

ORGANIZATIONAL PERSPECTIVES ON OCEANS GOVERNANCE:

META-ORGANIZATIONS AND CROSS-SECTORAL COLLECTIVE ACTION

Berkowitz, Heloise¹, Larry B. Crowder², and Cassandra M. Brooks³

¹CNRS, Toulouse School of Management Research, Toulouse, France

²Hopkins Marine Station of Stanford University, Pacific Grove, CA, USA

³Environmental Studies Program, University of Colorado Boulder, Boulder, CO, USA.

Working paper, forthcoming in Marine Policy

Abstract

Although scholars have thoroughly explored theories and practices of formal and informal governance for oceans, most of the research has concentrated on interactions among individuals, or organizations within a sector. The emerging literature from management science argues that meta-organizations, organizations which members are themselves organizations, and especially cross-sectoral meta-organizations, may be a critical concept for scientists, public decision makers, managers, local communities and other actors in ocean governance. A meta-organization's main attributes (i.e., bringing together different formal organizations, consensus-based decision making process, little to no hierarchy, diversity of membership, information-production and collective capacity building and self-regulation mechanisms) can foster critically necessary collaborative behaviors among competitors and across sectors. Here we review key concepts regarding meta-organizations, study six examples of meta-organizations in marine systems, and outline how these advances in management and policy could foster cooperation rather than competition within and among sectors in ocean governance. Meta-organization thinking therefore can help us understand, but also frame and encourage, cross-sectoral collective actions that are solutions-oriented.

Keywords : ocean governance, conservation, meta-organization, management studies, cooperation

Oceans face multi-scale challenges, from small-scale fisheries management to coastal ecosystems protection and global-scale climate change impacts that call for collective action responses. These problems resulted not simply from human activity but also from governance failure and addressing them therefore requires rethinking governance systems (Crowder et al., 2006). Sustainably governing oceans requires us to address problems that are not only multi-level but also multi-actor, thus requiring us to tap in extensive and diverse expertise. Indeed, tackling ocean challenges necessitates the involvement of a diversity of scientific disciplines, along with local and global activists and non-governmental organizations (NGOs), as well as policy-makers that belong to agencies or institutions across scales (Gopnik et al., 2012). Sustainable ocean governance also concerns multi-sectoral private stakeholders, i.e. those that belong to a vast array of economic sectors. Overfishing, for instance, involves not only fishing companies, but also actors on the whole supply chain such as gear producers, food processors, or retailers (Longo, 2011). The diversity of actors involved in marine resource management, and the diversity and multi-scale problems at hand, calls for new innovative forms of governance.

Given that oceans governance is highly fragmented as well as multi-sectoral and multi-stakeholder, major environmental threats like climate change, biodiversity and habitat loss would be expected to drive cooperation rather than competition. Even further, humanity faces daunting problems that have recently turned into “existential” threats, i.e. the risk of humanity being wiped out (Xu & Ramanathan, 2017). Ocean actors develop different kinds of partnerships, from informal and temporary collaborations, to formal and long-lasting organizations. However, more often than not, ocean actors still compete for the same resources, such as socio-political support, infrastructure and funding, and may neglect or refuse collaborating with industries. While industries’ negative externalities are the usual suspects, there is a growing consensus that people matter in

ocean governance and that includes firms (Christie et al., 2017; Kittinger et al., 2014) . So how can ocean governance foster collaborations to ensure sustainable and responsible ocean governance and bring timely solutions to concrete multi-level problems?

Extensive research has refined the collective understanding of communities' self-governance of fisheries resources (Dietz, Ostrom, & Stern, 2003; Hardy, Béné, Doyen, Perea, & Mills, 2016) and in integrating economic drivers to tackle overfishing (Finkbeiner et al., 2017; Kittinger et al., 2017). But how does this scale up? Some scholarship endorses a narrative of transition towards sustainability that views organizations like companies only as adversaries or detractors that either develop greenwashing strategies or simply ignore environmental challenges (Delmas & Burbano, 2011; Wright & Nyberg, 2017). Without an adequate analysis of voluntary cooperation among all organizations, scholars, and further, policy makers, may undervalue some organizations' potential impact in the transition to sustainability, ultimately leading to a reductive conceptualization of their role in the sustainable development of our societies (Schot & Steinmueller, 2018).

In this paper, we propose to bridge the gap between Ocean Science and Management and Organization Studies to analyze ocean governance and identify conditions for successful multi-sectoral, multi-actor cooperation. A growing literature in Management and Organization Studies seeks to address "grand challenges," i.e. global problems that call for coordinated and collaborative efforts at global scales (Eisenhardt, Graebner, & Sonenshein, 2016; Ferraro, Etzion, & Gehman, 2015; George, Howard-Grenville, Joshi, & Tihanyi, 2016). These grand challenges include climate change (Howard-Grenville, Buckle, Hoskins, & George, 2014) and natural resources management (George et al., 2016). Management and Organization Studies however increasingly highlights the importance of meta-organizations, organizations which

members are themselves organizations (Ahrne & Brunsson, 2008), for the governance of grand challenges like climate change (Chaudhury et al., 2016).

Meta-organizations differ from individual-based organizations and present certain specific emergent characteristics. They constitute an inter-organizational space (bringing together different formal organizations), with a decision making based on consensus, they are only partial organization (i.e. with little to no hierarchy) which make them desirable for members, and they facilitate information-production and collective capacity building as well as self-regulation mechanisms (Berkowitz, 2018). These attributes can foster collaborative behaviors among competitors across sectors or even types of actors (social movements, academia, policy making). In particular, Berkowitz (2018) shows that meta-organizations allow cooptation, a game theory concept describing the advantages from a combination of cooperation and competition. But relatively little is known about the conceptual power of meta-organization to enhance ocean governance.

Here we outline an interdisciplinary approach to ocean governance, building on elements from management science, organization theory and game theory. Then we illustrate and enrich these elements with six ocean-related cases of informal or formal governance. Based on the management and organization literature on meta-organizations, we develop an analytical framework to study these six cases with different status, scale, goals, and functioning. We identify potential gaps in these different cases that could benefit from application of meta-organization theory. Finally, we conclude by highlighting the benefits that inter-disciplinary, cross-sectoral collaborations among organizations hold for resolving climate change problems, the advancement of solutions-oriented research, for policy-making and society as a whole.

An interdisciplinary approach to ocean governance

Recently, the center of gravity on governance thinking has largely shifted from governments on the one side, and local communities, on the other side of the spectrum, to more hybrid spaces where a multiplicity of actors interact, including private actors, through transnational governance or networked partnerships (Ansari, Wijen, & Gray, 2013; Brès, Mena, & Salles-Djelic, 2019; Djelic & Sahlin-Andersson, 2006). In this perspective, a growing body of literature studies the characteristics of meta-organizations, organizations which members are themselves organizations, that make them a useful device for governance.

Meta-organizations: a governance device facilitating coopetition

To organize governance thinking and advance organization theory, Ahrne and Brunsson (2008) offered the concept of meta-organization. Literature in management science and organization theory has distinguished between organizational and meta-organizational design (Gulati, Puranam, & Tushman, 2012). Several recent works have identified the key emergent attributes of this contemporary phenomenon of collective action among organizations (Ahrne, Brunsson, & Kerwer, 2016; Bor, 2014; Chaudhury et al., 2016; Spillman, 2017; Valente & Oliver, 2018). We summarize these attributes as well as the values they embody and the rationale behind them (Table 1). This table outlines a general framework to understand the benefits of meta-organizations and why they can foster collaborative behaviors among highly heterogeneous organizations focused on ocean governance issues.

Table 1: Meta-organizational design: attributes that foster collaborative behaviors among organizations

Attributes	Values	Rationale	References
Inter-organizational space	Dialogue	Facilitate negotiations and coopetition combined	(Ahrne & Brunsson, 2008; Ahrne et al., 2016; Berkowitz, 2018)

			advantages of cooperation and competition)	
Complementary skill sets	Interdisciplinarity		Diversity of membership (sectoral, cross-sectoral), pooling	(Laurent, Garaudel, Schmidt, & Eynaud, 2019; Valente & Oliver, 2018)
Information-production and collective capacity building	Collective learning		Resource-sharing, access to information, to staying outside	(Chaudhury et al., 2016; Spillman, 2017)
Self-regulation mechanisms (standardization, reporting, best accountability mechanisms)	Organizational responsibility, social acceptability, transparency		Reputational effects, pressures, of collective strategies	(King & Lenox, 2000; Rasche, Bakker, & Moon, 2013)

Meta-organizations differ from individual organizations, such as firms or NGOs, in a number of ways. First, they are made of other organizations and as such they constitute an inter-organizational space that facilitates dialogue between different organization-members. One well-known case in the management literature is the United Nations Global Compact, where different corporations, labor associations, and NGOs can meet and dialogue (Rasche, Waddock, & McIntosh, 2013). As an inter-organizational space, meta-organizations also encourage cooperation among competitors, whether they are businesses or NGOs competing for funding and influence (Berkowitz, 2018).

Brandenburger and Nalebuff (1996) coined this phenomenon “coopetition” in game theory to describe combined advantages of both competition and cooperation among former competitors when they are seeking resolution of a larger-scale problem. Organizations can achieve more success by developing dynamic collective strategies than by working on their own. Meta-organizations incorporate this very argument.

A meta-organization is formally set-up and has a visible membership. It offers a highly collaborative device which costs little to set up since it depends so much of its own members' resources, from financial to human. Therefore, meta-organizations present a strong culture of consensus and rely heavily on their members (König, Schulte, & Enders, 2012). Brexit constitutes a showcase of this high dependence on member-organizations since the UK's exit deeply threatens the stability of the EU as a whole, but also bears threats for the UK itself. A company like General Motors will survive even after the CEO retires whereas exit of the UK may profoundly damage the EU's stability (Ahrne & Brunsson, 2008; Ahrne et al., 2016; Schütz & Bull, 2017).

Meta-organizations can present high membership diversity in terms of organizations and sectors. Some meta-organizations are created among business only organizations at the sectoral level, like trade associations. Some are more or less open clubs of businesses that spawn across sectors, like the World Ocean Council or the Global Business Initiative for Human Rights. Finally, some are highly cross-sectoral such as the Voluntary Principles for Security and Human Rights that brings together companies from the oil and gas industry, the mining and metals industry, but also from civil society (NGOs) and governments (of countries where there are extractive operations) (Berkowitz, Bucheli, & Dumez, 2017). This diversity of membership allows a complementarity of skill sets as well as risk pooling (Laurent et al., 2019; Valente & Oliver, 2018).

As producers of rules, these meta-organizations play a key role in governance. One of their main attributes indeed consists in building self-regulation mechanisms such as standards (Brunsson & Jacobsson, 2000; Brunsson, Rasche, & Seidl, 2012). Reporting guidelines, grievance mechanisms, and guides to best practices all contribute to the collective design of self-regulation at different sectors (Berkowitz et al., 2017). They also contribute to making organizations socially responsible (Rasche, Bakker, et al., 2013). As

such, these reporting mechanisms participate not only to the self-regulation of whole sectors but also to making members accountable to the meta-organization itself or to society as a whole.

The management and organization literature provides elements for a governance approach that facilitates dialogue among organizations, knowledge sharing, collective decision making, but also cooperative strategies.

Informal and formal governance cases in the ocean

Current ocean governance takes up various forms, from public agencies (e.g., Southern California Coastal Water Research Project) to international organizations (e.g., International Sea Bed Authority), or regional planning bodies (e.g., the Mid-Atlantic Ocean Action Plan). Their scale, goals and power largely vary. We analyze six different cases of ocean governance meta-organizations: Southern California Coastal Water Research Project (SCCWRP); Ocean Action Plan; Mid-Atlantic Regional Planning Body, USA; Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR); International Sea Bed Authority (ISA); Conservation alliance for seafood solutions; and International Whaling Commission (IWC). Our aim was to cover a broad range of governance devices, with differences in scale, goals, and type of members. Table 2 summarizes the cases' main characteristics and we elaborate on each case below.

Table 2: Brief presentation of the cases

Name	Creation	Status	Scale
Southern California Coastal Water Research Project (SCCWRP)	1969	Public agency	Regional (Southern California, United States)
Ocean Action Plan, Mid-Atlantic Regional Planning Body, USA	2016	Regional Planning Body, US National Ocean Council, National Ocean Policy	Mid Atlantic US Delaware, Maryland, New York, New Jersey, Pennsylvania, Virginia

Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)	1980	International commission part of the Antarctic Treaty System	International: Governs the entire Southern Ocean (the area south of the Antarctic Convergence, roughly 10% of the global oceans)
International Seabed Authority (ISA)	1994	International organization established under the 1982 UN Convention on the Law of the Sea and the 1994 Agreement relating to the Implementation of Part XI of the UN Convention on the Law of the Sea.	International
Conservation alliance for seafood solutions	2008	Alliance of conservation groups	North America
International Whaling Commission (IWC)	1946	Inter-Governmental organization set up to implement the International Convention for the Regulation of Whaling (ICRW), in Washington, D.C., United States, 1946	Global

Building on the management and organization literature, we developed an analytical framework to systemically study these cases. The framework is composed of various organization theory elements, from the type of organization, to its internal functioning and its actions derived from the meta-organization attributes we summarized in the previous section. Table 3 synthesizes all elements that we examined for each case.

Table 3: Organizational elements analyzed in the cases

Organizational dimension	Organizational element studied
Type of organization	Date of creation Status Scale Goals Membership Diversity of members
Internal functioning	Resources Coopetition

	Decision making process Rules, monitoring, and sanctions Reporting mechanisms External accountability
Actions and effects on members	Standardization of practices Outcomes Performance metrics Outreach

Case study 1: Southern California Coastal Water Research Project (SCCWRP)

SCCWRP is a regional-level public agency that was created in 1969 (Mearns, Allen, & Moore, 2000). SCCWRP is composed of fourteen public agencies which represent a composite group of actors in the field of water quality management and aquatic ecosystems protection from Southern California. SCCWRP also counts four wastewater dischargers, four stormwater agencies and six agencies from the regulatory sector (SCCWRP, 2018a). As such it is relatively cross-sectoral and multi-stakeholder (i.e. different types of actors, public, private and regulators). Its goals as an organization are fourfold (SCCWRP, 2018a). First it aims to undertake and participate in scientific investigations to understand ecological systems and to serve as a respected source of unbiased coastal water quality science. Second, SCCWRP aims to develop scientific consensus on environmental issues relevant to management decisions. Its third goal is to influence end-user water-quality management community decision-making. And fourth, its final objective is to provide long-term support expertise to the fourteen agencies in order to stimulate transformation of science into action.

Regarding its functioning, resources are mostly provided by sponsoring member-agencies, through grants (Mearns et al., 2000; SCCWRP, 1974, p. 197). Members work cooperatively and support SCCWRP to provide top quality information and advice. They are motivated to interact to efficiently acquire the data needed to meet their mandates and to efficiently resolve conflicts. This cooperative dimension is facilitated by the decision-

making process. SCCWRP provides the data and scientific consensus is reached by the members. The decisions to act on the science are made by individual agencies in consultation with the other agencies. Members meet to discuss management issues quarterly and jointly examine the scientific information they have supported collecting (SCCWRP, 2018b, 2019). There is no external monitoring of SCCWRP. There are no sanctions either, especially no membership exclusion. Membership has been stable for more than 20 years, a sign that all member-organizations find it in their interest to remain. SCCWRP provides annual reports and an annual performance review of the president. All data, methods, analyses are subject to accountability to the members who have open access to all the information provided and the debates held (SCCWRP, 2018a, 2019).

Members agree on data collection protocols, quality assurance/quality control, and independent analyses (SCCWRP, 2019). SCCWRP revisits its research plan frequently to ensure they are providing the best available science to support management decisions. There is no measurable indicator to assess performance, but goals are set and reviewed every year (SCCWRP, 2018a, 2019). Finally, outreach strategies are mostly internal: SCCWRP provides presentations to member agencies upon request. In addition, SCCWRP hosts a biennial Symposium for the staff of member agencies to learn about SCCWRP research.

Case study 2: Ocean Action Plan (OAP)

The Ocean Action Plan was created by the Mid-Atlantic Regional Planning Body and was published in 2016 in the United States (LaBelle, Leonard, & Schultz, 2016). Its scale is regional as it covers Mid Atlantic US (Delaware, Maryland, New York, New Jersey, Pennsylvania, Virginia). Through Mid-Atlantic regional ocean planning body, Federal agencies, States, Tribes, and the Mid-Atlantic Fishery Management Council worked

together with stakeholders on ocean management solutions. Membership was constituted of federal agencies that are required to join under executive order, but also states and tribes as voluntary members (but with fewer resources). OAP is multi-stakeholder, since membership is across levels of governance – federal, states, tribes – but not cross-sectoral since it does directly not involve private actors (LaBelle et al., 2016; Raymond-Yakoubian & Daniel, 2018).

This initiative does not result from legislation but from presidential executive order, so resources are limited. (Science and Technology Policy Office, 2016) This is particularly pressing for the states and tribes. Members are not direct competitors and they are willing to cooperate because future regional planning decisions may affect their interests. Decisions follow thorough discussions and debates among members and are made by consensus. To date, the decisions have been limited to agreeing on setting up a data portal and a planning process (Science and Technology Policy Office, 2016). The actors have set some guidelines and responsibilities for future steps, but these are still subject to negotiation (LaBelle et al., 2016). There is no monitoring, no sanctions and no agreed upon monitoring mechanisms. The Federal Agencies in the OAP are accountable to the National Ocean Council for draft plans on schedule and compliance with the Presidential Executive Order (Science and Technology Policy Office, 2016). The states and tribes are voluntary participants.

To date, the main outcome was an approved plan in 2016. No actions have been taken yet beyond setting up the data portal for information sharing and development of the approved plan. While members are encouraged to use identified best practices for sustainable ocean management, implementation is only voluntary (LaBelle et al., 2016). There are no performance metrics. Finally, there is no outreach to engage new members,

but some outreach activities are aimed at engaging stakeholders in ocean industry and civil society.

Case study 3: Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)

The Commission for the Conservation of Antarctic Marine Living Resources or CCAMLR, was established by an international convention in 1982. The Commission, through its Convention, governs the entire Southern Ocean (the area south of the Antarctic Convergence, roughly representing 10% of the global oceans) (The Convention on the Conservation of Marine Living Resources, 1980). It aims to regulate the use of economically valuable resources while protecting the integrity of the Antarctic marine ecosystem, all under conditions of rapid environmental change (Rayfuse, 2018). In line with principles of peace, science, and environmental preservation embodied in the Antarctic Treaty System, CCAMLR has the explicit objective to ‘conserve’ marine living resources (Berkman, Lang, Walton, & Young, 2011; Jacquet, Blood-Patterson, Brooks, & Ainley, 2016; The Convention on the Conservation of Marine Living Resources, 1980).

CCAMLR Membership is comprised of 24 sovereign nations and the EU. Membership is limited to nations (The Convention on the Conservation of Marine Living Resources, 1980), but they represent cross-sectoral and multi-stakeholder concerns, including research, fishing and conservation interests, primarily (Dodds, Hemmings, & Roberts, 2017; Liggett, Frame, Gilbert, & Morgan, 2017). Recent additions to membership have included more fishing nations, which now make up the majority of member States (C. M. Brooks, 2013). The CCAMLR Secretariat operates by membership fees, as well as fishery notification fees (see e.g. CCAMLR, 2018a). The members that comprise CCAMLR also provide resources in the form of research, monitoring, and

enforcement capabilities, through human, infrastructure, and financial resources. The motivation to participate is to protect and promote sovereign interests in the context of the international convention (Dodds et al., 2017).

With CCAMLR, all decisions are made by consensus, including scientific criteria for protection or for allowing fisheries (CCAMLR, 1982). Members are responsible for monitoring their national fishing activity in the CCAMLR Area (Miller & Slicer, 2014). CCAMLR is advised by a Scientific Committee, which is further advised by Working Groups dedicated to Ecosystem Monitoring and Management, Fish Stock Assessment and other topics. Collectively, these science teams help research and monitor the status of living resources and provide guidance to CCAMLR (Miller, 2011). As for sanctions, no member has ever been removed from CCAMLR. However, there are a variety of mechanisms that could be viewed as sanctions. CCAMLR collectively evaluates member compliance annually through its Standing Committee on Implementation and Compliance (see e.g. CCAMLR, 2018a). If a member is non-compliant, there are various formal (e.g., adding to the IUU vessel list) or informal sanctions (e.g., shaming). For good behavior, a State may continue to be granted fishing rights or be openly praised on the meeting room floor (both informal rewards) (see e.g., CCAMLR annual meeting reports). Commission States are responsible to each other for their actions and responsibilities. A variety of other organizations and stakeholders work to hold CCAMLR accountable, these include civil society (via NGOs and media), environmental organizations, industry, science NGOs, and others (e.g., the International Union for Conservation of Nature, or Agreement on the Conservation of Albatrosses and Petrels, among others). Some of these organizations have observer status to participate to CCAMLR annual meetings and can make statements in the meeting, submit documents, and interact with CCAMLR members directly (CCAMLR, 2019b).

CCAMLR established guidelines for developing marine protected areas (MPA) in 2011 (CCAMLR, 2011). It established the South Orkney Islands MPA in 2009 (CCAMLR, 2009), and the Ross Sea MPA in 2016 (the latter took six years of negotiations) (C. Brooks, 2017; CCAMLR, 2016) They have also established numerous scientific fishing zones to assess the effects of fishing for krill and toothfish, as well as sustainable management rules, seabird bycatch mitigation measures, ban on trawling and gillnets (leadership for other high seas fisheries bodies) (CCAMLR, 2018b)

Performance of members is assessed in the form of compliance (i.e., whether member states are complying with rules), which is evaluated at the CCAMLR annual meetings. Achieving mandated goals is also similarly assessed (see e.g. CCAMLR, 2018a) Outside of CCAMLR, practitioners and scholars have evaluated CCAMLR on similar metrics (compliance, sustainability) and their reports are publicly available (e.g. Cullis-Suzuki & Pauly, 2010; Lodge et al., 2007) CCAMLR also did an external performance review in 2008 (CCAMLR Performance Review Panel, 2008) and in 2017 (CCAMLR Performance Review Panel, 2017). Various outreach activities occur on a national and international level. For example, some CCAMLR States provide forums for stakeholder engagement and others produce media or reports for their governments, industry or the public (e.g. Commonwealth of Australia, 2016; United States Department of State, 2017) CCAMLR itself also has an up-to-date website; they have a media team and provide media while also engaging with other media outlets (CCAMLR, 2019a) .

Case study 4: International Seabed Authority (ISA)

International Seabed Authority (ISA) is an autonomous international organization established under the 1982 United Nations Convention on the Law of the Sea and the 1994 Agreement relating to the Implementation of Part XI of the United Nations

Convention on the Law of the Sea (United Nations Convention on the Law of the Sea, 1982). It aims to organize and control seabed and ocean floor activities in the area beyond the limits of national jurisdictions. ISA has 168 countries as full members, as well as observer states, observer intergovernmental and UN organizations, and observer non-governmental organizations. Full members are limited to states, but observers are more cross-sectoral and multi-stakeholder.

In terms of functioning, resources derive from members' contributions, decided every two year by the Assembly. Members are willing to join for two main reasons. First, to gain access to exploration contracts, second because of the redistribution of wealth (Lodge et al., 2014). While a 1994 agreement states that all decisions "should" be based on consensus, in practice only distributional decisions are taken by consensus whereas procedural questions, communications and agreements or policy questions are decided by a complex form of majority rule (Posner & Sykes, 2014). The Assembly of the Authority consists of all ISA members. This Assembly constitutes the "supreme organ" with the power to establish general policies by approving rules, regulations, and procedures (see e.g. International Seabed Authority, 1994). These decisions may address prospection, exploration and exploitation in the 'Area' (i.e. beyond national jurisdictions) (Jaeckel, 2016). For instance, in 2000, the Assembly took its first action by approving "Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area", as first formulated by the Council (Lodge et al., 2014). So far, there is no monitoring, no sanctioning and no external accounting, by ISA itself (Jaeckel, 2016). There is no reporting mechanisms either, which would be needed to increase transparency (Ardrón, Ruhl, & Jones, 2018). While ISA is developing regulatory frameworks for commercial mining, it has no power to ensure that contractors comply with environmental standards once the contract has been awarded (Jaeckel, 2016).

Case study 5: Conservation alliance for seafood solutions

Conservation alliance for seafood solutions was created in 2008 as an alliance of conservation groups, dedicated to sustainable seafood supply (Conservation Alliance for Seafood Solutions, 2008). The objective of this initiative is that members share expertise and collectively develop tools to help small businesses enhance their sustainable seafood commitments (Conservation Alliance for Seafood Solutions, 2014). Members of the Conservation Alliance are North American nonprofit conservation organizations that focus on sustainable seafood issues. Membership is cross-sectoral and multi-stakeholder (Deighan & Jenkins, 2015; Lewis & Boyle, 2017).

While members are cooperating to develop seafood solutions, they may also be competing on sustainability brands that still exist independently from the Alliance. Members therefore compete for public attention and media awareness. Conservation Alliance members elect a Steering Committee. This Steering Committee frames and guides the work of members, by developing an overall strategy for the Alliance activities and by overseeing the Alliance's Operations Teams or fundraising (Conservation Alliance for Seafood Solutions, 2019). The Alliance also provides guidance to businesses on developing and implementing sustainable seafood policies, through a guide called "Common Vision for Environmentally Sustainable Seafood". In addition, the Conservation Alliance also provides a set of guidelines for fishery improvement projects (FIPs) (Borland & Bailey, 2019; Cannon et al., 2018). There is no monitoring and sanctioning of members. There is no reporting mechanisms but the Alliance has defined guidelines on transparency for members (Conservation Alliance for Seafood Solutions, 2014).

In terms of standardization, the Alliance participates as an expert to various committees that work on seafood certification. The guidelines for Fishery Improvement Projects discussed above create a standard for FIPs (Deighan & Jenkins, 2015). The objective is that companies use these guidelines to seek sustainable seafood products. Some of the outputs of the Alliance are the tools developed to help businesses solve problems and advance their sustainable seafood commitments. These outputs include above mentioned guide “Common Vision: Guidance for companies developing sustainable seafood policies”, the guidelines for fishery improvement projects (FIP) and the creation of a glossary to explain key terms used in the guidelines (Conservation Alliance for Seafood Solutions, 2008, 2014). Overall, the Alliance has had a significant influence on seafood supply in North America, contributing to harmonizing practices (Gutiérrez & Morgan, 2015) and improving them (Cannon et al., 2018). However, there are no performance metrics used to continuously monitor and assess compliance. There are some outreach activities towards prospective members since they must be sponsored by a current member of the Alliance and participate in Alliance activities on a trial basis (see e.g. Conservation Alliance for Seafood Solutions, 2019).

Case study 6: International Whaling Commission (IWC)

International Whaling Commission (IWC) is an inter-governmental organization set up to implement the International Convention for the Regulation of Whaling (ICRW), in 1946 (IWC, 1946). It aims to ensure the proper conservation of whale stocks and thus frame a sustainable development of whaling industry (Gillespie, 2001). Membership of the IWC is open to any country in the world that formally adheres to the 1946 Convention (IWC, 1946). Each member country is known as a Contracting Government and represented by a Commissioner, who can be assisted by experts and advisers (IWC,

2018c). Membership of the IWC currently includes a diversity of potentially rival actors: whaling nations, anti-whaling nations and conservation-oriented nations. There are no businesses or NGOs in the membership though they can be accredited to observe meetings and participate in intersessional working groups (Gillespie, 2001). They also conduct advocacy activities aimed at delegations.

Regarding functioning, resources are based on financial contributions from Contracting Governments (IWC, 2018c). These fees constitute IWC's core income, but a significant part of resources results from additional voluntary donations. Non-governmental organizations (NGOs), industry bodies, or sometimes contracting governments make these donations to support specific work programs (IWC, 2018c). Regarding cooperation, there are strong divisions between nations with active whaling or “scientific” whaling interests and those with conservation or anti-whaling interests (Gillespie, 2001). In that perspective, scientific uncertainty can be used to serve one political agenda or the other (Heazle, 2004).

During annual meetings, the Scientific Committee provides scientific assessment updates to the full Commission through an annual report (Vernazzani et al., 2017). The Commission discusses and approves them (or otherwise) at its biannual plenary meeting. The Commission also defines new rules for whaling, whale watching, designation of whales' sanctuaries and other proposals from the membership (Punt & Donovan, 2007). The IWC authorizes catch quotas based on the Scientific Committee advice, then members must comply with those limits (Punt & Donovan, 2007). They also need to report exploitation. Permits for “scientific whaling” are used to collect various types of data. Aboriginal whaling, justified by cultural reasons and conducted by indigenous people, is managed through a strict process that guarantees the sustainability of their hunts, including animal welfare considerations (Reeves, 2002). The IWC has an Infraction

Committee, however, it does not sanction members, and there is no external accounting. In the context of the recently agreed renewal of Aboriginal Subsistence quotas (2018), any infraction can automatically freeze the assigned quotas (IWC, 2018b).

In terms of effects, the Scientific Committee has assessed populations for potential exploitation through a rigorous scientific process, i.e. “Implementation Reviews” (Punt & Donovan, 2007). All species that have passed this assessment appear in good shape, e.g. all eight populations subject to Aboriginal Subsistence Whaling and several populations of minke, Bryde’s whale fin or humpback whales (IWC, 2018a). The IWC has not yet developed performance metrics to assess either its own effects on practices or members’ compliance with the guidelines (Vernazzani et al., 2017), but there is an ongoing governance review that could lead to the definition of indicators (IWC, 2018a).

Ocean governance: framing a meta-organization approach

After reviewing the six cases based on management and organization literature, we now identify and synthesize their governance characteristics and main meta-organizational attributes. We also analyze elements that may motivate member-organizations to participate, obstacles that may make cooperation difficult, and success criteria. Table 4 presents these elements.

Table 4: Characteristics of studied ocean governance devices

Cases	Governance characteristics	Meta-organization’s attributes	Motivations to participate	Obstacles/difficulties	Criteria of success
SCCWRP	Informal governance based on a meta-organization	Inter-organizational space, Cross-sectoral, collective research, information	Cost pooling, legitimizing produced research	Regulatory responsibilities vs. implementation costs, political resistance	Fostering open discussions of data and interpretation. Reduced conflict coming to decisions.

		production, coopetition			
Ocean Action Plan	Formal governance and policy making	Inter-organizational space	Presidential Executive Order	Different agency mandates, culture, language, priorities	More functional cooperation across agencies
CCAMLR	Formal governance based on international treaty	Inter-organizational space, information production, Self-regulation	Consensus support for national activities	Disagreements on priorities and interpretation of Convention language. Geopolitical roadblocks	Scientific rigor, Progress toward consensus decision making, Sustainable fisheries stocks
ISA	Formal governance based on international treaty	Inter-organizational space, self-regulation	Increased ability to self-determine	Asymmetry of power, marginalization and inequities, Geopolitical roadblocks	Progress toward consensus decision making,
Conservation Alliance for Seafood solutions	Informal governance based on a meta-organization	Inter-organizational space, self-regulation, Coopetition	Increased ability to self-determine	Asymmetry of power, marginalization and inequities, sheer numbers of fishers, interconnectedness with societal issues outside of fishing, brand competition	Human well-being, food security, pursuit of livelihoods, sustainable and resilient marine ecosystems
IWC	Formal governance based on international treaty	Inter-organizational space, self-regulation,	Increased ability to self-determine	Asymmetry of power, marginalization and inequities, sheer numbers of fishers, Geopolitical roadblocks	Progress toward consensus decision making, sustainable use of whale populations

Our multi-case study suggests the existence of governance devices with varying levels of formality and informality. SCCWRP for instance presents characteristics of an informal governance device, inspired on a meta-organization design. SCCWRP indeed is an organization of organizations which may informally facilitate governance of the water

quality sector by collectively producing data. Conversely, the Ocean Action Plan constitutes a very formal governance and policy making device. CCAMLR, ISA and IWC also form formal governance devices but based, this time, on an international treaty rather than national policy. The Conservation Alliance for Seafood Solutions echoes to SCCWRP's design in the sense that it fully constitutes a meta-organization and acts as an informal governance device by producing norms for the fishing sector.

These cases of ocean governance also greatly differ in terms of meta-organizational attributes. As a governance device, the Ocean Action Plan for instance only borrows one element from meta-organization theory, i.e. the fact that it is an “inter-organizational space”, that is to say a space where organizations meet. Quite similarly, ISA also constitutes an inter-organizational space but in addition it produces self-regulation, a key attribute of meta-organizations. CCAMLR gathers the same two attributes (inter-organizational space, self-regulation), while also producing information for members. The Conservation Alliance also discloses two common attributes (inter-organizational space and self-regulation) and has the specificity of bringing together direct competitors and thus facilitating co-competition among them, another important feature of meta-organizations. Lastly, SCCWRP constitutes the case with most attributes of a meta-organization. Indeed, it brings together multiple member-organizations (inter-organizational space), from various sectors (cross-sectoral), that conduct collective research and produce information for members. Said members, we have shown, can be in competition and therefore SCCWRP is an interesting case where there may be competition among members.

With such different features and different objectives, as we highlighted in the previous section, these governance devices may offer different advantages for members. Motivation to participate in SCCWRP may result from cost pooling and the legitimizing

effect of collectively produced research. Conversely, motivation (or obligation) to participate in the Ocean Action Plan simply emanates from a Presidential Executive Order. In the cases of ISA, the Conservation Alliance and IWC, the increased ability to self-determine may be what most appeals to members. Finally, in the case of CCAMLR, it is the consensus and support for national activities resulting from collaboration that may motivate members.

Depending on the governance design, various obstacles or challenges in collaborating may arise, as Table 4 shows. In the case of SCCWRP, there may be high implementation costs and a strong political resistance. In the case of Ocean Action Plan, members have different agency mandates, culture, language and priorities, all of which may make dialogue and progress difficult. In CCAMLR, members may strongly disagree on priorities and there may be great variations in the interpretation of the Convention's language. These may lead to geopolitical roadblocks, as it has been the case in the past. In ISA as well, geopolitical roadblocks may constitute the main obstacle to effective governance, resulting from asymmetries of power, marginalization and inequalities among members. The same challenge may occur in governance devices such as the Conservation Alliance. Difficulties may also result from the sheer number of fishers to govern and the strong interconnectedness with societal issues outside of fishing, as well as competition on brands. IWC presents very similar challenges that may lead to geopolitical roadblocks due to its organizational nature (based on an international treaty).

Finally, one important aspect consists in assessing the success of a governance device. Our multi-case study shows that these criteria vary depending on the device and its objectives. In SCCWRP, we identified two main success criteria: first their ability to foster open discussion about data and their interpretation, second the resulting dramatically reduced conflict in coming to decisions. The Ocean Action Plan's main

criterion of success would be encouraging a more functional cooperation across agencies. For CCAMLR, scientific rigor, progress toward consensus decision making and sustainable fish stocks constitute three main success criteria. At ISA, it would mostly be progress toward consensus decision making. Conservation Alliance has more framed success criteria, that may prove hard to assess (human wellbeing, food security, pursuit of livelihoods, sustainable and resilient marine ecosystems). For IWC, finally, similarly to other formal governance devices based on international treaties, one success criterion is making progress toward consensus decision making, but another also consists in reaching sustainable use of whale populations.

This multi-case study shows that different formal and informal ocean governance devices borrow more or less elements from the concept of meta-organization (Table 4). These elements include cross-sectoral inter-organizational space, i.e. the fact that organizations from different sectors or domains meet in a given forum to dialogue, negotiate and produce information and regulation. Another element borrowed from meta-organization theory is coopetition, that is to say simultaneous cooperation and competition between rivals (from governments to market competitors or anti vs pro positions, on whale hunting for instance).

Our multi-case study also highlights very different levels of reporting, monitoring, sanction and performance assessment across analyzed governance devices. Some devices such as SCCWRP are relatively advanced where accountability towards stakeholders is concerned, or reporting towards members. Other devices however, such as ISA, have no accountability procedure. Implementing such mechanisms of monitoring and accountability may help overcome obstacles to cooperation for ocean governance (as identified in Table 4). It may also enhance ocean governance by bringing these devices closer to full meta-organizations.

Making the case for multi-stakeholder collective action through meta-organizations

In ocean resource management, problems mostly result from fragmentation and mismatches in governance (Crowder et al., 2006). The diversity of actors involved in marine resource management, and the complex, diverse and multi-scale problems they confront, from biodiversity to human rights of local communities, from underwater acoustic pollution to acidification of oceans, call for new innovative forms of governance. In this paper, we offered to build on Management and Organization Studies (MOS) and game theory to bring new insights to ocean governance that may foster collaborations to tackle concrete multi-level problems. Especially, we unfolded the conceptual power of *meta-organization*, organizations which members are themselves organizations, to identify characteristics, attributes and conditions of successful cooperative governance devices applied to oceans.

Through our review of MOS literature, we show that meta-organizations' design facilitates informal governance and self-regulation including among competitors. Indeed, meta-organizations constitute a neutral inter-organizational space where organizations meet, dialogue and negotiate. As such, they promote co-competition, i.e. the combined advantages of competition and cooperation. and they offer points of convergence among potentially diverging actors. Meta-organizations are also consensus-based organizations, with little to no hierarchy. They facilitate interdisciplinary work by providing complementary skill sets among potentially diverse membership (sectoral, cross-sectoral, public, private). As their main task is information production and collective capacity building, they permit collective learning for members who share resources and information.

Finally, because they work on consensus and voluntary membership, meta-organizations can only develop self-regulation mechanisms (such as standardizations, guides to best practices, accountability). As such, they contribute to increase members' organizational responsibility, social acceptability and transparency. This is due to reputational effects and stakeholder and institutional pressures. Such pressures encourage members to follow the rules defined within meta-organizations, in a virtuous circle. But this virtuous impact of meta-organizations also results from the multiple benefits of developing collective strategies (i.e. coopetition).

Next, based on a multi-case study of ocean governance, we show that certain governance devices may present one or more characteristics similar to meta-organizations: inter-organizational space, coopetition between members, information production, self-regulation among others. However, most of the cases we study lack several more elements to fully act as meta-organizations. In almost all cases, there is little to no accountability mechanisms (such as reporting to stakeholders) that may compel members to more quickly implement decisions taken by all. While motivation to participate is often high, for cost pooling and increased ability to self-determine for members, governance challenges are also high: disagreement on priorities, asymmetries of power, geopolitical roadblocks. Further borrowing characteristics from meta-organization design may help these governance devices enhance their coordination and collective action efforts. In particular, SCCWRP emerges as a particularly successful case of governance, presenting most characteristics of a full meta-organization. SCCWRP could serve as a model for the development of similar meta-organization in sectors and on problems related to ocean governance. Studies could further investigate the specificities of SCCWRP and its conditions of success.

On the urgency of developing meta-organization research in ocean governance

In a recent paper, Xu and Ramanathan (2017) develop climate risk scenarios at near and long term, where according to them there is a 5% probability of “being fully in the unknown risk category, which also includes existential threats for everyone” (p. 4). This definition of a new risk category as existential, shows the urgency of taking collective action to address grand challenges like climate change or biodiversity loss. But governance frameworks and devices have rarely succeeded in fostering the cross-sectoral collective action that is necessary or fast enough to provide solutions to local and global problems.

If governance cannot engage the right sectors, the right organizations, including businesses and NGOs, it cannot be effective at solving major problems that our societies are facing, like those island nations threatened with submergence due to sea level rise. Or communities poorly prepared for deeper droughts or more intense hurricanes associated with climate change. Despite the urgency, organizations, and larger sectors, but also disciplines in science, fight for their narrow interests when the need for collaboration and interdisciplinarity has never been greater. Meta-organizations, especially cross-sectoral, multi-stakeholder meta-organizations, could constitute a helpful device in framing the development of such collaborations among diverse organizations with unaligned interests.

Varying forms of meta-organizations may facilitate the management of emerging or long-standing sectoral or cross-sectoral ocean issues. This may include underwater noise pollution, a problem which concerns various sectors from oil and gas to shipping or renewable marine energies (Paxton et al., 2017). Other examples of topics that would benefit from governance through meta-organizations may include invasive species (Malpica-Cruz, Chaves, & Côté, 2016) or sand mining (Torres, Brandt, Lear, & Liu,

2017). Bringing businesses and civil society into the governance of such issues could hold a key to collectively solving these problems. Even further, meta-organizations in the forms of R&D consortia (Bor, 2014) also appear as a growing device for carrying international, interdisciplinary research to tackle grand challenges such as climate change. Developing ocean solutions may increasingly call for such meta-organizational design.

We therefore encourage not only more research on existing ocean governance based on meta-organizational design to identify potential venues for organizational enhancement. But we also call for implementation of ocean governance devices that resemble or draw on the meta-organization framework. The future of our oceans could be in the balance.

References

- Ahrne, G., & Brunsson, N. (2008). *Meta-organizations*. Cheltenham, Glos, UK; Northampton, MA, USA: Edward Elgar Publishing.
- Ahrne, G., Brunsson, N., & Kerwer, D. (2016). The Paradox of Organizing States: A Meta-Organization Perspective on International Organizations. *Journal of International Organizations Studies*, 7(1), 5–24.
- Ansari, S., Wijen, F., & Gray, B. (2013). Constructing a Climate Change Logic: An Institutional Perspective on the “Tragedy of the Commons.” *Organization Science*, 24(4), 1014–1040.
- Ardron, J. A., Ruhl, H. A., & Jones, D. O. B. (2018). Incorporating transparency into the governance of deep-seabed mining in the Area beyond national jurisdiction. *Marine Policy*, 89, 58–66. <https://doi.org/10.1016/j.marpol.2017.11.021>
- Berkman, P., Lang, M., Walton, W., & Young, O. (2011). *Science Diplomacy: Antarctica* (Smithsonian Institute Scholarly Press). Washington, DC.

- Berkowitz, H. (2018). Meta-organizing firms' capabilities for sustainable innovation: a conceptual framework. *Journal of Cleaner Production*, 175, 420–430.
- Berkowitz, H., Bucheli, M., & Dumez, H. (2017). Collective CSR strategy and the role of meta-organizations: a case study of the oil and gas industry. *Journal of Business Ethics*, 143(4), 753–769.
- Bor, S. (2014). *A theory of meta-organisation: An analysis of steering processes in European Commission-funded R&D 'Network of Excellence' consortia* (Ph.D. thesis).
- Borland, M. E., & Bailey, M. (2019). A tale of two standards: A case study of the Fair Trade USA certified Maluku handline yellowfin tuna (*Thunnus albacares*) fishery. *Marine Policy*, 100, 353–360.
<https://doi.org/10.1016/j.marpol.2018.12.004>
- Brandenburger, A., & Nalebuff, B. (1996). *Co-opetition*. New York: Harper Collins Business.
- Brès, L., Mena, S., & Salles-Djelic, M.-L. (2019). Exploring the formal and informal roles of regulatory intermediaries in transnational multistakeholder regulation. *Regulation & Governance*, 13(2), 127–140. <https://doi.org/10.1111/rego.12249>
- Brooks, C. (2017). *Policies for managing the global commons: The case of marine protected areas in Antarctica* (Phd thesis). Stanford University.
- Brooks, C. M. (2013). Competing values on the Antarctic high seas: CCAMLR and the challenge of marine-protected areas. *The Polar Journal*, 3(2), 277–300.
- Brunsson, N., & Jacobsson, B. (2000). *A world of standards*. Oxford: Oxford University Press.

- Brunsson, N., Rasche, A., & Seidl, D. (2012). The dynamics of standardization: Three perspectives on standards in organization studies. *Organization Studies*, 33(5–6), 613–632.
- Cannon, J., Sousa, P., Katara, I., Veiga, P., Spear, B., Beveridge, D., & Van Holt, T. (2018). Fishery improvement projects: Performance over the past decade. *Marine Policy*, 97, 179–187. <https://doi.org/10.1016/j.marpol.2018.06.007>
- CCAMLR. (1982). *Rules of Procedure*.
- CCAMLR. (2009). *Conservation Measure 91-03. Protection of the South Orkney Islands southern shelf*.
- CCAMLR. (2011). *Conservation Measure 91-04. General Framework for the establishment of CCAMLR Marine Protected Areas*.
- CCAMLR. (2016). *Conservation Measure 91-05, Ross Sea Region Marine Protected Area*.
- CCAMLR. (2018a). *Report of the XXXVII Meeting of the Commission* [In. Hobart, Tasmania, Australia.: CCAMLR.].
- CCAMLR. (2018b). *Schedule of Conservation Measures in Force 2018/19* [In. Hobart, Tasmania, Australia.: CCAMLR.].
- CCAMLR. (2019a). *Commission for the Conservation of Antarctic Marine Living Resources* [<https://www.ccamlr.org>].
- CCAMLR. (2019b). *Cooperation with others* [<https://www.ccamlr.org/en/organisation/cooperation-others>].
- CCAMLR Performance Review Panel. (2008). *CCAMLR Performance Review Panel Report* [In, 168. Hobart, Tasmania, Australia: CCAMLR].

- CCAMLR Performance Review Panel. (2017). *Second Performance Review of CCAMLR - Final Report of the Panel. CCAMLR-XXXVI/01*. [In, 41. Hobart, Tasmania, Australia: CCAMLR].
- Chaudhury, A. S., Ventresca, M. J., Thornton, T. F., Helfgott, A., Sova, C., Baral, P., ... Ligthart, J. (2016). Emerging meta-organisations and adaptation to global climate change: Evidence from implementing adaptation in Nepal, Pakistan and Ghana. *Global Environmental Change*, 38, 243–257.
- Christie, P., Bennett, N. J., Gray, N. J., ‘Aulani Wilhelm, T., Lewis, N., Parks, J., ... Friedlander, A. M. (2017). Why people matter in ocean governance: Incorporating human dimensions into large-scale marine protected areas. *Marine Policy*, 84(Supplement C), 273–284.
<https://doi.org/10.1016/j.marpol.2017.08.002>
- Commonwealth of Australia. (2016). *Australian Antarctic Strategy and 20 Year Action Plan* [Australian Government].
- Conservation Alliance for Seafood Solutions. (2008). *A Common Vision for Sustainable Seafood*. Retrieved from <http://www.solutionsforseafood.org/projects/common-vision/>
- Conservation Alliance for Seafood Solutions. (2014). *Guidelines for Supporting Fishery Improvement Projects* (p. 22). Retrieved from <http://solutionsforseafood.org/wp-content/uploads/2015/03/Alliance-FIP-Guidelines-3.7.15.pdf>
- Conservation Alliance for Seafood Solutions. (2019). Joining the Alliance. Retrieved from Seafood Solutions website: <https://solutionsforseafood.org/about/join-the-alliance/>

- Crowder, L. B., Osherenko, G., Young, O. R., Airamé, S., Norse, E. A., Baron, N., ... others. (2006). Resolving mismatches in US ocean governance. *Science*, *313*(5787), 617.
- Cullis-Suzuki, S., & Pauly, D. (2010). Failing the high seas: A global evaluation of regional fisheries management organizations. *Marine Policy*, *34*(5), 1036–1042.
- Deighan, L. K., & Jenkins, L. D. (2015). Fishing for recognition: Understanding the use of NGO guidelines in fishery improvement projects. *Marine Policy*, *51*, 476–485. <https://doi.org/10.1016/j.marpol.2014.10.009>
- Delmas, M. A., & Burbano, V. C. (2011). The Drivers of Greenwashing. *California Management Review*, *54*(1), 64–87.
- Dietz, T., Ostrom, E., & Stern, P. C. (2003). The struggle to govern the commons. *Science*, *302*(5652), 1907–1912.
- Djelic, M.-L., & Sahlin-Andersson, K. (2006). *Transnational Governance*. Cambridge: Cambridge University Press.
- Dodds, K., Hemmings, A. D., & Roberts, P. (2017). *Handbook on the Politics of Antarctica*. Edward Elgar Publishing.
- Eisenhardt, K. M., Graebner, M. E., & Sonenshein, S. (2016). Grand Challenges and Inductive Methods: Rigor without Rigor Mortis. *Academy of Management Journal*, *59*(4), 1113–1123.
- Ferraro, F., Etzion, D., & Gehman, J. (2015). Tackling Grand Challenges Pragmatically: Robust Action Revisited. *Organization Studies*, *36*(3), 363–390.
- Finkbeiner, E. M., Bennett, N. J., Frawley, T. H., Mason, J. G., Briscoe, D. K., Brooks, C. M., ... Crowder, L. B. (2017). Reconstructing overfishing: Moving beyond Malthus for effective and equitable solutions. *Fish and Fisheries*, *18*, 1180–1191.

- George, G., Howard-Grenville, J., Joshi, A., & Tihanyi, L. (2016). Understanding and Tackling Societal Grand Challenges through Management Research. *Academy of Management Journal*, 59(6), 1880–1895. <https://doi.org/10.5465/amj.2016.4007>
- Gillespie, A. (2001). Transparency in International Environmental Law: A Case Study of the International Whaling Commission. *Georgetown International Environmental Law Review*, 14, 333–348.
- Gopnik, M. C., Fieseler, L., Cantral, K., McClellan, L., Pendleton, L., & Crowder, L. (2012). Coming to the table: Early stakeholder engagement in marine spatial planning. *Marine Policy*, (36), 1139–1149.
- Gulati, R., Puranam, P., & Tushman, M. (2012). Meta-organization design: Rethinking design in interorganizational and community contexts. *Strategic Management Journal*, 33(6), 571–586.
- Gutiérrez, A. T., & Morgan, S. K. (2015). The influence of the Sustainable Seafood Movement in the US and UK capture fisheries supply chain and fisheries governance. *Frontiers in Marine Science*, 2. <https://doi.org/10.3389/fmars.2015.00072>
- Hardy, P.-Y., Béné, C., Doyen, L., Perea, J.-C., & Mills, D. (2016). Viability and resilience of small-scale fisheries through cooperative arrangements. *Environment and Development Economics*, 21(6), 713–741.
- Heazle, M. (2004). Scientific uncertainty and the International Whaling Commission: An alternative perspective on the use of science in policy making. *Marine Policy*, 28(5), 361–374. <https://doi.org/10.1016/j.marpol.2003.10.001>
- Howard-Grenville, J., Buckle, S. J., Hoskins, B. J., & George, G. (2014). Climate change and management. *Academy of Management Journal*, 57(3), 615–623.

- International Seabed Authority. (1994). *Rules of procedure of the Assembly of the International Seabed Authority*. Retrieved from <https://s3.amazonaws.com/isa.org.jm/s3fs-public/documents/EN/Regs/ROP-Assembly.pdf>
- IWC. (1946). *The International Convention for the Regulation of Whaling*. Retrieved from <https://archive.iwc.int/pages/view.php?ref=3607&k=>
- IWC. (2018a). *Intersessional Report of the International Whaling Commission*. Retrieved from https://archive.iwc.int/pages/view.php?search=populations&k=&modal=&display=list&order_by=title&offset=0&per_page=240&archive=&sort=DESC&restypes=1%2C2%2C3%2C4&recentdaylimit=&foredit=&ref=6977
- IWC. (2018b). *Report of the meeting of the Aboriginal Subsistence Whaling Working Group*. Retrieved from [https://archive.iwc.int/pages/search.php?search=!collection29299&bc_from=the mes](https://archive.iwc.int/pages/search.php?search=!collection29299&bc_from=the%20mes)
- IWC. (2018c). *Rules of Procedure and Financial Regulation*. Retrieved from <https://archive.iwc.int/pages/view.php?ref=3605&k=>
- Jacquet, J., Blood-Patterson, E., Brooks, C., & Ainley, D. (2016). 'Rational use' in Antarctic waters. *Marine Policy*, 63, 28–34. <https://doi.org/10.1016/j.marpol.2015.09.031>
- Jaeckel, A. (2016). Deep seabed mining and adaptive management: The procedural challenges for the International Seabed Authority. *Marine Policy*, 70, 205–211. <https://doi.org/10.1016/j.marpol.2016.03.008>

- King, A. A., & Lenox, M. J. (2000). Industry Self-Regulation Without Sanctions: The Chemical Industry's Responsible Care Program. *Academy of Management Journal*, 43(4), 698–716.
- Kittinger, J. N., Koehn, J. Z., Cornu, E. L., Ban, N. C., Gopnik, M., Armsby, M., ... Crowder, L. B. (2014). A practical approach for putting people in ecosystem-based ocean planning. *Frontiers in Ecology and the Environment*, 12(8), 448–456. <https://doi.org/10.1890/130267>
- Kittinger, J. N., Teh, L. C., Allison, E. H., Bennett, N. J., Crowder, L. B., Finkbeiner, E. M., ... Ota, Y. (2017). Committing to socially responsible seafood. *Science*, 356(6341), 912–913.
- König, A., Schulte, M., & Enders, A. (2012). Inertia in response to non-paradigmatic change: The case of meta-organizations. *Research Policy*, 41(8), 1325–1343.
- LaBelle, R., Leonard, K., & Schultz, G. (2016). *Mid-Atlantic Regional Ocean Action Plan*. 136.
- Laurent, A., Garaudel, P., Schmidt, G., & Eynaud, P. (2019). Civil Society Meta-organizations and Legitimizing Processes: The Case of the Addiction Field in France. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *Online first*.
- Lewis, S. G., & Boyle, M. (2017). The Expanding Role of Traceability in Seafood: Tools and Key Initiatives: Seafood traceability tools and initiatives.... *Journal of Food Science*, 82(S1), A13–A21. <https://doi.org/10.1111/1750-3841.13743>
- Liggett, D., Frame, B., Gilbert, N., & Morgan, F. (2017). Is it all going south? Four future scenarios for Antarctica. *Polar Record*, 53(5), 459–478.
- Lodge, M., Anderson, D., Løbach, T., Munro, G., Sainsbury, K. J., & Willock, A. (2007). *Recommended Best Practices for Regional Fisheries Management*

Organizations Report of an independent panel to develop a model for improved governance by Regional Fisheries Management Organizations. London: Chatham House.

- Lodge, M., Johnson, D., Le Gurun, G., Wengler, M., Weaver, P., & Gunn, V. (2014). Seabed mining: International Seabed Authority environmental management plan for the Clarion–Clipperton Zone. A partnership approach. *Marine Policy*, *49*, 66–72. <https://doi.org/10.1016/j.marpol.2014.04.006>
- Longo, S. B. (2011). Global Sushi: The Political Economy of the Mediterranean Bluefin Tuna Fishery in the Modern Era. *Journal of World-Systems Research*, *17*(2), 403–427.
- Malpica-Cruz, L., Chaves, L. C. T., & Côté, I. M. (2016). Managing marine invasive species through public participation: Lionfish derbies as a case study. *Marine Policy*, *74*(Supplement C), 158–164. <https://doi.org/10.1016/j.marpol.2016.09.027>
- Mearns, A. J., Allen, M. J., & Moore, M. D. (2000). The Southern California Coastal Water Research Project — 30 years of environmental research in the Southern California Bight. *SCCWRP Annual Report 1999-00*, 25.
- Miller, D. (2011). Sustainable management in the Southern Ocean: CCAMLR science. In P. Berkman, M. Lang, W. Walton, & O. Young (Eds.), *Science diplomacy: Antarctica, science, and the governance of international spaces*. Washington DC: Smithsonian Institution Scholarly Press.
- Miller, D., & Slicer, N. M. (2014). CCAMLR and Antarctic conservation: The leader to follow. In S. M. Garcia, J. Rice, & A. Charles (Eds.), *Governance of marine fisheries and biodiversity conservation: interaction and co-evolution* (John Wiley & Sons, Ltd., pp. 253–270). West Sussex, UK.

- Paxton, A. B., Taylor, J. C., Nowacek, D. P., Dale, J., Cole, E., Voss, C. M., & Peterson, C. H. (2017). Seismic survey noise disrupted fish use of a temperate reef. *Marine Policy*, 78(Supplement C), 68–73.
<https://doi.org/10.1016/j.marpol.2016.12.017>
- Posner, E. A., & Sykes, A. O. (2014). Voting Rules in International Organizations. *Chicago Journal of International Law*, 15, 195–228.
- Punt, A. E., & Donovan, G. P. (2007). Developing management procedures that are robust to uncertainty: Lessons from the International Whaling Commission. *ICES Journal of Marine Science*, 64(4), 603–612.
<https://doi.org/10.1093/icesjms/fsm035>
- Rasche, A., Bakker, F., & Moon, J. (2013). Complete and Partial Organizing for Corporate Social Responsibility. *Journal of Business Ethics*, 115(4), 651–663.
- Rasche, A., Waddock, S., & McIntosh, M. (2013). The United Nations Global Compact Retrospect and Prospect. *Business & Society*, 52(1), 6–30.
- Rayfuse, R. (2018). Climate Change and Antarctic Fisheries: Ecosystem Management in CCAMLR. *Ecology LQ*, 45, 53–81.
- Raymond-Yakoubian, J., & Daniel, R. (2018). An Indigenous approach to ocean planning and policy in the Bering Strait region of Alaska. *Marine Policy*, 97, 101–108. <https://doi.org/10.1016/j.marpol.2018.08.028>
- Reeves, R. R. (2002). The origins and character of ‘aboriginal subsistence’ whaling: A global review. *Mammal Review*, 32(2), 71–106.
- SCCWRP. (1974). *Annual Report*. Retrieved from <http://ftp.sccwrp.org/pub/download/DOCUMENTS/AnnualReports/2018AnnualReport/2018AnnualReport.pdf>

- SCCWRP. (2018a). *Annual Report: Next generation biology*. Retrieved from <http://ftp.sccwrp.org/pub/download/DOCUMENTS/AnnualReports/2018AnnualReport/2018AnnualReport.pdf>
- SCCWRP. (2018b). *CTAG Update* [SCCWRP Commission Meeting]. Retrieved from http://ftp.sccwrp.org/pub/download/PRESENTATIONS/Commission_Meetings/18_12.07/CTAGUpdate.pdf
- SCCWRP. (2019). *Executive Director's Report* [SCCWRP Commission Meeting]. Retrieved from http://ftp.sccwrp.org/pub/download/PRESENTATIONS/Commission_Meetings/19_03.08/DirectorsReport.pdf
- Schot, J., & Steinmueller, W. E. (2018). Three frames for innovation policy: R&D, systems of innovation and transformative change. *Research Policy*, 47(9), 1554–1567. <https://doi.org/10.1016/j.respol.2018.08.011>
- Schütz, M., & Bull, F.-R. (2017). Die EU als Metaorganisation. In M. Schütz & F.-R. Bull (Eds.), *Unverstandene Union: Eine organisationswissenschaftliche Analyse der EU* (pp. 9–33). https://doi.org/10.1007/978-3-658-17149-0_3
- Science and Technology Policy Office. (2016, November 3). Submittal of Mid-Atlantic Regional Ocean Action Plan for National Ocean Council Certification. Retrieved June 5, 2019, from Federal Register website: <https://www.federalregister.gov/documents/2016/11/03/2016-26623/submittal-of-mid-atlantic-regional-ocean-action-plan-for-national-ocean-council-certification>
- Spillman, L. (2017). Meta-Organization Matters. *Journal of Management Inquiry*, Online Preview.
- The Convention on the Conservation of Marine Living Resources. (1980).

- Torres, A., Brandt, J., Lear, K., & Liu, J. (2017). A looming tragedy of the sand commons. *Science*, 357(6355), 970–971.
<https://doi.org/10.1126/science.aao0503>
- United Nations Convention on the Law of the Sea. Montego Bay. , 1833 UNTS 397 10 December 1982, in force 16 November 1994 § (1982).
- United States Department of State. (2017). *Designation of the Ross Sea Region Marine Protected Area*. In. Washington, DC, United States: U.S. Department of State, Media Note, Office of the Spokesperson.
- Valente, M., & Oliver, C. (2018). Meta-Organization Formation and Sustainability in Sub-Saharan Africa. *Organization Science*.
- Vernazzani, B. G., Burkhardt-Holm, P., Cabrera, E., Iñíguez, M., Luna, F., Parsons, E. C. M., ... Stachowitsch, M. (2017). Management and conservation at the International Whaling Commission: A dichotomy sandwiched within a shifting baseline. *Marine Policy*, 83, 164–171.
- Wright, C., & Nyberg, D. (2017). An inconvenient truth: How organizations translate climate change into business as usual. *Academy of Management Journal*, 60(5), 1633–1661.
- Xu, Y., & Ramanathan, V. (2017). Well below 2° C: Mitigation strategies for avoiding dangerous to catastrophic climate changes. *Proceedings of the National Academy of Sciences*, 201618481.