence available, that harvesting and associated activities to be restricted or prohibited are

inconsistent with the three principles. Given the unique status and importance of scientific research in the Antarctic Treaty system, it shall be encouraged by the Commission and, in general, shall not be the target of restrictive measures.

The Commission shall coordinate and cooperate with the ATCM and other institutions in accordance with the provisions of relevant international instruments and on the basis of equality. However, any conservation measures to be adopted by the Commission shall meet the requirements as set out in Article II of the Convention and shall not go beyond the limits of mandate provided by the Convention. Through effective implementation of the Convention and close cooperation with the ATCM and other relevant institutions, the Commission could make its contribution to the achievement of the overall objective of the protection of the Antarctic environment and dependent and associated ecosystems.

A copy of this presentation is available in Volume 2.

Presenter: Olivier Guyonvarch

The complex and delicate CCAMLR ecosystem and precautionary approach sets this organization clearly apart from other fisheries management regimes, which do not provide with such careful conservation measures for marine ecosystem conservation and rational use. CCAMLR is a marine ecosystem conservation international organization, where rational use of marine resources is conditioned by global and specific objectives of conservation, in a context of precautionary and ecosystem approach taking into account all components of ecosystems, harvested or not.

Members of the Commission should share the same vision, which was enshrined by the negotiators in the text to the Convention signed in 1980 and entered into force in 1982, and which has demonstrated its efficiency in conserving Southern ocean marine resources while allowing fishing activities in a sustainable and profitable way.

A copy of this paper is provided in Volume 2.

Presenter: Andrew Constable

Article II provides for the conservation of Antarctic marine living resources (CAMLR), which are defined in Article I as all populations in the ecosystem south of the Antarctic Convergence. Rational use can be undertaken in the Convention Area but is a subsidiary objective to the conservation objective. Lastly, harvesting is a specific case of rational use that is required to meet specific objectives.

This presentation develops a process for the Commission to assess progress in achieving the objectives of CCAMLR; twelve questions are derived from Article II that, together, can be used for this purpose. A concept of 'reference state' is proposed for underpinning these questions. Here, the Article II *Reference State* is defined as 'The ecosystem state consistent with how the ecosystem would be (at the time being considered) if there had been no fishing since the beginning of CCAMLR.'

Three of the twelve questions relate to the conservation objective in Article II, paragraph 1: (Q1) Are threatened and endangered species and depleted populations being safeguarded? (Q2) Are source areas and refugia being maintained at a spatial scale suitable for sustaining Antarctic and Southern Ocean biodiversity? (Q3) Is the *Reference State* of the Antarctic marine ecosystem changing, including changes in productivity, distributions of species, and restoration of depleted populations?

Two questions relate to the conservation of target species of fisheries in Article II, paragraph 3(a): (Q4) Are the patterns of recruitment of target species unaffected? (Q5) Is recruitment consistent with the productivity of the *Reference State*?

Three questions relate to the maintenance of ecological relationships and restoration in Article II paragraph 3(b): (Q6) Are ecological dynamics being sustained? (Q7) Is restoration of depleted populations being impacted? (Q8) Are ecological dynamics consistent with the *Reference State*?

Two questions relate to recovery and change in Article II paragraph 3(c): (Q9) Can the *Reference State* of the ecosystem be assessed? (Q10) Will the marine ecosystem be restored to the *Reference State* within 2-3 decades if fishing ceased?

Two questions relate to prevention of change and managing uncertainty in Article II paragraph 3(c): (Q11) Can catch rates be updated as required to remain consistent with the *Reference State*? (Q12) Will principles be achieved despite uncertainties in these questions?

The presentation concludes by examining how well science and implementation have been undertaken in support of the Commission addressing the twelve questions derived from Article II. These can be summarized in four areas. (S1) Assessments, taking account of uncertainty, including (i) stock status and future states, (ii) status and trends of key habitats, species, food webs (including depleted populations), and (iii) spatial assessments of what might happen to the future amenity of biodiversity. (S2) Spatial management: (i) maintained source areas and refugia for stocks and biodiversity, (ii) reference areas for status and trends without effects of fishing (*Reference State*), and (iii) spatially structured fishing to learn about the ecosystem. (S3) Targeted science to eliminate key uncertainties, including (i) long-term field observing program, (ii) key process studies (what are major sensitivities), and (iii) modelling (integrated ecosystem modelling and advice) and (S4) Compliance, including (i) reduction of incentives for illegal activities by legal operators, and (ii) elimination of unregulated and unreported fishing.

Most attention has been on assessments of stock status of target species and the implementation of measures to eliminate IUU fishing. Apart from the successful mitigation of seabird mortality in longline fisheries, progress in the other areas has been either insufficient or incomplete in its coverage of the CCAMLR area.

A copy of this presentation is available in Volume 2.

Session 2: Discussions

This session's discussions began with a reference to the origin of the Convention and its roots in the Antarctic Treaty. It was noted that the text of the Convention reflects a discussion that was taking place during the 80s which, in the opinion of a participant, is very interesting to analyze with today's eyes, because of the changing nature of the Antarctic ecosystem. Some participants considered it was difficult to interpret precaution if there are changes taking place continuously to the system. Some asked if the Convention should be modified to address the fast-paced environmental changes taking place, or whether the Convention should continue to be interpreted as it is? A definition of a reference state was proposed, but some pointed out that it was difficult to define such a state, due to either the ecosystem changing too slowly or the ecosystem changing

dramatically as a result of a significant event. On that matter, it was recalled that Article II, paragraph 3 c) takes account of environmental changes and, therefore, the Convention should not be changed.

Further, it was suggested that where there were different interpretations of Article II (3) and there were uncertainties, science will bridge the difference. Some noted that the policy interpretation of Article II and the scientific approach to Article II were interlinked, and that the interaction between science and policy needed to be strengthened. It was further suggested that some areas of work such as whole ecosystem relationships was currently largely absent from CCAMLR's work, and that instead of focusing on single species or stock, a more interactive approach should be adopted to deal with ecosystem issues.

On the other hand, some considered it is important to address whether the interpretation of Article II affects the way the scientific work is conducted. It was noted that while scientific advice should not be affected by legal or policy interpretations, there are times when the Scientific Committee will need to prioritize its work depending on the interpretation of Article II which may require guidance from the Commission. Participants discussed Article II being at the core of the Convention; that it separates CCAMLR from traditional fisheries management organizations. Participants noted the Convention needed to be considered in the context of the Antarctic Treaty and the Protocol on Environmental Protection. It was noted that the objective of the Convention is "conservation where the definition of conservation includes rational use"; conservation is not protection alone nor rational use on its own. Some participants recalled that the Convention needs to be considered in the context of its negotiation history and supporting documentation and not in isolation. It was noted that the objective is conservation and that conservation is not equally weighted with rational use, rather that use is allowed but cannot impede achieving conservation. It was pointed out that CCAMLR follows an ecosystem approach, not only to manage stocks but to conserve all Antarctic marine living resources. Participants generally considered a common mission was necessary and that it needed to come from Article II.

On the issue of the objective of the Convention, the right of State Parties to harvest was also referred to, and it was noted that Article IX of the Convention refers to those activities that should be allowed if done rationally and consistent with the principles of Article II. It was also stated that the Commission can only take restrictive or prohibitive measures in cases where it is certain that the fishing activities are inconsistent with Article II (3). The question was raised as to how such a right to fish could be consistent with Article IX (2) (f), which provides for open and closed areas, and further that rational use

takes place within the context of conservation, and that the Commission has a responsibility to ensure that harvesting activities do not impede achieving that objective, not vice versa.

MPAs and how they relate to Article II were also explored. It was expressed that MPAs and in particular Conservation Measure 91-04 must be interpreted and implemented in accordance with the objective of the Convention and should not go beyond the objective of the Convention and Article II. It was also suggested that any conservation measure that goes beyond the objective of the Convention would be null and void.

The link between the three principles from Article II (3), and how the Commission seeks advice from the Scientific Committee was also pointed out. Participants considered that the first principle of Article II (3) is clear, in that the decision rules provide guidance. It was further discussed that there is a clear mechanism to assess the status of stocks related to the first principle (prevention of decrease in the size of any harvested population to levels below those which ensure its stable recruitment). Participants noted that the other two principles of Article II (3) prove more challenging, and that due to the lack of clarity on the second and third principles the Scientific Committee had difficulty providing advice to the Commission. It was suggested that in order to solve this, guidelines for scientific assessment, thresholds, and definition of specific levels consistent with the Convention's objectives might be useful. In response to the suggestion to define 'reference state' it was noted that the Scientific Committee needed to consider what an acceptable reference state would be for the system, which would then enable the Scientific Committee to provide better advice to the Commission.

Some participants noted that there will be changes in the environment that will require a change in the way the Scientific Committee presented advice to the Commission. This was considered by some to be an issue of practical implementation that needs to be tackled: the role of the Scientific Committee, and the interaction with the Commission on predefined matters.

Regarding scientific research, a differentiation in its status or regulation was proposed depending on the level of harvesting involved. Scientific research that involved substantial fishing activities should, it was considered, be regulated by the Commission. It was suggested that other scientific research activities which do not involve substantial harvesting, but can enrich the scientific knowledge of the Convention Area and therefore the ecosystem, should not be restricted. The need to differentiate between scientific research and other activities was also considered.

The importance of context, i.e. the objective and purpose when CCAMLR was created was discussed, noting that the Convention was negotiated over concerns for the ecosystem where krill was considered a fundamental component of the ecosystem, noting that conservation at that time meant something very specific and different to sustainable use. It was considered that Article II (3) provides the specific rules for harvesting and it should be read together with Article IX. In seeking to understand and differentiate CCAMLR's objective from other international agreements, CITES and RAMSAR were noted as examples of where the concepts of conservation and prevention are considered.

Some noted that the terms of the Convention are clearly defined, and only if there is some ambiguity should the Commission resort to other principles of international law for interpretation. It was further suggested that, Article II was unambiguous as are the definitions of Antarctic marine living resources and the ecosystem in Article I.

The participants were asked to reflect on a series of questions that the Scientific Committee may take into account in reporting to the Commission. It was suggested that an important consideration for the Scientific Committee was what science is needed to address questions on adequacy, how to identify when an activity is failing to meet the objective, and how to ensure that harvesting activities do not impact on research.

The session elicited various legal, policy, and scientific elements in the interpretation and practical application of Article II. The session also noted that there were elements of Article II for which there was a common understanding as well as parts for which there wasn't. Some also noted that it was not necessary to have complete agreement on the legal interpretation of all elements to enable application. Some participants also said that there may be merit in further exploring the decision rules with a view to clarifying the definition of the reference state. A key theme that was again highlighted was the importance of cooperation within the ATS and other relevant international organizations.

Session 3

The implementation of ecosystem and area protection in the framework for managing CCAMLR fisheries

Chair: Osvaldo Urrutia

Presenter: Joji Morishita

The MPA (Marine Protected Area) concept is interpreted and promoted in many different ways and this lack of common understanding has been making the MPA discussion in CCAMLR and many other international fora more difficult.

Public perception is often that a MPA is "large scale, permanent … and no-take marine reserves". On the other hand, international organizations such as IUCN and CBD have their definitions of a MPA; "*Any confined area within or adjacent to the marine environment, together with its overlying waters and associated flora, fauna, and historical and cultural features, which has been reserved by legislation or other effective means, including custom, with the effect that its marine and/or coastal biodiversity enjoys a higher level of protection than its surroundings* (CBD COP7 Decision VII/5）."

Furthermore, in 1994 IUCN presented six categories of protected areas that include wide ranges of protection levels. They are very different from the public perception.

Then, what is a MPA? How is it different from traditional spatial and temporal management measures, e.g. closed areas and closed seasons?

In a sense, CCAMLR answers these questions in CM91-04 through the descriptions of MPA objectives. CM91-04 also defines a MPA by listing its components including definition of boundaries, establishment of management plans, establishment of research and monitoring plans, and introduction of review and feedback procedures, among others.

While establishment of a MPA is often promoted as if it is the goal of conservation and management framework, the reality is and should be, as described by CM91-04,

establishment of a MPA is not a goal but a start of conservation and management of marine living resources and their ecosystem. Because of scientific uncertainties and dynamic nature of ecosystems, an adaptive approach is essential in designing a MPA.

A copy of this presentation is available in Volume 2.

Presenter: Jillian Dempster

CCAMLR has had some remarkable successes in the implementation of ecosystem-based management and area protection, for example seabird by-catch mitigation, combatting IUU fishing, and the toothfish tagging programme. Compared to many fisheries management organisations, CCAMLR is able to act relatively quickly, be responsive to threats, and we have a remarkably strong science-policy interface. But we cannot be complacent in the face of growing challenges. In particular, CCAMLR needs to be certain that it is addressing the entirety of Article 2, and that equal attention is being given to conservation objectives alongside fisheries management objectives. We face growing challenges in the CCAMLR Area, both man-made and environmental. CCAMLR must fully utilise existing tools, and further develop others (particularly Marine Protected Areas), or else risk being ineffective. The case study of Type C killer whales in the Ross Sea, and in particular the risk of future depredation or prey competition with the toothfish fishery, highlights the kind of emerging issues CCAMLR will need to address if it is to achieve the objectives of the Convention. It is important that all of CCAMLR's decisions reference our desired future state, namely that a healthy ecosystem, with significant science investment, a network of MPAs, enhanced understanding of the effects of fishing and other threats, and sustained commitment and the will to act.

A copy of this presentation is available in Volume 2.

Session 3: Discussions

The discussion on ecosystem and area protection began with the question of whether the establishment of MPAs was the most appropriate tool to invest in: i.e., given the ecosystem is facing so many changes, should the Commission study a wider range of tools? Some noted that MPAs would enable a long term commitment by Members and would produce a broader range of responses to investment. It was further suggested that there is a difference in scale with other conservation tools such as Small Scale Management Units (SSMUs) and Small Scare Research Units (SSRUs) which provide shorter term, target-species-specific outcomes.

When referring to 'long term', it was noted that the length of time for MPAs can vary substantially depending on the objectives and the ecosystem requirements, e.g., if the objective is the protection of landscapes, long term could imply many years, but if it is for sustainable use of a certain resource, it could be shorter. It was further considered that due to the changing nature of the ecosystem, it was important to invest in the most appropriate tool, which may or may not be MPAs. Participants considered that appropriate management tools, if applied, should be able to handle changes in the ecosystem.

Some noted that MPAs were considered as the best tool to deal with climate change because they allow the Commission to address a whole host of objectives at the same time, provide insurance against effects of climate change, and facilitate dealing with unknown outcomes in the future. It was further suggested that because MPAs are not necessarily static in time, revisions to them on the basis of observations will be very important in a changing climate.

It was suggested that there were perhaps two layers to the discussion: firstly, where are the areas in the Convention Area that are important for conservation and science; and secondly, how do we give effect to all the values and objectives. It was further suggested that once these questions are considered, the Commission could determine how we classify them, whether they would be SSMUs, SSRUs, MPAs or some other management tool.

The issue of resources and how CCAMLR can continue to support the management of sustainable fisheries was raised, specifically that responsibility has fallen on the Members whilst the benefits go to the fishermen, who are not adequately contributing to the system. Members were asked to consider whether the Commission should be directly charging industry more so that the Scientific Committee can channel that money into

research. The notion of a research fund was discussed, including that if a research fund is to be created, all stakeholders should be involved in the process. Participants considered that CCAMLR resources were seriously undervalued and discussed other ways to better establish a user-pays system including amending Member contributions, increasing notification fees and providing incentives for research to fishermen. Whilst noting all the options available to the Commission, it was considered important to include fishermen in the discussions.

Participants discussed adaptive management. Some suggested, that in the face of ongoing changes, adaptive management has the advantage of enabling all stakeholders to participate in the assessment of management and conservation measures. It was noted that one of the assumptions of adaptive management is uncertainty, and because there are many unknowns, contribution to the monitoring process by a wider group of stakeholders is fundamental. It was further suggested that the identification of mechanisms to extract greater investment by those who benefit in areas such as research and management requires a sustained effort - an approach that is gaining support, and could be considered in CCAMLR.

Noting that it usually takes a long time to detect large scale changes, participants considered that this puts the Commission in a difficult position to come up with response actions first and monitor later. It was further noted that the key benefit of adaptive management as a tool is that it allows fast responses to large scale problems before all the information is available to the Commission. Alternatively, it was suggested that even adaptive management may not enable fast enough responses and the precautionary approach in CCAMLR requires response actions before effects can be detected. In further discussing response actions, it was suggested that the need to act should be based on the objectives being sought. Therefore when considering long term objectives, it was noted that MPAs could be one of several tools.

Participants discussed how MPAs can complement other management tools. It was considered that for some systems short term open and closed areas will not be an adequate solution. On the other hand it was noted that for short lived species, MPAs may not necessarily be the best tool. It was suggested that for short lived species or where ecosystem changes occur quickly, a system of short term open and closed areas may be a better tool. Even though MPAs are not the only solution, some considered they are important to help understand the overall dynamics of the ecosystem. Participants also discussed other positive effects of MPAs (e.g. protecting spawning grounds).

Some noted that one of the difficult aspects of MPAs and spatial and temporal management are the perceptions of those concepts. Some participants pointed out that

there are different interpretations of MPAs. It was also noted that misinformation produces misconceptions and this is evident in forums outside CCAMLR. It was suggested that in order to rise above these perceptions, key considerations should be to be clear about objectives and functions of MPAs and for science to inform discussions. Some participants noted that if CCAMLR is successful in overcoming current obstacles (and recalling that it has already adopted an MPA) CCAMLR could deliver real benefits to broader international discussions on MPAs.

Discussions noted that Conservation Measure 91-04 provides a good framework for spatial and temporal management. Some also pointed out that CM91-04 provides for what MPAs should do rather than what they are. It was suggested that specifics must be built in to MPA proposals to ensure there are mechanisms in place to monitor parameters that indicate change, and to have an appraisal of the uncertainties and develop research and monitoring to address these. It was also suggested that in order to assess the effectiveness of MPAs as a conservation tool, the establishment of management plans, research and monitoring plans, and the introduction of review and feedback procedures are fundamental.

Participants noted that although there were different views on MPAs, the Commission has already agreed to the creation of an MPA network through the adoption of CM 91-04. It was suggested that a possible way forward was the creation of an intersessional process to discuss MPAs. It was suggested that a working group that included participants from both the Scientific Committee and Commission may be able to work through some of the difficult issues and could be modeled on similar such bodies used by CCAMLR in the past (for example the Joint Assessment Group).

Session 4

Climate Change: The role CCAMLR can play and projections and CCAMLR response options.

Chair: Polly Penhale

Presenter: Esther Winterhoff

The presenter gave a brief outline of current developments, both at international political level and with respect to rapid environmental changes in the Antarctic and beyond. The impacts of those changes on Antarctica as a sensitive climate barometer are far from being thoroughly examined and understood. It is therefore important that CCAMLR contribute within its competence to improved data collection and analysis. The Working Group on EMM, the CCAMLR Ecosystem Monitoring Program (CEMP) and the cooperation with the Scientific Commission on Antarctic Research (SCAR) are important tools to date. Further CCAMLR-contributions could be made by

- closer coordination with other relevant international organizations,
- analyzing climate change studies and incorporate results in CCAMLR management decisions,
- implementing relevant recommendations (e.g. of the SCAR Horizon Scan Approach), including considering an "Antarctic climate change categorization" exercise of areas or ecosystems within the CCAMLR jurisdiction,
- integrating climate change issues as a regular item on the CCAMLR agenda and
- agreeing on Marine Protected Areas.

The development of a roadmap with climate change related priorities and a time frame could trigger relevant CCAMLR measures.

A copy of this presentation is available in Volume 2.

Presenter: Olav Rune Godø

Climate change is occurring now and we are all affected. In the North we are happy to notice more productive seas and grapes in the garden, but these gains are brutally overshadowed by dramatic events elsewhere in the world. Climate change has always taken place at different intensity and with different periodicity. UN climate panel gives a realistic insight in the positive and negative influence on the marine environment that should be closely listened to. Their positive signs are that the large scale circulation systems of the oceans seems to persist and that higher latitude marine production might give rise to higher commercial catches. The largest threats are the warming oceans combined with change in pH which represents risks to productivity in fisheries and aquaculture.

For the Antarctic the galloping ice melting and the simultaneous acidification in the west and around the Antarctic Peninsula region are of great concern for the recruitment and production of krill with potential cascading effects through the whole ecosystem. When being under threat, it is particularly important to carefully analyze the situation and critical evaluation the enormous amount of research now produced under the "climate threat" label. For example, the ice melting in the west needs to be balanced with simultaneous increase in East Antarctica ice masses, and the robustness of the ecosystem to acidification and temperature changes should not be underestimated. Organisms experience normally variation in pH in time and space that override the predicted trend in acidification the next 100 year. Nevertheless, CCAMLR need to be proactive and contribute to the understanding of impacts of climate change. The remoteness of the Antarctic and the lack of research vessel capacity require rethinking of how the ecosystem can be monitored. CCAMLR manage a competent and efficient capacity of fishing vessels that are present in the area year around. This represents a unique capacity that could dramatically increase our database. The Southern Ocean Observing System (SOOS) could be used as a framework for systematic data collection and thus the CCAMLR initiative could support the whole scientific community in enlighten the climate impact issue. Also, CCAMLR needs to reconsider its organization to secure that this issue is given appropriate attention and effective action by the SC and Commission combined. Finally, the proposed stronger involvement of stakeholders will improve common understanding and legitimate management and thus result in a better basis for efficient future consensus decisions in the challenges CCAMLR now faces.

A copy of this presentation is available in Volume 2.

Session 4: Discussions

Participants noted that we are living in a world which faces the effects of climate change, and that the Southern Ocean is no exception. Most participants considered it was critical for CCAMLR to start identifying the impacts of climate change and how it will affect the achievement of CCAMLR's objective. It was acknowledged that because the uncertainties associated with climate change are greater in Antarctica and the Southern Ocean than for some other areas, better understanding of the changing nature of Antarctic ecosystems is important.

In this sense, the interaction between the Commission and Scientific Committee to identify the most pressing matters was considered important. Clear communication from the Scientific Committee on the implications for Antarctic marine living resources was considered crucial to enable the Commission to make informed decisions. In this context participants noted that a key question CCAMLR needed to consider was: what are the key parameters that the Scientific Committee can prepare for the Commission to assist with better decision making by the Commission? Some suggested that implications for krill and toothfish may be considered as a starting point.

Participants noted the importance of strengthening scientific research and monitoring, and identified several tools. Long term observation systems were considered to be important. While some expressed that no take MPAs are the best way to observe which changes are due to fishing and which are due climate change, others noted the importance of fishing fleets in data collection. Some also considered MPAs should be established for long periods to enable are understanding of the implications of climate change on Antarctic marine living resources. Some noted building resilience should be an important consideration in climate change discussions.

Some suggested strengthening the relationship between CCAMLR and the Scientific Committee on Antarctic Research (SCAR) so as to enable a more fruitful dialogue and so that SCAR can contribute to data collection. The relation between SCAR and the Antarctic Treaty Consultative Meetings (ATCM)/Committee for Environmental Protection (CEP) was noted as an example where there is already cooperation on climate change impacts. Some participants considered the interaction between Scientific Committee and the Commission needed to be more than the delivery of the SC report to the Commission and they considered a more interlinked group should be established to allow free flow of information. Others noted that the Commission should take a stronger role in giving policy

guidance to the Scientific Committee, including taking care to request advice on issues where scientific input was needed for taking Commission decisions.

Some participants pointed out that the key element to assist with understanding and managing a system that has changed, and is changing further, is baseline data. Some examples suggested were research on life history of specific species, changes to stock structure, and large scale migrations. Reference areas were considered by some as a useful tool in this regard. Participants also suggested it was important to request the Scientific Committee to identify management strategies that take account of climate change and convey information so that the Commission can take appropriate actions.

In concluding this session, the participants discussed the following key considerations: How do you detect climate change and how can changes be attributed to climate change rather than fishing?

Participants noted that the Commission and scientists should communicate more actively. It was also suggested that the Commission should find a mechanism to have more considered climate change discussions and should not only look to the Scientific Committee. In this context the participants noted that the Commission needed to consider its role as a policymaking body.

Some participants suggested that the Commission needed to consider how to take climate change into account and a practical way to move forward: for example, by considering how conservation measures could be drafted to account for climate change implications. It was further discussed that the Commission also needed to consider what additional questions they should ask the Scientific Committee.

Session 5

CCAMLR: which are the most effective/efficient means for the Scientific Committee and the Commission to do their business?

Chair: Jason Mundy

Presenter: Joji Morishita

Based on the CCAMLR Performance Review in 2008, three items were addressed in this presentation:

1. Improvements of the Schedule and Organization of meetings
2. Decision-Making, and
3. Special Requirements of Developing States.

Regarding improvements of the schedule and organization of meetings, the Review Panel, recognizing the serious implications of any reorganization or expansion of work and the need for prioritization of activities, recommended avoidance of duplication of work carried out by the Standing Committees and the plenary of the Commission, avoidance of repeating and/or reopening matters addressed in reports from Standing Committees, and delegation of far more work on detailed or technical matters from the Standing Committees to subsidiary groups. While no significant follow-up action has been taken, there could be many practical improvements in format of reports, their adoption, and scheduling of meetings.

The Review Panel observed that consensus decision-making process by CCAMLR is very positive while suggesting implementation of substantive decisions could be submitted to a different procedure. The Panel recommended a majority ruling on implementation matters with an abstention clause, creation of an expert panel to deal with the determination of factual matters (i.e. inclusion of a vessel on the IUU vessel list), and introduction of “a negative consensus” to turn over panel decisions. These issues are not yet considered by the Commission.

As to the issue of special requirements of developing states, the Review Panel recommended establishment of a dedicated fund to support Developing States, identification of current best practice and existing arrangements elsewhere, particularly within RFMOs, in relation to Developing States, and provision of available information on other funding sources to assist Developing States who wish to engage with CCAMLR. While some discussions were made after the Performance Review, no significant follow-up has been conducted.

A copy of this presentation is available in Volume 2.

Presenter: George Watters

To "streamline" an organization is to make it more efficient and effective by employing faster or simpler work processes. It is unclear to what extent the work of SC-CAMLR can be streamlined; the issues that are currently being addressed by the Committee are so complex that it is difficult to work faster or simpler. Nevertheless, by increasing its capacity, improving its processes, and reorganizing its structure, the Scientific Committee may provide more focused, topical, and timely advice to the Commission.

The capacity of SC-CAMLR might be increased by strengthening and broadening the experience and expertise of individuals that work within CCAMLR's scientific community, promoting the responsibility of Members' representatives to the Committee, and enhancing financing for science. The experience and expertise of CCAMLR's scientific community can be improved by keeping the CCAMLR Scholarship Scheme alive and healthy, supporting the participation of individuals over the long term (including development of succession and mentoring plans when long-term participants leave the community), making the Committee's reports easier to understand, and utilizing external experts (e.g., from SCAR) and the Secretariat more frequently. Members' representatives to SC-CAMLR could take greater responsibility to address CCAMLR issues if their workloads at home are prioritized to emphasize the work of SC-CAMLR and they are provided increased financial and personnel resources by their governments. The Representatives can improve their efforts to provide advice by reading more thoroughly (including the peer-reviewed literature) and more actively participating in intersessional work and discussions. Antarctic science is generally expensive, and a budget with no real net

growth like that established for CCAMLR will, over time, limit the range of topics that can be addressed by SC-CAMLR and jeopardize the viability of long-term monitoring efforts to support feedback management of the krill fishery, marine protected areas (MPAs), etc. Financing for science could be improved by continuing contributions to CCAMLR's special funds (e.g. the CEMP Special Fund) over the long term.

The Scientific Committee's processes might be improved by strategic prioritization of its work, accepting failures to reach scientific consensus, and increasing the organization's transparency. SC-CAMLR would benefit from the development of a 3-5 year strategic plan that prioritizes work elements and establishes an advance timeline for their consideration by the working groups. Meeting agendas could then be focused to address priorities, with discussion time preferentially allocated to the highest priority topics. Every topic would not necessarily need to be addressed every year (or at every meeting). This approach would allow Members to better plan how resources might be leveraged to address a particular topic in any given year, and Members could limit their submission of papers to those that specifically address prioritized agenda items. While achievement of scientific consensus is powerful, it can delay report adoption, lead to less emphatic advice, and provide opportunities for policy interests to influence scientific debate. The Scientific Committee might progress its work faster if the Commission agrees to make decisions despite scientific uncertainty or disagreement, the Committee itself agrees to disagree more often, and a new reporting template is adopted that clearly indicates how scientific data, analyses, and inference substantiate each resulting piece of advice, including advice which is not consensus advice. The reporting template should make it obvious which inferences and aspects of advice are robust (or sensitive) to points of legitimate scientific disagreement. Despite existing mechanisms for observers to attend the meetings of SC-CAMLR, the organization's transparency can be further increased, particularly by allowing observers to attend working group meetings. A new reporting template that clearly indicates how advice flows from scientific analysis and inference might also increase transparency.

There is ample scope to revise the structure of SC-CAMLR and its working groups. The scientific work required to support development of MPAs has consumed a large proportion of the WG-EMM's agenda and limited progress on development of feedback management strategies for the krill fishery. The Scientific Committee might be well served to find a new venue within which to consider MPAs. The work of WG-SAM is critical for providing initial review of stock assessments and research plans, but discussions at WG-SAM are often redundant with those at WG-FSA. The Scientific Committees various workshops have been very successful and provide excellent opportunities for external experts to get involved in the work of CCAMLR. The number of

workshops has, however, increased and these now occur all year long and are scattered all over the globe. It might be useful to hold two or more workshops concurrently at a shared venue and regularly scheduled time each year. This would make it easier for Members to plan for and participate in the Committee's workshops. The annual meeting of the Scientific Committee is extremely busy and its proximity in time to the annual meeting of the Commission provides Members' Representatives little time to think and consolidate advice to their commissioners. It might be worthwhile for the Scientific Committee to meet twice per year, with one "large" meeting during the northern hemisphere summer, and a smaller meeting to address loose ends during October.

A copy of this presentation is available in Volume 2.

Session 5: Discussions

Discussions during this session included: how to improve the relationship between the Scientific Committee and the Commission; how the Commission, Scientific Committee and their subsidiary bodies can better conduct their business, including through possible structural changes to improve coordination and efficiency; and whether CCAMLR should undertake an exercise to identify key priorities and set a strategic direction.

One approach discussed was holding all the working groups of the Scientific Committee together in the middle of the year, with the Scientific Committee to follow immediately after. It was noted that a possible difficulty with separating the Scientific Committee from the Commission meeting was having to adjust the current assessment periods for the fisheries to align with a changed timetable and the opening and closing of the fishing season. It was suggested that this could probably be achieved with minimal disruption to ongoing work. It was also noted that in most cases Scientific Committee Representatives were required to attend the Commission meetings and separating the two meetings could create some difficulty. The IWC and CCSBT were mentioned as two examples where the Scientific Committee and Commission were held at separate times. In these cases the understanding was that the Scientific Committee representatives would brief their Commissioners prior to the Commission meetings, with the Chair of the Scientific Committee and the Secretariat having the role of conveying the advice to the Commission.

Some considered the inclusion of observers in the Scientific Committee and its working groups could be beneficial; others considered the best opportunity to harness expertise from observers could be during workshops, through which scientists and policymakers from outside the organization could provide external views. Some considered the proceedings and the rules of procedure were not clear on the participation of observers in Scientific Committee working group meetings and revision of those would enable a more transparent and effective process.

On the issue of finding efficiencies and reducing the workload of the Scientific Committee and Commission, it was suggested to approve conservation measures that extend for more than one year. Some considered if such a practice was introduced it would be important to ensure that there were review mechanisms in place in the intervening period and to consider the conservation measures on a case by case basis.

It was pointed out that there is a level of thematic redundancy in the working groups, mainly because of a lack of clarity on priority issues. It was also suggested that instead of having working groups oriented towards tasks, they should be oriented more around themes such as biology, ecology and conservation; status and trends; and assessments.

The concept of an executive body or a leadership group for the Scientific Committee and Commission was discussed. Several models were mentioned, including one that included the Chairs and Conveners of Scientific Committee and its working groups; or one that included those as well as the Chairs of the Commission and its standing committees. Participants considered this would significantly improve communication and coordination amongst the different groups.

The issue of requiring consensus in the Scientific Committee before advice was provided to the Commission was discussed. Some noted this resulted in important considerations not being forwarded to the Commission as part of the management advice and therefore not being reflected in conservation measures. Others commented that it was paramount that evidence that supports management advice and decisions be recorded. It was noted that consensus was a very important pillar of CCAMLR, and that the Scientific Committee and Commission needed to continue to reflect on their key past achievements in going forward with their approach to management.

Some noted that the current fixed structure of agendas and the meetings were not responsive enough and suggested that a priority setting exercise should be embarked on to set a strategic direction for CCAMLR. As a more immediate issue, some participants suggested a new approach to setting meeting agendas so that they are more flexible to

enable consideration of high priority issues. Some noted that the meeting reports could be improved and questioned whether the current system of report preparation and adoption is best addressing the needs of CCAMLR.

A possible second Performance Review of CCAMLR was discussed. In this context, and in the context of CCAMLR considering a strategic priority setting, some noted that CCAMLR should not restrict itself to the recommendations from a Performance Review or a Symposium but should take a broader perspective to its priorities.

Some considered that CCAMLR should improve its cooperation with developing States. In this context it was suggested that CCAMLR should consider ways to encourage port States and market States in particular to cooperate with CCAMLR to assist its work.

Participants also discussed the role of the CCAMLR Secretariat, noting that the Secretariat may have some excess capacity as a result of efficiencies gained through new information technology solutions, particularly the more interactive website. Participants noted that the Scientific Committee and the Commission should look at ways the Secretariat could assist further with their business.

Session 6

The next steps: Challenges, response options and strategic priorities

Chair: Evan Bloom

Presenter: Jane Rumble

THE NEXT 10 YEARS: CHALLENGES, RESPONSE OPTIONS AND STRATEGIC PRIORITIES

Since it was negotiated 35 years ago, CCAMLR has been a frontrunner of global conservation; at the cutting-edge of international treaties developed to protect the marine environment. CCAMLR's strong objective to conserve the ecosystem is what differentiates it from regional fisheries management organisations. However, for CCAMLR to remain in the vanguard of international conservation efforts for the next 35 years, the ongoing challenges to CCAMLRs objectives must be considered.

Given the current global economic uncertainty, CCAMLR could look to utilise international collaborations to develop greater understanding of the Southern Ocean and deliver scientific priorities. In the future, CCAMLR must consider self-promotion on a global scale; all too often negative stories dominate the headlines, whilst recognition of the conservation and protection delivered through CCAMLR to the Antarctic area is overlooked.

In addition, the operating framework of CCAMLR needs to be flexible and evolve as new challenges emerge. CCAMLR needs to have conservation at the heart of all decision making if it's to be as successful in the next 35 years.

Presenter: Carlos Bentancour

The dimensions of need -The dire straits of want: CCAMLR is a resource management system sitting on top of a trove of scarce resources, as the majority of the five fishing grounds in the world are in need of conservation.

The world's population is steadily growing, and food production will have to satisfy its appetite. CCAMLR should attempt to devise regulation with this scenario in mind. Can CCAMLR withstand the social, political, and commercial pressure, both from within, and from without, 20 years from now?

A success story that might flunk - The learning curve: CCAMLR is, no doubt, one of the few success stories in the area of fish resource management, and it is internationally recognised as such. It has faced, and met a number of challenges posed to the conservation of Antarctic marine living resources, and its environment.

Does this mean that we should pride in our achievements and consider ourselves successful? Are we doing our best to be the best?

*Clear and present danger-Policy vs. Policing: t*he challenges posed by IUU fishing during the late 90's, and early 2000s, were confronted by means of sanctions, and in cases, even by the use of force by some member countries. Although these extreme measures were considered necessary, we must recognise that enforcement brought some collateral damage, as confrontation derived in legal or operational drawbacks.

For some years now, we have seen IUU vessel lists becoming shorter, and shorter. The big question is: Is it because of policing, or because of policy? We still do not know if policies have been the best deterrent of all. Will CCAMLR concentrate on what it does best, and predominantly formulate policies, or is it gradually veering towards something else?

Sense and Sensibility-The dilemma of what is right, and what is wrong: in the particular case of Port Inspections, compliance has to be fully assessed. However, a system devised to stem the flow of illegal catches seems to be slowly turning into a cross-examination of the country performing the inspection, delving in technicalities.

If the inspection is carried out, that is an achievement to be recognised. If 99% of the inspection procedure has been undertaken according to the provisions of the relevant Conservation Measures; why do we have to stigmatise a given country for missed time-frames, or small procedural details?

*The importance of being earnest- More cooperation: t*he conservation of Antarctic marine living resources calls for international cooperation with due regard for the provisions of the Antarctic Treaty, but that mandate has not been fully met. We have failed to show a rather stronger spirit of cooperation for non-Contracting Parties (NCPs).

In accordance with CM 10-07 (2009), CCAMLR is committed to the enhancement of cooperation with NCPs. If our approach is too stern, we run the risk of pushing them away. It is in our best interest to bring them closer.

To protect and to serve - What do we really want? The success of the precautionary approach depends on the formulation of a management procedure which includes decision rules that specify how harvest controls will be adjusted based on the best scientific information available, and the assessments that arise from such information. This derives from the hard work done by the Scientific Committee. Even though this has proved rather successful, we have slowly veered towards a short-term perspective, forsaking the mid and long-term one.

Does the Commission impart clear guidelines to the SC? Does the Commission have a mid and long term view regarding science?

To be, or not to be, that is the question: There is a challenge that has not been met: agreeing on what "best available science" MPAs will be based on. Discussions on MPAs have been turning more, and more political. We seem to have lost focus along the way, as the international community holds CCAMLR in high regard, setting the expectations bar high.

How long are we prepared to show dissension in the ranks? Are we going to find the right mix of political will, and science, to find a common ground to agree on MPAs in the short run?

Presenter: Gillian Slocum

A VISION FOR THE FUTURE: A PERSONAL PERSPECTIVE

In the past 15 years CCAMLR has been successful in significantly reducing IUU fishing and seabird mortality in the Convention Area. These successes can be attributed directly to the Commission, as a collective, working together to develop and implement solutions. The number and complexity of issues that CCAMLR has to deal with has however increased in recent years. As a result, CCAMLR's successes are no longer as significant or as strategic as they once were in terms of achieving the objective of the Convention. CCAMLR could benefit greatly from a priority setting exercise in order to start to make progress on key issues, and position CCAMLR to successfully meet future challenges. In order to determine CCAMLR's priorities a vision for the future could also be useful.

In order to be at the forefront of conservation and fisheries management into the future a vision for CCAMLR was articulated as follows:

- CCAMLR will be proactive in its work and in fulfilling its obligations under the Convention.
- As such CCAMLR will be recognised as the regional manager for the Southern Ocean and there will be no (or less) external pressures to act on global issues.
- CCAMLR will have adopted and effectively implemented conservation-related conservation measures, as well as fisheries-related conservation measures, on the basis of the best available science.
- CCAMLR will have a consistent approach to the management of all CCAMLR fisheries.
- CCAMLR will have an effective compliance regime which sets the benchmark for RFMOs and other relevant organisations.
- CCAMLR will have effective and meaningful relationships with other relevant forums, both within the Antarctic Treaty system and beyond.
- CCAMLR will be making decisions that take account of its history.
- All Members of the Commission will be actively engaged in the work of CCAMLR.
- In particular all Members will be actively engaged in the work of the Scientific Committee, and will be making a contribution to scientific research.
- And most importantly, CCAMLR will have a common purpose.

Session 6: Discussions

Participants discussed a wide range of issues, including existing and new challenges, opportunities for CCAMLR to tackle emerging issues that affect the conservation of marine resources, and embracing such emerging issues in a more proactive rather than a reactive manner. It was noted that CCAMLR is regarded as a unique organization, making it possible to create innovative approaches towards conservation given its mandate is not limited like an RFMO.

Participants noted that creating cooperative relationships with external bodies - such as a regional plan of action - has helped CCAMLR address challenges like IUU fishing, and can help tackle other emerging difficulties. Participants questioned how best to keep

abreast of external developments such as BBNJ. Some suggested it was important for CCAMLR to identify key challenges and stay ahead of the game.

Several elements were noted as relevant in identifying the way forward in addressing uncertainty, including collaboration between Members and stakeholders, and clearly defining shared strategic scientific priorities.

Participants considered that outreach was important. It was noted that CCAMLR has many positive assets that need to be promoted more widely. Some considered the organization lacks an effective public relations program, to emphasize the positive actions taken since it was created, such as: 100 percent observer coverage in exploratory finfish fisheries, tagging programs and seabird by-catch reduction. It was acknowledged that these have been achieved with industry-science collaboration and are all achievements that should be broadcast to build CCAMLR's reputation in the broader international community. On improving CCAMLR's public relations profile, the whole Convention Area being recognized as an IUCN Category IV MPA was mentioned.

Related to CCAMLR's ecosystem and precautionary approaches it was noted that, many regional fisheries management organizations and countries have now included these approaches as their goals, narrowing the gap between CCAMLR and other organizations.

Participants considered maintaining the integrity of the organization and the system to be a key issue. Participants identified the success of the Commission in addressing IUU fishing as a key achievement. Continuing to take strong actions against IUU fishing was regarded as important. Some highlighted an important consideration for maintaining integrity was to also ensure that decisive actions were taken against licensed fishers that act in contravention of conservation measures. Also noted as important was dedicating time to discussing global issues that were relevant to CCAMLR and how to interact with other international organizations.

The consensus mechanism was discussed, and some noted that while powerful, it sometimes results in delays in decision making and dilution of decisions. With regard to some of the difficulties with consensus decision making, it was noted that the process leads to effective solutions that are long lasting. Some also considered consensus was a safeguard to ensure the integrity of the system.

Some participants identified managing fishing capacity as a challenge for CCAMLR. Some considered the Olympic style of CCAMLR fisheries were placing vessels and fishermen in dangerous conditions.

On a longer term challenge, some participants posed the question of whether the Convention Area would need to be changed due to climate change impacts.

There was discussion that for CCAMLR to remain effective and focused, a common approach was highly desirable. Some participants suggested that the Commission should create a clearer strategic plan and noted that any process within the organization to determine priorities would be a difficult task, but that should not deter CCAMLR from trying to do so in order to move forward.

Symposium Wrap-up Session

Evan Bloom, Jason Mundy and Francisco Berguño

During this short closing session, the Chairs presented and distributed a Co-Chair Summary, which is reproduced as Appendix C. This document contains a list of issues – framed as questions – identified by participants during the six sessions, noting that the list is indicative and not exhaustive.

Participants acknowledged that the list of questions prepared by the co-chairs represented an accurate reflection of the matters raised at the Symposium, but noted that the scale and focus of the issues raised varied considerably. Some participants noted that the questions could offer a useful basis for further discussion, but that some structure and further distillation of the issues would be helpful to identify priorities for consideration by the Commission. Participants were encouraged to identify priorities within the list of 61 questions.

The Co-Chairs thanked all participants for their active involvement in the Symposium, which had been a very successful and stimulating exercise.

APPENDIX A

Session questions

These are potential questions intended to guide speakers and facilitate the discussion in each session.

Introduction and setting the scene

- What are the key issues that the Symposium needs to discuss?
- What are member expectations from the discussions?
- General information on organisation, procedure and time limitations.
- Information on wrap-up session.
- Explanation of how these questions would be used.

Session one: CCAMLR: 35 years since the signing of the Canberra Convention - the performance of CCAMLR (1982-2015)

a) within the Antarctic Treaty system

- Is CCAMLR meeting its objectives? Where yes, what mechanisms have resulted in success? If not, what have been issues preventing this?
- What are the primary issues which have faced CCAMLR in the last 35 years and what have been CCAMLR's key achievements and shortcomings?
- What issues still need to be addressed?
- How has CCAMLR responded to these issues?
- Are the current interactions between the Committee for Environmental Protection (CEP) and CCAMLR achieving CCAMLR objectives and those envisaged in the Madrid Protocol? Does it need to be improved?

b) within the wider international context

- How can CCAMLR's role as a conservation body be balanced with its RFMO attributes?
- What is CCAMLR's role in cooperating with RFMOs? How does CCAMLR compare with RFMOs? Is the current level of cooperation sufficient through

MoUs/Arrangements etc? How does CCAMLR compare with and how can we best cooperate with other organizations such as UN (UNCLOS, FAO, UNEP, CBD, UNFSA), CITES, IWC, IUCN?

- Catches outside the CCAMLR Area: Is cooperation with other relevant organizations possible and what will define our relationship with RFMOs?
- How can CCAMLR manage or contribute to the management of transboundary stocks? Is CCAMLR a model for conservation of marine biodiversity in the high seas? What attributes of CCAMLR make it model-worthy? Could it do it better? Should further steps be taken to raise public/broader international awareness of CCAMLR's achievements?
- What are the challenges in the wider international context to CCAMLR achieving its objectives?

Session two: Article II of the Convention: CCAMLR's objective of conservation where the definition includes rational use. Can we achieve a shared understanding?

- What do the objectives in Article II mean in relation to conservation of Antarctic marine living resources, taking account of what we know about Antarctic marine ecosystems?
- How can we maximize on our common goals and aspirations in order to achieve CCAMLR's conservation objective, which also includes rational use?
- What approaches can we use to achieve CCAMLR's conservation objectives?
- Is there sufficient precaution in making decisions given the collective commitment to CCAMLR science: what levels of evidence are needed to make decisions on fisheries and can these be realistically achieved in order that the objectives are safeguarded?

Session three: The implementation of ecosystem and area protection in the framework for managing CCAMLR fisheries

- What spatial management measures are working and what further improvements for managing fisheries can be implemented?
- Are SSRUs and SSMUs relevant for the provision of scientific advice and/or spatial divisions of harvest activities, e.g. catch limits?
- What role do MPAs play in assisting with the achievement of CCAMLR's objectives?
- How can CCAMLR effectively implement MPAs, fisheries management measures, and research activities in the Convention Area?

- What steps can CCAMLR take to better identify and deliver on shared scientific research priorities?

Session four: Climate change: The role CCAMLR can play and projections and CCAMLR response options

- What are the key challenges for CCAMLR in the face of climate change?
- What science and management opportunities might be presented by climate change?
- How is CCAMLR currently considering and/or addressing climate change in meeting its science and management objectives?
- How can the Commission better safeguard the objectives for Antarctic Marine Living Resources in the face of climate change impacts?
- What is CCAMLR's role in climate change discussions globally?

Session five: CCAMLR: which are the most effective/efficient means for the Scientific Committee and the Commission to do their business?

- How can the Scientific Committee and its working groups streamline their work?
- Should CCAMLR seek to again shorten the length of its annual meeting? What worked and what didn't in the previous trial?
- Are there any opportunities for outsourcing work? What opportunities are there for collaborations with other specialist organizations?
- What role might the Secretariat play in further assisting the Commission and Scientific Committee? Is the current level of delivery by the Secretariat meeting Commission and Scientific Committee's needs?
- Does the current role of observers and invited participants achieve the intended objectives?

Session six: The next steps: Challenges, response options and strategic priorities

- What are the major challenges facing the Commission? What are the urgent problems requiring solution and what solutions are available.
- How do we better engage with non-Parties (flags of convenience, market States, port States)?
- What gaps are there for eliminating IUU fishing activities by nationals of Members in the Convention Area?

- How can we best ensure effective management and enforcement in areas outside of national jurisdiction?
- Too little fish, too many vessels: Is there a problem? If so, does it need to be tackled and how can the Commission best position itself to deal with this issue?
- 20 years from now: what is the 'worst case' scenario and what would this mean for CCAMLR?
- How can CCAMLR remain at the forefront of conservation and fisheries management best practice?

APPENDIX B

Opening speech by Alfredo Labbé Villa, Acting Vice-Minister of Foreign Affairs
Ministry of Foreign Affairs of Chile

Setting the Scene

It seems as if it were only yesterday that we were commemorating twenty five years of the signing of the CAMLR Convention in Valdivia in 2005. Ten years have passed and once again we come together to take stock of more than 30 years of work by the Commission and to exchange views regarding the future of CCAMLR and the challenges facing the conservation of Antarctic marine resources.

It is always a useful exercise to have a look at what we were aspiring to back in 1982 and compare it to the achievements we have reached over time on this singular journey we have made together. The Head of the Chilean delegation at the opening of the Canberra Conference stated (and I quote) "*the conservation of marine Antarctic resources is an essential element of Chilean Antarctic Policy. This constant preoccupation, shared by the Consultative Parties of the Antarctic Treaty, has been reflected in the draft convention and constitutes the prime objective of the regime we aspire to establish. Within this context, we are pleased to see principles of conservation. We are convinced the inclusion of these principles will guide future activities in the area".* Our delegate was referring to the three principles enshrined in paragraph 3 of Article II, which have guided our efforts over the years.

35 years have passed and we have indeed managed to establish a robust, practical and efficient regime to protect and conserve Antarctic marine living resources, and which is internationally recognized for its precautionary approach. CCAMLR continues to be at the forefront of conservation of these resources. Nonetheless we must remain vigilant. There are a series of current and future challenges that must be addressed by the Commission. This Symposium offers a unique opportunity for you to address these issues in an informal

setting, allowing delegates to exchange ideas and opinions in an open and transparent manner that perhaps a Commission meeting would not permit.

During two and a half days, you will be able to address key issues during six sessions that will cover the historical achievements of CCAMLR, the objectives of the Convention, ecosystem and area protection for managing CCAMLR fisheries, climate change, the working methods of the Scientific Committee and the Commission and finally, Challenges, response options and strategic priorities for CCAMLR.

To guide discussions we have asked several distinguished colleagues to make keynote presentations at the beginning of each session. We will have at least two presentations per topic that will capture the essence of issues to be discussed. We have also prepared a list of questions that was distributed beforehand and that we hope will also contribute to guide your deliberations. Some delegations have also prepared papers as contributions to the Symposium and these were distributed at the beginning of this meeting and can be found on the Symposium Website. In all, we expect that there will be no lack of ideas to be addressed.

Before leaving you to your discussions I would ask for your indulgence and adventure one reflection that you may or may not consider.

Our National Antarctic Policy, established the year 2000, states (I quote*) "In the Southern Ocean we can identify a growing dilemma between the exploitation of living marine resources and the need for their conservation based on sound science and general political agreements."* Our Policy adds: "*Strategic considerations regarding the management of renewable resources should be achieved, highlighting research aimed at supporting the conservation and rational use of resources protected by the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR)*."

We believe that to be able to continue to be successful CCAMLR must have a clear vision of what it wishes to achieve over the next 5 to 10 years. Your work over the next three days may perhaps touch upon this issue. The Commission may wish to consider in the future elaborating a consensus based strategic document that will guide the work of the Commission and the Scientific Committee over the medium term.

Chile also believes such guidance would be beneficial to the overall work of the Commission and its subsidiary bodies. For this, though, we would need to have clarity with respect to the path we choose to embark on, as well as a certain understanding on how best to achieve the objectives of the Convention.

When setting the scene back in 2005, Chile indicated (and I quote) "*Our celebration, in the full meaning of the concept, means not only that CCAMLR is vitally alive, in good standing, but also has the capacity and the inclination, always enshrined in a science-based organization, to critically review its past record, to take stock of its experience and confidently draw upon its energies towards the future*." These words still remain valid.

The presence today in Santiago of 16 Commission members, four observers and some fifty delegates confirms that there is a strong commitment of Parties to fulfilling the objectives of the Convention and to avoid deviating from the path we started out on more than three decades ago.

Finally I would like to thank Australia and the United States for co-organising this Symposium with Chile. This has effectively been a shared effort and we have invested much thought and time in bringing this meeting to life. Its success now lies with each and everyone's determination to engage in our discussions.

I wish you success in your deliberations!

Thank you.

APPENDIX C

2015 CCAMLR Symposium
Co-Chairs' Summary

The CCAMLR Symposium was held in Santiago, Chile, from 5 - 8 May 2015. The Symposium was co- sponsored by Australia, Chile and the United States. 16 Commission Members, 4 observers, as well as the Executive Secretary and the Chair of the Scientific Committee met to mark the 35th Anniversary of the signing of the Canberra Convention, to take stock of more that 30 years of work by the Commission and to review current and future challenges facing the conservation of Antarctic marine living resources. The acting Vice-Minister of Foreign Affairs of Chile opened the meeting.

The participants held six working sessions on the following issues:

- Session 1. CCAMLR: 35 years since the signing of the Canberra Convention. The performance of CCAMLR (1982-2015) within the Antarctic Treaty System and the wider international context.

- Session 2. Article II of the Convention: CCAMLR's objective of conservation where the definition includes rational use. Can we achieve a common understanding?

- Session 3. The implementation of ecosystem and area protection in the framework for managing CCAMLR fisheries.

- Session 4. Climate Change: The role CCAMLR can play and projections and CCAMLR response options.

- Session 5. CCAMLR: which are the most effective/ efficient means for the Scientific Committee and the Commission to do their business.

- Session 6. The next steps: Challenges, response options and strategic priorities.

Each session was moderated by one of the co- sponsors and had at least two keynote speakers to introduce issues. In all, 13 Commissioners or CCAMLR experts made presentations.

This Co-Chairs' Summary contains a list of issues identified by participants during the six sessions. This list is indicative and by no means exhaustive. The co-sponsors of the Symposium will present a detailed report of the proceedings to the coming Commission Meeting in October 2015.

Santiago, 8 May 2015.

High level key points from the Symposium presentations and discussion:

- Should CCAMLR set a strategic direction for itself – for the next 5-10 years?
- Can CCAMLR allocate effort without rights? Should it do so?
- Can we be more assertive and develop common approaches with regards to actions to combating IUU fishing?
- Should CCAMLR take a proactive approach to issues such as safety at sea?
- Are there benefits to CCAMLR having an ongoing dialogue with relevant coastal states?
- How should CCAMLR respond to the negotiations on an Implementing Agreement? (BBNJ)
- Is CCAMLR giving its mandate away to other international organisations?
- Should CCAMLR be asking other organisations to not permit activities in the CCAMLR Area?
- How could CCAMLR engage better with other international organisations?
- How can we best measure performance of Article II?
- Are we fulfilling our obligations against Article II (3) (b) and (c)? If not should the Commission and SC be prioritising this work?
- How can marine protected areas be used to fulfil CCAMLR's mandate?
- What science is needed to avoid failure in meeting the requirements in Article II?
- Should fees associated with fishing be more commensurate with value of the fishery?
    - Should CCAMLR develop a research fund?
    - Should CCAMLR develop incentives to do research?
- Should there be an intersessional Working Group or dialogues on MPAs?
- How can we factor climate change into management decisions?
- How can we distinguish climate change impacts from other impacts?
- Should CCAMLR be cooperating with other organisations such as SCAR, IPCC, ICED, SOOS and CEP?
- Should climate change be mainstreamed into the Commission decisions?
- Develop a roadmap with climate change related priorities with a timeframe?
- Can CCAMLR play a more proactive role in removing the knowledge gaps on climate change?
- How can we better utilise the capacity of fishing vessels and other vessels to collect data (taking into account the advances in technology)?
- How could CCAMLR better cooperate with SOOS noting CCAMLR has an important data collection role?
- How can we improve the interactions between the Scientific Committee and Commission on a range of issues?

- What are the key parameters that the Scientific Committee can prepare for the Commission to help inform decision making?
- How can the Scientific Committee better present its advice to inform policy makers?
- How can CCAMLR improve its relationship with SCAR? How can it leverage off the Horizon Scan?
- Are reference areas a tool to effectively measure climate change?
- Should fishery reports include a climate change implications statement?
- What is the role of the Commission with regards to climate change?
- What should the Commission do with advice from the Scientific Committee? Does the Commission have other questions for the Scientific Committee?
- Could CEMP be improved?
- Can CCAMLR improve its reports? If so how?
- Should the Secretariat play a more active role in scientific work?
- Should meeting agendas be more focussed on priority issues?
- Should CCAMLR develop a process for the involvement of observers in the working groups of the Scientific Committee?
- How can the Scientific Committee prioritise its work?
- Is there a better structure through which the Scientific Committee and the Commission could consider progressing marine protected areas?
- Is there a better structure for the Scientific Committee and its working groups (including ad hoc informal workshops)? Should timing of these meetings be adjusted?
- Is scientific consensus necessary in providing advice to the Commission?
- Should reports from Standing Committees be sent to the Commission only for endorsement?
- Should the Commission and its committees use more subsidiary groups to conduct its business?
- Should there be a common format for all the reports?
- How can CCAMLR strengthen its engagement with Developing States?
- How can CCAMLR better cooperate with Port and Flag States?
- Can conservation measures be multi-year to help reduce workload in the Scientific Committee and Commission?
- Should CCAMLR utilise new work practices such as e-groups to more efficiently progress its work?
- Should the Commission and the Scientific Committee adopt leadership groups (Bureau) to better coordinate including during the intersessional period?
- Is the current system of report preparation and adoption best addressing the needs of CCAMLR?

- Can CCAMLR streamline its processes?
- Does CCAMLR have the membership it needs and how can it manage new membership?
- What are CCAMLR's strategic priorities, and how could we go about identifying them?
- How can CCAMLR engage with Non-Contracting Parties?
- How can we be more proactive rather than reactive?
- How can we learn from and build on our history?
- Does the Olympic approach to fisheries work?
- How can CCAMLR communicate its successes more effectively?
- How can we utilise adaptive management processes to deal with uncertainty in order to make progress?
- How can we progress CCAMLR's conservation agenda?
- Should we more regularly reflect as we have done so at this Symposium?
- How can we develop the feedback management procedure and the modeling to support it?