



RESEARCH ARTICLE

Negotiating regime complexity: Following a regime complex in the making

Arne Langlet  and Alice Vadrot 

Department of Political Sciences, University of Vienna, Vienna, Austria
Corresponding author: Alice Vadrot; Email: alice.vadrot@univie.ac.at

(Received 18 May 2022; revised 10 June 2023; accepted 14 June 2023)

Abstract

This article broadens the understanding and empirical study of regime complexes by shifting the focus from the negotiation outcome to the processes of negotiating new international agreements. Although they are important to regime-complex formation and delimitation, the sites where states negotiate new agreements are rather neglected. We aim to enhance the methodological toolbox available to scholars studying global governance in two ways: (1) by demonstrating how dynamic relationships between states and international organisations (IOs) unfolding within the social space of international treaty negotiations contribute to regime-complex formation; and (2) how social network analysis (SNA) can help us to detect patterns in these relationships. Combining participant observation and collaborative event ethnography (CEE) with social network analysis, we present new empirical material illustrating how we delimited a regime complex and how IOs interact throughout the negotiation process. We applied our methodology to the case of marine-biodiversity governance and use observational data collected during three intergovernmental conferences (IGCs) (2018–19) on a new treaty for the conservation and sustainable use of marine biodiversity beyond national jurisdiction (BBNJ) for our analysis. We discuss the results in relation to our approach's strengths and weaknesses and implications for future research on regime complexity.

Keywords: international negotiations; marine biodiversity; methodology; regime complexity; United Nations

Introduction

Global governance and international relations have witnessed a steady increase of international organisations (IOs) governing particular issue areas at the international level.¹ This phenomenon has been described as ‘treaty congestion’,² ‘institutional linkages’,³ ‘clusters of regimes’,⁴ ‘conglomerate regimes’,⁵ ‘correlated regimes’,⁶ ‘networks of regimes’,⁷ ‘regime

¹ Union of International Associations, ‘Yearbook of international organizations: Annuaire des organisations internationales’, (Leiden Brill, 2020). Retrieved from: <https://uia.org/yearbook>.

² Edward Duncan Brown, ‘The 1994 agreement on the implementation of Part XI of the UN Convention on the law of the sea: Breakthrough to universality?’, *Marine Policy*, 19:1 (1995), pp. 5–20.

³ Oran R. Young, ‘Institutional linkages in international society: Polar perspectives’, *Global Governance*, 2 (1996), pp. 1–24.

⁴ Sebastian Oberthür, ‘Clustering of multilateral environmental agreements: Potentials and limitations’, *International Environmental Agreements*, 2:4 (2002), pp. 317–40.

⁵ Laurence R. Helfer, ‘Regime shifting in the international intellectual property system’, *Perspectives on Politics*, 7:1 (2009), pp. 39–44.

⁶ Detlef F. Sprinz, ‘Research on the effectiveness of international environmental regimes: A review of the state of the art’, *Potsdam Institute for Climate Impact Research & University of Potsdam (PIK)* (2000).

⁷ Arild Underdal and Oran Young, ‘Research strategies for the future’, in Arild Underdal and Oran Young (eds), *Regime Consequences* (Springer, Dordrecht, 2004), pp. 361–380.

interplay,⁸ a ‘patchwork of international institutions’,⁹ ‘organizational ecology’,¹⁰ ‘fragmentation’,¹¹ and ‘polycentricity’,¹² but at this point scholars of International Relations widely use the concept ‘regime complexity’ to capture the proliferation and fragmentation of institutions, agreements, and sites where states negotiate legal text to codify the values, norms, and rules that should govern a particular issue area.¹³ Empirical studies have shown that regime complexes are inherently dynamic, consisting of different phases¹⁴ and levels of IO involvement,¹⁵ where IOs are considered to be both important elements of regime complexes as well as central actors within them.¹⁶ During regime-complex formation and the different stages of their consolidation, IOs tend first to compete and then to specialise,¹⁷ which may lead to a division of work and create synergies between regimes and their elements,¹⁸ but which could also encourage forum shopping or regime shifting.¹⁹

So far, empirical studies have largely produced descriptions of established regime complexes using analyses of mandates²⁰ or treaty text citations²¹ to describe the units (e.g. legal agreements,²²

⁸Sebastian Oberthür and Olav Schram Stokke, *Managing Institutional Complexity: Regime Interplay and Global Environmental Change* (Cambridge, MA: MIT Press, 2011).

⁹Naghmeh Nasiritousi and Hugo Faber, ‘Legitimacy under institutional complexity: Mapping stakeholder perceptions of legitimate institutions and their sources of legitimacy in global renewable energy governance’, *Review of International Studies*, 47:3 (2021), pp. 377–98.

¹⁰Christian Downie, ‘Competition, cooperation, and adaptation: The organizational ecology of international organizations in global energy governance’, *Review of International Studies*, 48:2 (2021), pp. 1–21.

¹¹Brian Greenhill and Yonatan Lupu, ‘Clubs of clubs: Fragmentation in the network of intergovernmental organizations’, *International Studies Quarterly*, 61:1 (2017), pp. 181–95; Rakhyun E. Kim, ‘Is global governance fragmented, polycentric, or complex? The state of the art of the network approach’, *International Studies Review*, 22:4 (2019), pp. 1–29; Sebastian Oberthür and Justyna Pożarowska, ‘Managing institutional complexity and fragmentation: The Nagoya protocol and the global governance of genetic resources’, *Global Environmental Politics*, 13:3 (2013), pp. 100–18; Peter Lawrence, ‘The fragmentation of global climate governance: Consequences and management of regime interactions’, *Transnational Environmental Law*, 5:2 (2016), pp. 451–5; Frank Biermann, Philipp Pattberg, Harro Van Asselt, and Fariborz Zelli, ‘The fragmentation of global governance architectures: A framework for analysis’, *Global Environmental Politics*, 9 (2009), pp. 14–40; Marija Isailovic, Oscar Widerberg, and Philipp Pattberg, ‘Fragmentation of Global Environmental Governance Architectures: A Literature Review’, *Available at SSRN 2479930* (2013).

¹²Elinor Ostrom, ‘Polycentric systems for coping with collective action and global environmental change’, *Global Environmental Change*, 20:4 (2019), pp. 550–557.

¹³Laura Gomez-Mera, Jean-Frédéric Morin, and Thijs Van de Graaf, ‘Regime complexes’, in Frank Biermann and Rakhyun E. Kim (eds), *Architectures of Earth System Governance: Institutional Complexity and Structural Transformation* (Cambridge: Cambridge University Press, 2020), pp. 137–157.

¹⁴Amandine Orsini, Jean-Frédéric Morin, and Oran R. Young, ‘Regime complexes: A buzz, a boom, or a boost for global governance?’, *Global Governance*, 19 (2013), pp. 27–39.

¹⁵James Hollway, ‘What makes a “regime complex” complex? It eepend’, *Complexity, Governance and Networks*, 6:1 (2020), pp. 68–81.

¹⁶Kenneth W. Abbott, ‘The transnational regime complex for climate change’, *Environment and Planning C: Government and Policy*, 30:4 (2012), pp. 571–90.

¹⁷Jean-Frédéric Morin and Amandine Orsini, ‘Regime complexity and policy coherency: Introducing a co-adjustments model’, *Global Governance*, 19:1 (2013), pp. 41–51.

¹⁸Gomez-Mera, Morin, and Van de Graaf, ‘Regime complexes’, p. 139.

¹⁹Stephanie C. Hofmann, ‘The politics of overlapping organizations: Hostage-taking, forum-shopping and brokering’, *Journal of European Public Policy*, 26:6 (2019), pp. 883–905; Thomas Gehring and Benjamin Faude, ‘The dynamics of regime complexes: Microfoundations and systemic effects’, *Global Governance*, 19:1 (2013), pp. 119–30; Diana Panke, Stefan Lang, and Anke Wiedemann, ‘State and regional actors in complex governance systems: Exploring dynamics of international negotiations’, *The British Journal of Politics and International Relations*, 19:1 (2017), pp. 91–112.

²⁰Abbott, ‘Transnational regime complex’.

²¹Rakhyun E. Kim and Brendan Mackey, ‘International environmental law as a complex adaptive system’, *International Environmental Agreements: Politics, Law and Economics*, 14:1 (2013), pp. 5–24.

²²Kal Raustiala and David G. Victor, ‘The regime complex for plant genetic resources’, *International Organization*, 58:2 (2004), pp. 277–309.

regimes,²³ IOs,²⁴ etc.) and connections (e.g. overlaps of governance topics,²⁵ conflict clauses in treaty text,²⁶ etc.), but central questions concerning the delimitation²⁷ of a sample of regimes into one analytical unit (a regime complex) and how the connections between the regimes form²⁸ remain unanswered. Although negotiations play an important part in regime-complex formation,²⁹ as actors tend to use intergovernmental negotiations, such as the Conferences of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC), to exercise influence on the regime under discussion and its interlinkages with other fora,³⁰ negotiation sites themselves have remained rather neglected in debates about regime-complex formation and delimitation. This has come at the expense of knowledge about the delimitation and the agency of the involved IOs at the negotiation stage of regime-complex formation, where IOs seek a role and position in governing a specific issue area.

We advance this debate by showing how a regime complex forms through the interactions of IOs and states during negotiations, addressing the important role that intergovernmental negotiations play in the process of regime-complex formation.³¹ Thus, we see regime-complex formation as a process to which negotiations contribute through the delimitation by states and the agency of IOs. Conversely, we see negotiations as a process in which a regime complex can form because states mention which IOs they see as part of the regime complex, and IOs express how they relate to the issue area under discussion. This process has different phases itself (i.e. rounds of negotiations) and does not preclude that IOs become part of the regime complex before or after negotiations conclude. With a view on regime-complex formation happening during the negotiations, we aim to complement existing research which largely focused on negotiation outcomes such as legal documents and texts.³²

Combining participant observation and collaborative event ethnography (CEE) to collect data on the actors and processes in negotiations with social network analysis (SNA), we present new empirical material illustrating (1) how a delimitation of the constituting elements of a regime complex based on states' statements takes place, and (2) how IO interaction is structured. We aim to strengthen the methodological toolbox available to IR scholars for studying global governance by demonstrating both how dynamic relationships and networks between states and IOs unfolding within the organised social space of negotiating legal text contribute to regime complex formation and how SNA can help us to detect patterns in the behaviour of state and non-state actors.

We applied our methodology to the case of marine-biodiversity governance and use observational data collected during three intergovernmental conferences (IGC) (2018–19) on a new treaty for the conservation and sustainable use of marine biodiversity beyond national jurisdiction

²³Stephen D. Krasner, 'Structural causes and regime consequences: Regimes as intervening variables', *International Organization*, 36:2 (1982), pp. 185–205.

²⁴Tyler Pratt, 'Deference and hierarchy in international regime complexes', *International Organization*, 72:3 (2018), pp. 561–90.

²⁵Jean-Frédéric Morin, Sélim Louafi, Amandine Orsini, and Mohamed Oubenal, 'Boundary organizations in regime complexes: A social network profile of IPBES', *Journal of International Relations and Development*, 20:3 (2016), pp. 543–77.

²⁶Kim and Mackey, 'International environmental law'.

²⁷Orsini, Morin, and Young, 'Regime complexes'.

²⁸Downie, 'Competition, cooperation, and adaptation'; Gomez-Mera, Morin, and Van de Graaf, 'Regime complexes'.

²⁹Karen J. Alter and Sophie Meunier, 'The politics of international regime complexity', *Perspectives on Politics*, 7:1 (2009), pp. 13–24.

³⁰R. O. Keohane and D. G. Victor, 'The regime complex for climate change', *Perspectives on Politics*, 9:1 (2011), pp. 7–23; Panke, Lang, and Wiedemann, 'State and regional actors'.

³¹Morin and Orsini, 'Regime complexity and policy coherency'; Jean-Frédéric Morin and Amandine Orsini, 'Policy coherency and regime complexes: The case of genetic resources', *Review of International Studies*, 40 (2014), pp. 303–24.

³²Hollway, 'What makes a "regime complex" complex?'; Kim, 'Fragmented, polycentric, or complex?'

(BBNJ)³³ as an entry point for our analysis. The new legally binding instrument is an implementing agreement of the United Nations Convention on the Law of the Sea (UNCLOS) and has the objective to establish a coherent legal framework for the management and conservation of biodiversity in the high seas beyond the boundaries of nation-states.³⁴ The BBNJ negotiations were distinctive in that, although the BBNJ negotiations took place under UNCLOS, it was widely recognised that the new agreement will interact with many existing treaties and IOs.³⁵ As one state delegate put it, ‘we need to be aware that we are creating a regime complex. This treaty will not function alone but will speak to other regimes and in relation to others’ (own observation, 20 August 2019). Accordingly, the BBNJ negotiations were shaped by governmental attempts to embed the new treaty within the existing legal framework governing marine biodiversity and to define relationships to other IOs in this particular issue area.³⁶

This article is structured as follows. The second section, by reviewing existing literature, demonstrates how new empirics can contribute to understanding how regime complexes form and discusses how we built on existing methodological approaches that focus on international negotiations. The third section describes the methods and data used for the empirical analysis, and the fourth presents the results, demonstrating how the IOs within the current marine-biodiversity regime complex can be identified, and how they interacted throughout three rounds of negotiations. Lastly, we discuss the results concerning our approach’s strengths and weaknesses, and implications for future research on regime complexity.

Understanding how regime complexes form

The proliferation of international treaties and organisations³⁷ has been followed by literature using different concepts to address the increasing complexity of global governance. This literature is based on observations that IOs are ‘embedded in a larger web of international rules and regimes.’³⁸ Raustiala and Victor introduced the concept of a ‘regime complex,’³⁹ which has found popularity in the field of global environmental governance.⁴⁰ A regime complex is defined as ‘an array of partially overlapping and non-hierarchical institutions governing a particular issue area.’⁴¹ Literature on regime complexes has identified as topics to be addressed: (1) a lack of clarity on the delimitation of elements;⁴² (2) a gap in describing the dynamics between IOs;⁴³ and (3) a lack of active fieldwork, as most studies so far have relied on desk research.⁴⁴ This section reviews relevant literature to clarify our contributions.

³³ Lisa M. Campbell, Catherine Corson, Noella J. Gray, Kenneth I. MacDonald, and J. Peter Brosius, ‘Studying global environmental meetings to understand global environmental governance: Collaborative event ethnography at the Tenth Conference of the Parties to the Convention on Biological Diversity’, *Global Environmental Politics*, 14:3 (2014), pp. 1–20; Kate O’Neill and Peter M. Haas, ‘Being there: International negotiations as study sites in global environmental politics’, *Global Environmental Politics*, 19:2 (2019), pp. 4–13; Matthew Paterson, ‘Using negotiation sites for richer collection of network data’, *Global Environmental Politics*, 19:2 (2019), pp. 81–92; Alice B. M. Vadrot, ‘Multilateralism as a “site” of struggle over environmental knowledge: The north–south divide’, *Critical Policy Studies* 14:2 (2020), pp. 1–12.

³⁴ Kati Kulovesi, Michael Mehling, and Elisa Morgera, ‘Global environmental law: Context and theory, challenge and promise’, *Transnational Environmental Law*, 8:3 (2019), pp. 405–35.

³⁵ Arne Langlet and Alice B. M. Vadrot, ‘Not “undermining” who? Unpacking the emerging BBNJ regime complex’, *Marine Policy*, 147 (2023), p. 105372.

³⁶ Langlet and Vadrot, ‘Not “undermining” who?’.

³⁷ UIA, ‘Yearbook of international organizations: Annuaire des organisations internationales’.

³⁸ Alter and Meunier, ‘The politics of international regime complexity’, p. 13.

³⁹ Raustiala and Victor, ‘The regime complex for plant genetic resources’.

⁴⁰ Miguel Munoz, Rachel Thrasher, and Adil Najam, ‘Measuring the negotiation burden of multilateral environmental agreements’, *Global Environmental Politics*, 9 (2009), pp. 1–13.

⁴¹ Raustiala and Victor, ‘The regime complex for plant genetic resources’, p. 279.

⁴² Orsini, Morin, and Young, ‘Regime complexes’; Downie, ‘Competition, cooperation, and adaptation’.

⁴³ Orsini, Morin, and Young, ‘Regime complexes’; Downie, ‘Competition, cooperation, and adaptation’.

⁴⁴ Gomez-Mera, Morin, and Van de Graaf, ‘Regime complexes’.

The problem of regime-complex delimitation

One defining part of a regime complex is the ‘array of ... institutions’,⁴⁵ raising the question of how to delimit this array: where does it start, where does it end – or which IOs are in and which are out – and what makes them a regime complex? When the boundaries between regimes become blurred,⁴⁶ it is difficult to define a delimitation of a regime complex⁴⁷ or to assess which IOs are ‘in the same population’,⁴⁸ which has led to varying mappings of the same regime complex.⁴⁹

Addressing these questions, Hollway shows that it is the dependence among regimes that makes a set of regimes complex.⁵⁰ Orsini, Morin, and Young argue that ‘perceptions draw the boundaries of the complex, indicating which regimes are recognized or not as elements of a complex’.⁵¹ Perception becomes key when approaching the delimitation problem in the phase of intergovernmental negotiation. In this phase, the regime complex is not yet codified in adopted legal text and the elements ‘governing a particular issue-area’ are still up for debate.⁵² It is not yet clear which IOs will govern the issue area, but instead IOs compete for governance tasks and states favour diverging IOs according to their interests.⁵³

The delimitation of the regime complex is not predetermined but is often the outcome of international negotiations or other state or organisational deliberations such as forum-shopping.⁵⁴ In any case, a delimitation that considers only institutions that possess formally codified overlaps risks falling short of understanding that the regime complex exists not necessarily only through legal documents but also through the perception of actors,⁵⁵ and that regimes may develop in interdependence to each other even without codified relationships.⁵⁶

Despite the scholarly recognition of these factors, the delimitation problem of regime complexes has not been sufficiently discussed in the literature, which has largely focused on studying established regime complexes. These accounts relied on arguably rather static legal documents⁵⁷ and did not consider social data from within negotiations, thus not accounting for the dynamics of international negotiations.⁵⁸ IOs may interact and compete during negotiations without becoming part of the codified regime complex. In summary, there has been a lack of work supported by empirics that can broaden the delimitation of elements of the regime complex to acknowledge the IOs that governmental negotiators perceive and consider as relevant.⁵⁹ This study thus aims to contribute to the existing literature by bringing actor-oriented

⁴⁵Raustiala and Victor, ‘The regime complex for plant genetic resources.’

⁴⁶Raustiala and Victor, ‘The regime complex for plant genetic resources.’

⁴⁷Orsini, Morin, and Young, ‘Regime complexes.’

⁴⁸Downie, ‘Competition, cooperation, and adaptation’, p. 2.

⁴⁹Abbott, ‘The transnational regime complex for climate change.’

⁵⁰Hollway, ‘What makes a “regime complex” complex?’

⁵¹Orsini, Morin, and Young, ‘Regime complexes’, p. 31.

⁵²Raustiala and Victor, ‘The regime complex for plant genetic resources’, p. 279.

⁵³Keohane and Victor, ‘The regime complex for climate change.’

⁵⁴Stephanie C. Hofmann, ‘The politics of overlapping organizations’; Thomas Gehring and Benjamin Faude, ‘The dynamics of regime complexes: Microfoundations and systemic effects’, *Global Governance*, 19:1 (2013), pp. 119–30; Diana Panke, Stefan Lang, and Anke Wiedemann, ‘State and regional actors in complex governance systems: Exploring dynamics of international negotiations’, *The British Journal of Politics and International Relations*, 19:1 (2017), pp. 91–112.

⁵⁵Orsini, Morin, and Young, ‘Regime complexes’; Nasiritousi and Faber, ‘Legitimacy under institutional complexity.’

⁵⁶Hollway, ‘What makes a “regime complex” complex?’

⁵⁷Jean-Frédéric Morin, Joost Pauwelyn, and James Hollway, ‘The trade regime as a complex adaptive system: Exploration and exploitation of environmental norms in trade agreements’, *Journal of International Economic Law*, 20:2 (2017), pp. 365–90; Christoph Stadtfeld, James Hollway, and Per Block, ‘Dynamic network actor models: Investigating coordination ties through time’, *Sociological Methodology*, 47:1 (2017), pp. 1–40.

⁵⁸Panke, Lang, and Wiedemann, ‘State and regional actors.’

⁵⁹O’Neill and Haas, ‘Being there’; Nasiritousi and Faber, ‘Legitimacy under institutional complexity.’

data from negotiations to the analysis in order to complement studies that used formal documents.

IO behaviour in regime complexes

Research has shown that the ‘density of international rules and institutions’⁶⁰ has effects on actors’ behaviour⁶¹ and on global governance in general.⁶² Understanding IO behaviour requires theoretical guidance on the process of regime-complex formation. Orsini, Morin, and Young identified four stages in the life cycle of regime complexes. The first is ‘atomisation’: elemental regimes exist separately. The second stage is ‘competition’: the complex takes shape, and the elemental regimes compete for strategic positions. To move from the first to the second stage, actors need to perceive the complex and become aware of its externalities. IOs tend to ‘compete’ for authority and potentially engage in conflict⁶³ because they need to secure support from their constituents.⁶⁴ Hence, scholars understand IOs under regime complexity to be ‘self-interested bodies that are predominantly interested in increasing their individual resources and competencies.’⁶⁵ Alter and Meunier noted that the negotiation of an international agreement belongs to the stage of competition, during which actors’ strategies concerning the preferred legal, normative, and institutional setting become visible.⁶⁶ In the third stage, labelled ‘specialisation’, actors create common metaprinciples that increasingly manage competition.⁶⁷ This means that over time, competition between IOs is expected to decrease as they increasingly accommodate each other’s positions in the regime complex, ‘specialise’,⁶⁸ and defer to each other.⁶⁹ The fourth and final stage is ‘integration’: the complex becomes unified and stable.⁷⁰

Hence, the authors see competition and specialisation as specific stages in the evolution of a regime complex,⁷¹ but this scheme has so far rarely been filled with empirics. Further, assuming that IOs compete and specialise requires an approach that acknowledges the agency of IOs in global governance, which in turn raises the question of how to observe this agency. We argue that competition and specialisation are inherently relational processes and propose to look at the statements of IOs during the negotiations to observe these interactions and to use SNA to analyse patterns within them.

⁶⁰Jessica F. Green and Graeme Auld, ‘Unbundling the regime complex: The effects of private authority’, *Transnational Environmental Law*, 6:2 (2017), pp. 259–84.

⁶¹Downie, ‘Competition, cooperation, and adaptation’.

⁶²Gomez-Mera, Morin, and Van de Graaf, ‘Regime complexes’.

⁶³Downie, ‘Competition, cooperation, and adaptation’; Karen J. Alter and Kal Raustiala, ‘The rise of international regime complexity’, *Annual Review of Law and Social Science*, 14:1 (2018), pp. 329–49.

⁶⁴Gehring and Faude, ‘The dynamics of regime complexes’.

⁶⁵Steffen Bauer, Frank Biermann, Klaus Dingwerth, and Bernd Siebenhüner, ‘Understanding international bureaucracies: Taking stock’, in Frank Biermann and Bernd Siebenhüner (eds.) *Managers of Global Change: The Influence of International Environmental Bureaucracies* (Cambridge, MA: MIT Press Scholarship 2009), pp. 15–36 (p. 26); Darren G. Hawkins, David A. Lake, Daniel L. Nielson, and Michael J. Tierney, *Delegation and Agency in International Organizations* (Cambridge: Cambridge University Press, 2006); David A. Lake, ‘Relational authority and legitimacy in international relations’, *American Behavioral Scientist*, 53:3 (2009), pp. 331–53; Roland Vaubel, ‘Principal-agent problems in international organizations’, *The Review of International Organizations*, 1:2 (2006), pp. 125–38.

⁶⁶Alter and Meunier, ‘The politics of international regime complexity’.

⁶⁷Morin and Orsini, ‘Regime complexity and policy coherency’.

⁶⁸Morin and Orsini, ‘Regime complexity and policy coherency’.

⁶⁹Gehring and Faude, ‘The dynamics of regime complexes’; Morin and Orsini, ‘Regime complexity and policy coherency’; Pratt, ‘Deference and hierarchy’.

⁷⁰Morin and Orsini, ‘Regime complexity and policy coherency’.

⁷¹Gehring and Faude, ‘The dynamics of regime complexes’.

Negotiations as social spaces to study regime complexity

The view that regime complexes are social systems is not new, and literature on regime complexes has grown through the application of network analysis,⁷² complexity theory,⁷³ and empirical ethnographies to capture the relational dimensions of regime complexity.⁷⁴ Using SNA to study regime complexes brings about analytical synergies,⁷⁵ such as a shared focus on structure and interactions.⁷⁶ Therefore, a growing body of literature describes conflictual or synergic⁷⁷ relationships between international institutions⁷⁸ at different levels. By highlighting that regime complexes are networks of regimes,⁷⁹ authors have demonstrated the network structure of the international environmental governance system,⁸⁰ where overlaps are operationalised as references that connect legal texts⁸¹ or as collaborative links between organisations' secretariats.⁸² However, network scholars have often encountered the problem of accessing detailed relational data to describe and analyse regime complexes at different stages of their formation, and arguably the methodological approach to do so. Subsequently, many researchers conducting SNA relied on legal documents – a data source that arguably is particularly 'unsocial' and not interactive but rather the outcome of social interactions – to identify the elements of a regime complex and record overlaps between them.⁸³

In order to address this shortcoming, we built on a body of literature that has produced empirical ethnographies of international negotiations and other sites of global governance.⁸⁴ Negotiations

⁷²James Hollway and Johan Koskinen, 'Multilevel embeddedness: The case of the global fisheries governance complex', *Social Networks*, 44 (2016), pp. 281–94; James Hollway, Alessandro Lomi, Francesca Pallotti, and Christoph Stadtfeld, 'Multilevel social spaces: The network dynamics of organizational fields', *Network Science*, 5:2 (2017), pp. 187–212; Morin, Pauwelyn, and Hollway, 'The trade regime as a complex adaptive system'.

⁷³Morin, Pauwelyn, and Hollway, 'The trade regime as a complex adaptive system'; Amandine Orsini, Philippe Le Prestre, Peter M. Haas et al., 'Forum: Complex systems and international governance', *International Studies Review*, 22:4 (2019), pp. 1–30; Kim, 'Fragmented, polycentric, or complex?'; Kim and Mackey, 'International environmental law'; Matthew Hoffmann, *Climate Governance at the Crossroads: Experimenting with a Global Response after Kyoto* (online edn: Oxford Academic, 2011).

⁷⁴Séverine Autesserre, *The Frontlines of Peace: An Insider's Guide to Changing the World* (New York: Oxford University Press, 2021). Catherine Corson, Lisa M. Campbell, Peter Wilshusen, and Noella J. Gray, 'Assembling global conservation governance', *Geoforum*, 103 (2019), pp. 56–65.

⁷⁵Kim, 'Fragmented, polycentric, or complex?'.

⁷⁶Orsini, Philippe Le Prestre, Peter M. Haas et al., 'Forum: Complex systems and international governance'.

⁷⁷Gomez-Mera, Morin, and Van de Graaf, 'Regime complexes', p. 139.

⁷⁸Alter and Raustiala, 'The rise of international regime complexity'.

⁷⁹Morin and Orsini, 'Policy coherency and regime complexes'.

⁸⁰Kim and Mackey, 'International environmental law'; Rakhyn E. Kim, 'The emergent network structure of the multilateral environmental agreement system', *Global Environmental Change*, 23:5 (2013), pp. 980–91.

⁸¹Hanna Ahlström and Sarah E. Cornell, 'Governance, polycentricity and the global nitrogen and phosphorus cycles', *Environmental Science & Policy*, 79 (2018), pp. 54–65; Oren Perez and Ofir Stegmann, 'Transnational networked constitutionalism', *Journal of Law and Society*, 45:S1 (2018), pp. 135–62; Morin, Pauwelyn, and Hollway, 'The trade regime as a complex adaptive system'.

⁸²Yannick Atouba and Michelle Shumate, 'Interorganizational networking patterns among development organizations', *Journal of Communication*, 60:2 (2010), pp. 293–317; Margaret E. Keck and Kathryn Sikkink, *Activists beyond Borders: Advocacy Networks in International Politics* (Ithaca, NY: Cornell University Press, 2014); Michelle Shumate, Janet Fulk, and Peter Monge, 'Predictors of the international HIV–AIDS INGO network over time', *Human Communication Research*, 31:4 (2005), pp. 482–510; Margaret E. Keck and Kathryn Sikkink, 'Transnational advocacy networks in international and regional politics', *International Social Science Journal*, 68 (1998), pp. 89–101.

⁸³Kim, 'The emergent network structure'; Kim and Mackey, 'International environmental law'; Sally Engle Merry, 'Global legal pluralism and the temporality of soft law', *The Journal of Legal Pluralism and Unofficial Law*, 46:1 (2014), pp. 108–22.

⁸⁴Sally Engle Merry, *Human Rights and Gender Violence: Translating International Law into Local Justice* (Chicago: University of Chicago Press, 2009); Hannah Hughes and Alice B. M. Vadrot, 'Weighting the world: IPBES and the struggle over biocultural diversity', *Global Environmental Politics*, 19:2 (2019), pp. 14–37; Séverine Autesserre, 'The crisis of peace-keeping: Why the UN can't end wars', *Foreign Affairs*, 98 (2019), pp. 101–118; Ina Tessnow-von Wysocki and Alice B. M. Vadrot, 'Governing a divided ocean: The transformative power of ecological connectivity in the BBNJ negotiations', *Politics and Governance*, 10:3 (2022), pp. 14–28.

were found to be an important step in the formation of a regime complex,⁸⁵ and an issue area is understood to be a set of issues ‘dealt with in common negotiations.’⁸⁶ Further, ethnographic studies of global governance have established that international negotiations are largely social events⁸⁷ and have emphasised the relational and interactional aspects of negotiations⁸⁸ – both central themes for regime complexity and network analysis. Hence, scholars have repeatedly identified the potential for ethnographic studies to shed light on inter-institutional complexity by considering the perceptions of negotiators and participants of international negotiations,⁸⁹ as well as by providing a wealth of relational and social data for network analytic approaches.⁹⁰ Regime complexes may emerge through various developments such as international crises,⁹¹ state strategies,⁹² the activity of secretariats,⁹³ or the influence of small groups of people,⁹⁴ but the study of negotiations on a new treaty can offer a window to observe the formation of regime complexes.⁹⁵

Particularly, CEE, which collects data at intergovernmental negotiations, has become a widely applied research method in international environmental politics.⁹⁶ CEE has the advantage of dispatching a team of researchers to highly complex and dynamic negotiation sites, which enables the researchers to collect and connect various data sources.⁹⁷ Similarly to CEE literature, we approach the negotiations as sites of social interaction⁹⁸ and make use of collecting data ‘within’ the

⁸⁵Morin and Orsini, ‘Regime complexity and policy coherency’; Morin and Orsini, ‘Policy coherency and regime complexes’.

⁸⁶Robert O. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy* (Princeton, NJ: Princeton University Press, 2005), p. 61.

⁸⁷Campbell, Corson, Gray, MacDonald, and Brosius., ‘Studying global environmental meetings to understand global environmental governance: Collaborative event ethnography at the Tenth Conference of the Parties to the Convention on Biological Diversity’; Corson, Campbell, Wilshusen, and Gray, ‘Assembling global conservation governance’.

⁸⁸Michael Barnett and Raymond Duvall, ‘Power in international politics’, *International Organization*, 59:1 (2005), pp. 39–75; Thomas G. Weiss and Rorden Wilkinson, ‘From international organization to global governance’, in Thomas G. Weiss and Rorden Wilkinson (eds.) *International Organization and Global Governance* (London: Routledge, 2018), pp. 3–19; Kimberly R. Marion Suiseeya and Laura Zanotti, ‘Making influence visible: Innovating ethnography at the Paris climate summit’, *Global Environmental Politics*, 19:2 (2019), pp. 38–60; Hannah Hughes, Alice Vadrot, Jen Iris Allan et al., ‘Global environmental agreement-making: Upping the methodological and ethical stakes of studying negotiations’, *Earth System Governance*, 10 (2021), p. 100–121.

⁸⁹O’Neill and Haas, ‘Being there’.

⁹⁰Paterson, ‘Using negotiation sites’.

⁹¹Matias E. Margulis, ‘The regime complex for food security: Implications for the global hunger challenge’, *Global Governance*, 19:1 (2013), pp. 53–67.

⁹²Diana Panke and Sören Stapel, ‘Towards increasing regime complexity? Why member states drive overlaps between international organisations’, *The British Journal of Politics and International Relations* (2022), p. 13691481221115937; Helfer, ‘Regime shifting in the international intellectual property system’.

⁹³Sabine Campe, ‘The secretariat of the International Maritime Organization: A tanker for tankers’, in Frank Biermann and Bernd Siebenhüner (eds), *Managers of Global Change: The Influence of International Environmental Bureaucracies* (Cambridge, MA: MIT Press, 2009), pp. 143–168.

⁹⁴Federica Bicchì, ‘Communities of practice and what they can do for International Relations’, *Review of International Studies*, 48:1 (2022), pp. 24–43.

⁹⁵Langlet and Vadrot, ‘Not “undermining” who?’.

⁹⁶Campbell, Corson, Gray, MacDonald, and Brosius., ‘Studying global environmental meetings to understand global environmental governance: Collaborative event ethnography at the Tenth Conference of the Parties to the Convention on Biological Diversity’; Hughes and Vadrot, ‘Weighting the world’; Barbara B. Kawulich, ‘Participant observation as a data collection method’, *Forum: Qualitative Social Research*, 6:2 (2005), pp. 1–28; O’Neill and Haas, ‘Being there’; Finn Stepputat and Jessica Larsen, ‘Global political ethnography: A methodological approach to studying global policy regimes’, *DIIS Working Paper*, 2015:01 (2015); Vadrot, ‘Multilateralism as a “site” of struggle’; Hughes, Vadrot, Allan et al., ‘Global environmental agreement-making’.

⁹⁷Noella J. Gray, Catherine Corson, Lisa M. Campbell et al., ‘Doing strong collaborative fieldwork in human geography’, *Geographical Review*, 110:1–2 (2020), pp. 117–32; Hughes, Vadrot, Allan et al., ‘Global environmental agreement-making’.

⁹⁸Campbell, Corson, Gray, MacDonald, and Brosius., ‘Studying global environmental meetings to understand global environmental governance: Collaborative event ethnography at the Tenth Conference of the Parties to the Convention on Biological Diversity’.

negotiations, being sensitive to social and relational interactions in the negotiations.⁹⁹ Approaching regime complexity with a CEE view, we focus on the processes rather than the outcomes of international negotiations in which governmental and non-governmental actors shape the regime complex through social and political struggles.¹⁰⁰

However, in contrast with most CEE contributions, we use participant observation from the CEE toolkit as a data collection method and SNA as an analytical tool. Separating data collection and data analysis methods had a number of advantages: first, it allows different researchers to contribute to the same database of observations, which is used for different research purposes. This enabled us to systematically track the involvement of IOs throughout negotiation rounds, even when the researchers conducting the SNA were not present themselves. Second, in this way, the data and the method underlying the network analysis can be published to make the analysis reproducible and comprehensible. While the proposed combination of CEE with SNA in this way brings several advantages, it does render the ‘relational’ nature of the data relatively thin compared to a full ethnographic account of relationality. Building on the ethnographic and network-analytic work in the area of regime complexity, the next section describes a methodology to combine both: data collection through participant observation and CEE at international negotiations and network analysis using the collected data.

Combining observational data collection and social network analysis

While much of the work on regime complexes has relied on desk research,¹⁰¹ surveys, or document analysis to identify the elements of the complex,¹⁰² we propose studying the regime complex from within the negotiations. We used the ongoing BBNJ negotiations to collect data via participant observation as well as document analysis, making use of the rich network data collection opportunities offered by IGCs.¹⁰³ During the second and third two-week IGC sessions, three researchers conducted CEE at the New York headquarters of the United Nations (UN). During plenaries, working-group sessions, and side events, we made systematic observations on the delegation of the speaker, the section of the draft text, and the statement’s content.¹⁰⁴ Regarding the first IGC, which the research team did not attend, we watched the proceedings via the UN webcast and made observations with the same system.¹⁰⁵ Furthermore, all draft treaty texts were included in the document analyses. Our data collection and variables are summarised in [Table 1](#). We scanned the more than 10,000 observations for either (1) state references to IOs, to delimit the regime complex according to the statements of negotiators;¹⁰⁶ or (2) IO statements, to analyse their behaviour.¹⁰⁷

In analysing the observations, we combined network analysis with qualitative interpretations,¹⁰⁸ following the identified need to mix quantitative and qualitative methods in the description of

⁹⁹ Barnett and Duvall, ‘Power in international politics’; Weiss and Wilkinson, ‘From international organization to global governance’; Suisseea and Zanotti, ‘Making influence visible’.

¹⁰⁰ Hughes and Vadrot, ‘Weighting the world’; Hughes, Vadrot, Allan et al., ‘Global environmental agreement-making’.

¹⁰¹ Gomez-Mera, Morin, and Van de Graaf, ‘Regime complexes’.

¹⁰² Nasiritousi and Faber, ‘Legitimacy under institutional complexity’.

¹⁰³ Paterson, ‘Using negotiation sites’; Hughes, Vadrot, Allan et al., ‘Global environmental agreement-making’.

¹⁰⁴ Our notes are close to transcripts of the statements. For example, on 26 March 2019, the representative of Tonga highlighted the similarities between the ISA and the BBNJ negotiations: the ISA was a deal between conservation and use of resources; he added that the ISA legal framework enabled cooperation with other instruments. Another observed IGO activity was the FAO representative pointing out that the FAO already delivered technical assistance and cooperated closely with many of the states that were in the room (26 August 2019).

¹⁰⁵ The UN webcast is available at: <https://www.un.org/bbnj/content/webcast>.

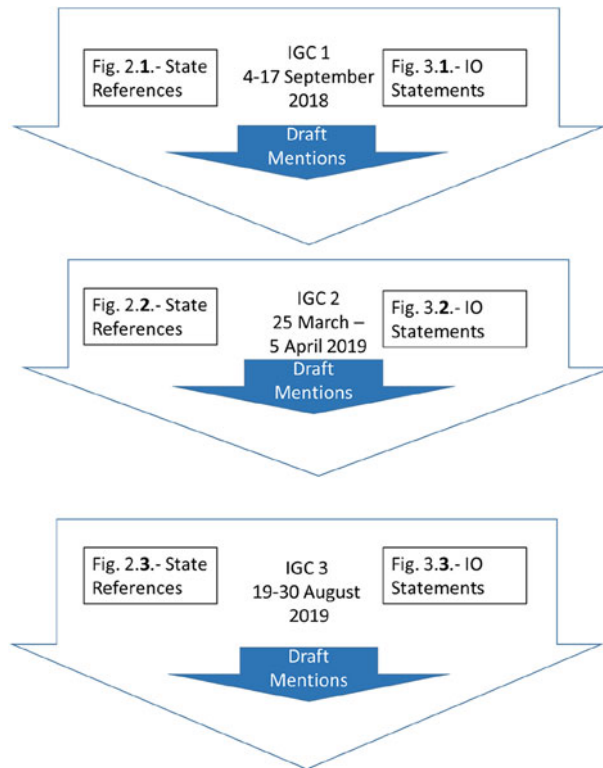
¹⁰⁶ See 3.2. Delimitating the ‘Constituting Elements’.

¹⁰⁷ See 3.3. Competition and Specialization during the Negotiations.

¹⁰⁸ Paterson, ‘Using negotiation sites’; Wayne W. Zachary, ‘An information flow model for conflict and fission in small groups’, *Journal of Anthropological Research*, 33:4 (1977), pp. 452–73.

Table 1. Overview of data collection.

Variable	Method	Source	Analytical use
Mentions in treaty draft text	Document analysis	Treaty drafts	Delimitation of regime complex; description of links
References made by state delegates	Participant observation	Observations	Delimitation of regime complex; description of links
IO statements in plenary	Participant observation	Observations	Delimitation of regime complex; description of IO interactions

**Figure 1.** Chronology of data.

regime complexes.¹⁰⁹ We mapped the IOs that are associated with the marine-biodiversity regime complex and how they overlap as network graphs and used qualitative insights from our observations to interpret them. The observations contain relational data because IOs enter into a relational structure when they overlap regarding the treaty provision on which they make a statement. To analyse and uncover patterns in the structure of these relations, we propose using SNA. We differentiate between the three IGCs to emphasise the dynamics of the negotiation process.¹¹⁰ In the following sections, we explain our methodological approach for the two main contributions of this paper: (1) the delimitation of the constituting elements of the regime complex; and (2) the description of patterns of interaction between them.

¹⁰⁹Morin and Orsini, 'Policy coherency and regime complexes'; Michele Acuto, 'The new climate leaders?', *Review of International Studies*, 39:4 (2013), pp. 835–57.

¹¹⁰While we also attended IGCs 4-final, we could not use data collected there due to the application of Chatham House rules in informal negotiation sessions.

Delimiting the ‘constituting elements’

According to Raustiala and Victor, ‘regimes’ are the elements of a regime complex.¹¹¹ To shed light on the behaviour of elements of the regime complex, we need to take into account their agency and acknowledge that non-state actors also play an active part ‘in the design and construction of the institutional framework of global governance’ through their active involvement.¹¹² Thus, this study operationalises the conceptualisation by Raustiala and Victor in a way that makes regimes and their interactions in negotiations observable. We adopt the definition of elements of the regime complex by Langlet and Vadrot that IOs contain (1) a normative framework (normally codified in a treaty); (2) member states (or other international organisations as constituting members); and (3) a body such as a secretariat with staff, budget, and a registered office that embodies the normative framework and sends representatives to the negotiation site.¹¹³ Further, we take into account organisations of the UN system that represent certain normative frameworks and can compete in governing a certain issue area,¹¹⁴ but we do not include NGOs as elements of the regime complex, although some have argued that ‘clubs, private regulations and transnational initiatives’¹¹⁵ or other non-governmental actors such as cities¹¹⁶ are indeed elements of a regime complex. In our case, they cannot be mandated by states to govern a particular issue area of international law and are thus excluded from the analysis.

Because we aim to find IOs that govern a ‘particular issue area’,¹¹⁷ we concur that issue areas are sets of issues ‘dealt with in common negotiations.’¹¹⁸ Operationalised, this means that issues are the individual provisions of the draft treaty text, which in total is the issue area dealt with in common negotiations. To advance rules for the delimitation of our sample of elements of the regime complex, we scanned our observations for state references to IOs. Any time a state mentioned an IO in a statement, we recorded this for the delimitation of the elements of the regime complex. For each IGC, these references were compared to the IOs that were mentioned in official draft texts to contrast a delimitation based on official documents with a delimitation based on perceptions and interactions.

These considerations helped us to combine various data sources (Table 1) to delimit the boundaries of the regime complex through the following rule: an IO must have: (1) made a formal statement; (2) be referred to by states in the room; or (3) be mentioned in a draft text.

Detecting competition and specialisation during negotiations

In addition to delimiting the elements of the regime complex, this paper looks at relational patterns between IOs to analyse how they influence global governance structures through their involvement in negotiations.¹¹⁹ To create a network, we scanned our observations for statements of IOs and connected each statement to the relevant provision of the draft treaty. These overlaps between IOs, i.e. when two or more IOs make statements in the negotiations on the same provision of the treaty draft text, represent the links between IOs in the emerging network.

To justify that these overlaps are indeed relational, we analysed the IOs’ statements. We found that IOs generally make similar statements to each other in which they underline their own

¹¹¹Raustiala and Victor, ‘The regime complex for plant genetic resources.’

¹¹²Dimitrios Katsikas, ‘Non-state authority and global governance’, *Review of International Studies*, 36:S1 (2010), pp. 113–35 (p. 113).

¹¹³Langlet and Vadrot, ‘Not “undermining” who?’.

¹¹⁴Frank Biermann and Bernd Siebenhüner, ‘The Role and Relevance of International Bureaucracies: Setting the Stage’, in Frank Biermann and Bernd Siebenhüner (eds), *Managers of Global Change: The Influence of International Environmental Bureaucracies* (Cambridge, MA: MIT Press, 2009), pp. 1–14, p. 7.

¹¹⁵Gomez-Mera, Morin, and Van de Graaf, ‘Regime complexes’, p. 139.

¹¹⁶Acuto, ‘The new climate leaders?’.

¹¹⁷Raustiala and Victor, ‘The regime complex for plant genetic resources’, p. 279.

¹¹⁸Keohane, *After Hegemony*, p. 61.

¹¹⁹Katsikas, ‘Non-state authority and global governance’, p. 113.

competence, mandate, and interest in working in relation to a certain provision of the treaty. UNEP, for example, by referring to its regional seas programmes¹²⁰ or its ocean-monitoring center,¹²¹ indicated that it is competent to be tasked to manage aspects of marine biodiversity. The IOC declared that it was ready to provide member states with technical assistance to develop a proof of concept for the clearing-house mechanism,¹²² and WIPO emphasised that it already had the mandate to govern intellectual property aspects of the new agreement.¹²³ While most of the analysed statements follow this communicative style, some statements indicated more directly a competitive relationship. For example, the FAO, by highlighting that existing bodies should be respected, underlined its authority over fishing-related matters and urged other IOs present in the room to refrain from interfering with 'its' topic.¹²⁴ On the other hand, we could not observe a single statement in which an IO advocated for the recognition of another IO's mandate. Overall, IO statements express a conscious decision to intervene on a specific provision and thus, if two intervene on the same provision, a shared interest between two or more IOs. In this way, we argue that IOs enter a relational structure when both make a statement on the provision. As a next step, we conducted SNA to uncover patterns in the relational structures between IOs, which are displayed in the following section. This approach limits the scope of our analysis to IOs that were 'present' during the negotiations and took the floor to make statements.

We suggest two readings in the relational structure: first, overlaps – when two (or more) IOs make statements in the negotiations on the same provision of the treaty draft – can be read as competition, because competition among IOs has repeatedly been observed in regime complexes¹²⁵ and IOs are expected to compete when experiencing complexity because they need to secure their position, financial resources, and governance tasks.¹²⁶ We argue that when states negotiate a new treaty, and with it additional financial resources and governance tasks, statements highlighting IOs' competence and relevance in relation to the targeted treaty provision can be viewed as competition when a second IO makes a similar statement on the same provision. Competition may not be directly expressed in the statement (which is expected in diplomatic settings where potentially conflictual statements are often formulated in very diplomatic language) and may not even be conscious behaviour, but competition emerges when two or more IOs make similar statements on the same treaty provision.

Second, it is suggested that specialisation takes place when IOs make statements in relation to treaty provisions in which no other IO appears interested. Just as with competition, specialisation is a behaviour that has been observed when IOs face complexity.¹²⁷ When IOs highlight how their competences and mandates could contribute to the objectives and tasks of the agreement and no other IO makes a similar statement on the same treaty provisions, they seem to recognise the other IOs' competence and specialisation.

The case of the marine-biodiversity regime complex

Delimiting the 'constituting elements'

In this section, we describe the formation of the new marine-biodiversity regime complex in the course of the three IGCs and describe its delimitation based on three graphs displaying the elements of the complex in each of the three IGCs – as proposed by states and as codified in the draft text.

During the IGCs, states refer to IOs they perceive to play a role in relation to the topic that is being negotiated. In the follow-up of an IGC, the presidency drafts a new version of the treaty text

¹²⁰ Own observation, 29 March 2019. For a list of acronyms, please see Annex.

¹²¹ Own observation, 4 April 2019.

¹²² Own observation, 25 March 2019.

¹²³ Own observation, 13 September 2018.

¹²⁴ Own observation, 27 August 2019.

¹²⁵ Downie, 'Competition, cooperation, and adaptation'; Gomez-Mera, Morin, and Van de Graaf, 'Regime complexes'.

¹²⁶ Gehring and Faude, 'The dynamics of regime complexes'; Panke and Stapel, 'Towards increasing regime complexity?'.

¹²⁷ Downie, 'Competition, cooperation, and adaptation'; Gomez-Mera, Morin, and Van de Graaf, 'Regime complexes'.

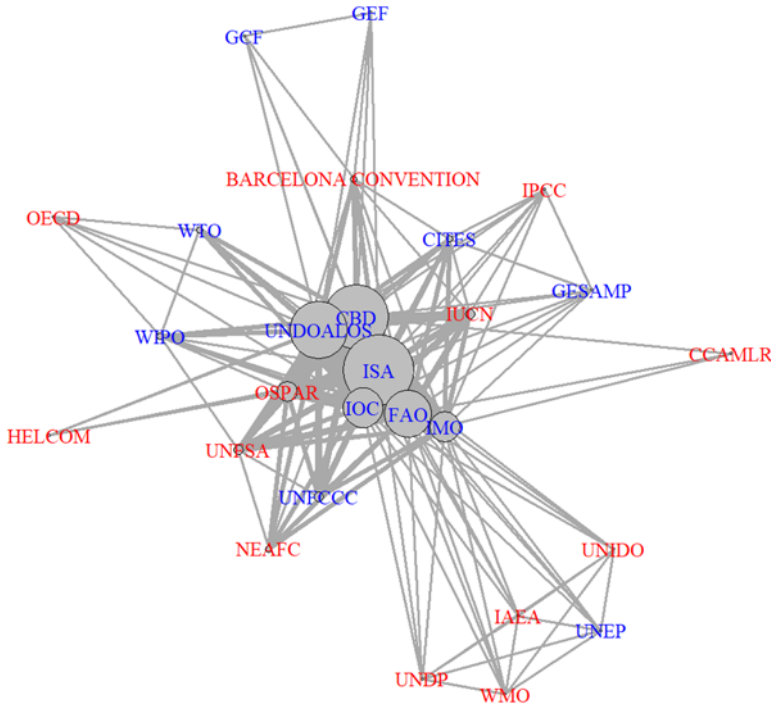


Figure 2. IOs are connected through provisions in which states referred to them in IGC 1. In blue are IOs that appear in the draft text after states mentioned them, in red IOs that did not appear in the draft text.

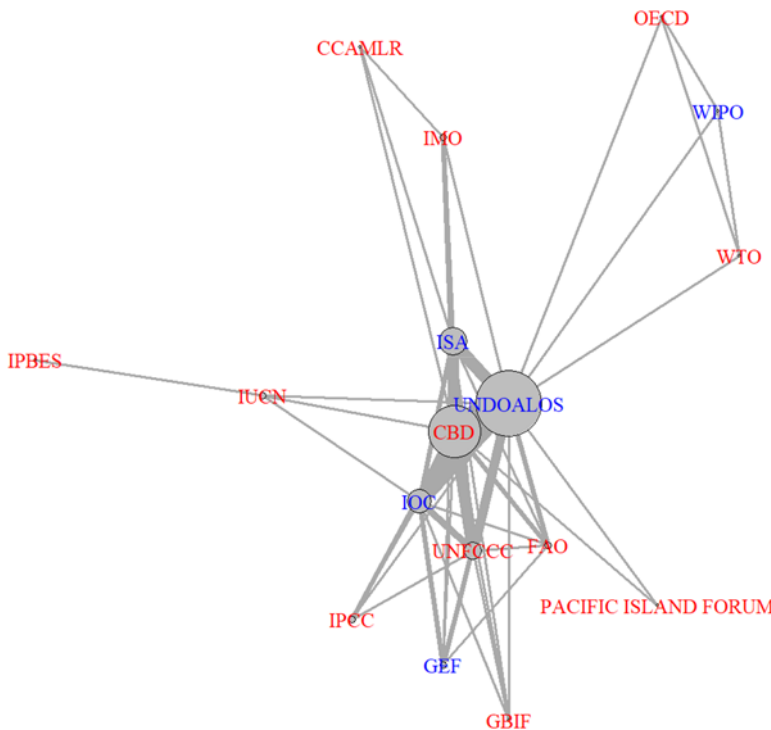


Figure 3. IOs are connected through provisions in which states referred to them in IGC 2. In blue are IOs that appear in the draft text after states mentioned them, in red IOs that did not appear in the draft text.

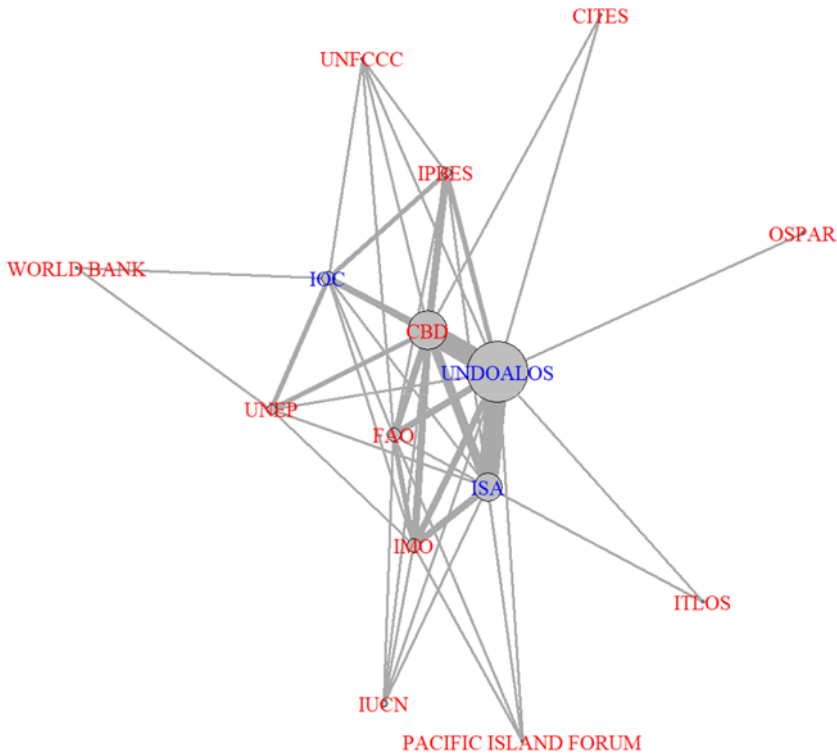


Figure 4. IOs are connected through provisions in which states referred to them in IGC 3. In blue are IOs that appear in the draft text after states mentioned them, in red IOs that did not appear in the draft text.

based on the statements that were made during the negotiations. As this codifies the current status of the negotiations (and the role of IOs within them) at the end of each negotiation round, this is the last step of each round and the first of the next round accordingly. The draft text serves as the basis for negotiations and structures the discussion on specific provisions.

Figure 1 visualises the chronology of the data presented in Figures 2–7 from IGC 1 to IGC 3.

Figures 2–4 show a network of IOs connected through references made by state delegates. By recognising different IOs in relation to the same treaty provision, states express diverging political interests that shape the constitution of the regime complex. Technically, if states mentioned two or more IOs in the same treaty provision, these will be connected through this provision. We present the negotiation of the regime complex as a network in which IOs become connected by being jointly mentioned in the same treaty provision. Figure 2 is the first step in this phase of regime-complex formation in which states delimit which IOs should be part of it and which not.

Figure 2 shows that in IGC 1, states refer to a considerable number of IOs – 27 in total. States perceive UNDOALOS, CBD, ISA, IOC, FAO, and IMO as central parts of the regime complex, and, accordingly, they appear in the resulting draft text after IGC 1. This shows how the marine-biodiversity regime complex evolves formally into legal text when the IOs that states propose are mentioned in treaty provisions. We see that while 14 of the IOs that were mentioned by states appear in the draft text (in blue), 13 do not (in red).

Figure 3 shows that states refer to 17 IOs in IGC 2. We see that states mention fewer IOs as they start to agree on the delimitation of the regime complex that is represented by a thinning out and a simultaneous consolidation of the centre of the network. Now, only 5 out of the 17 IOs are mentioned in the following draft text. We see that IOs such as FAO and IMO moved away from the centre of the network (e.g. were mentioned less by states) and subsequently were deleted from

the draft text. A similar fate can be observed for IOs that were mentioned rather peripherally in IGC 1 and which do not appear in the next step of the emerging regime complex in IGC 2, such as UNEP, GCF, and CITES. On the other hand, some peripheral IOs such as WIPO and the GEF remain part of the codified regime complex, although they are only mentioned in relation to a few treaty provisions.

The thinning out of the regime complex continues during IGC 3. In IGC 3, states referred to only 15 IOs, of which only 3 are mentioned in the following draft text. The three IOs that remain in the draft text occupy a central position, meaning that states perceive them to be important to many different aspects of the treaty.

In total, throughout the three IGCs, we can observe how states first propose many elements of the emerging regime complex, out of which some become part of the codified regime complex. Here, we want to highlight the different delimitation methods. Regime-complex descriptions relying only on codified documents such as treaty texts would not be able to observe the IOs that states consider and propose to play a role but that do not make it into the draft text. This means that research approaches looking only at the treaty draft text would only conceive IOs in blue to be part of the regime complex. We can see from Figure 2–4 that in fact the majority of IOs do not appear in the draft text, although states mentioned them and thus seemed to consider them important for the future governance of the regime complex.

Detecting competition and specialisation during negotiations

After states made their statements, IOs took the floor and issued statements on specific BBNJ treaty provisions to express their competence, existing mandate, and interest in relation to specific provisions.

During the first IGC, 12 IOs made 38 statements in relation to 14 different provisions of the draft treaty. The following networks of IOs show that several IOs sought to be recognised within the future BBNJ agreement. Figure 5 demonstrates that all IOs (with the exception of WIPO) overlap in their statements in relation to treaty provisions. IOs enter a relational structure by making statements, and if overlaps are interpreted as competition, the results confirm to some extent literature that expects competition among IOs¹²⁸ that use negotiations to attempt to increase their individual resources and competences.¹²⁹

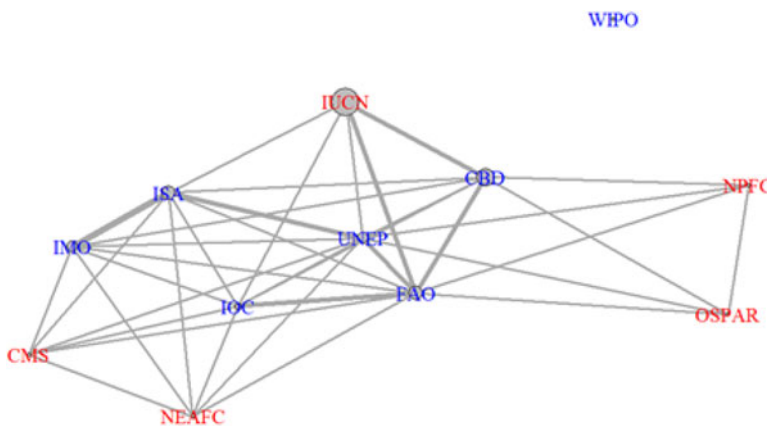


Figure 5. IOs are connected by making statements regarding the same treaty provision in IGC 1. In blue are IOs that appear in the draft text after states mentioned them, in red IOs that did not appear in the draft text.

¹²⁸ Gomez-Mera, Morin, and Van de Graaf, 'Regime complexes'; Downie, 'Competition, cooperation, and adaptation'.

¹²⁹ Bauer, Biermann, Dingwerth, and Siebenhüner, 'Understanding international bureaucracies'.

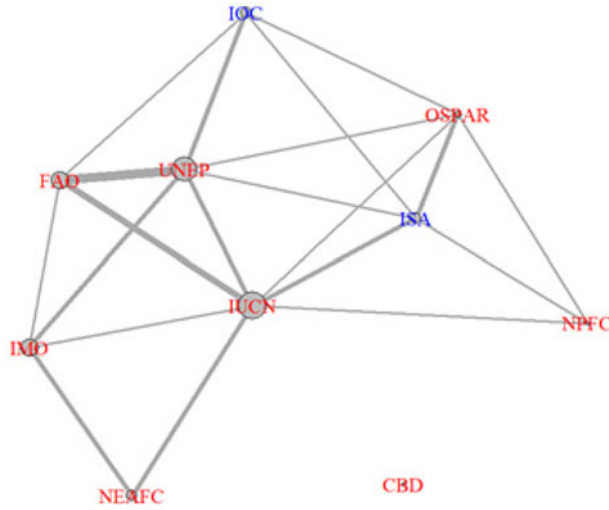


Figure 6. IOs are connected by making statements regarding the same treaty provision in IGC 2. In blue are IOs that appear in the draft text after states mentioned them, in red IOs that did not appear in the draft text.

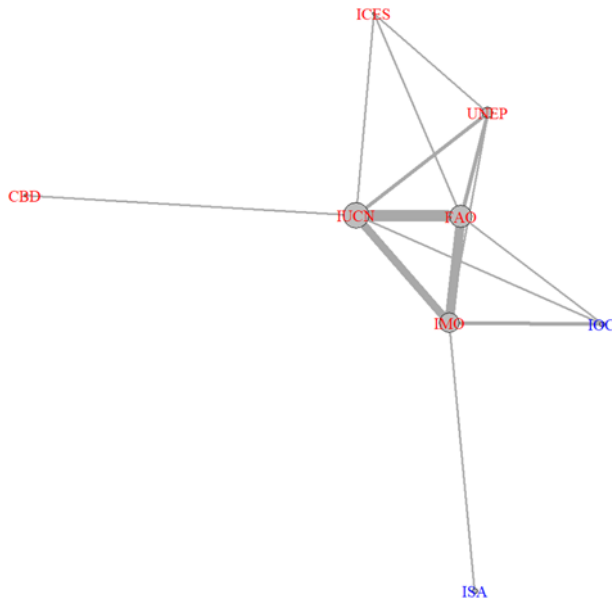


Figure 7. IOs are connected by making statements regarding the same treaty provision in IGC 3. In blue are IOs that appear in the draft text after states mentioned them, in red IOs that did not appear in the draft text.

This pattern, however, seems to change as the negotiations move on. During IGC 2, we can observe that IO behaviour begins to diverge. While the number of total statements remains equal at 38, now 10 different IOs relate to 17 different treaty provisions, and two opposing trends emerge. While the separation of the CBD from the main component and the disappearance of WIPO and the CMS indicate that there may be a specialisation taking place, overlaps between IOs in the centre seem to be aggravated.

In IGC 2, the CBD focuses solely on provisions that no other IO appears to be interested in, and WIPO, which had shown a similar behaviour in IGC 1, does not make any statement. In this way,

some IOs find their position in the new regime complex, and other IOs then focus on other parts of the treaty – IOs specialise or find their niche in organisational ecological terms.¹³⁰ However, among a few IOs, particularly the closely connected UNEP, IUCN, FAO, and IMO in the centre of the network, competition appears to persevere. These IOs are also the ones that were taken out of the draft text in IGC 2 (as indicated in red), which additionally suggests that they needed to highlight their work in relation to the treaty.

During IGC 3, only 8 IOs made statements in relation to 16 provisions (Figure 7). However, the overall number of statements increased to 53. We can see a continuation of the trends identified in Figure 6: some IOs (NEAFC and NPFC) cease to make statements. The IOC and ISA move away from the centre of the network where contestation persists and seem to specialise in specific provisions. Interestingly, both IOs are mentioned in the draft text (indicated by the blue colour). This suggests that they may have found their niche, which is codified in the draft text, and in response move away from competing. On the other hand, we also observe a further increase of overlaps in the centre, particularly among the four IOs (UNEP, IUCN, FAO, and IMO) that have been at the centre throughout all three IGCs. The thickness of their links indicates that the number of overlaps has increased, possibly indicating increased competition.

Discussion

We set out in this paper to (1) show how a methodological focus on international negotiations combining observational data collection methods and SNA can contribute to understanding the formation of a regime complex by obtaining and analysing new data; (2) demonstrate how this data can be used to delimit the regime complex based on the perception of actors, rethinking traditional ways to delimit the regime complex; and (3) advance understanding of competition and specialisation among IOs during the ongoing negotiations. The following section first discusses the methodological contributions and their implications for regime-complex delimitation and then evaluates the results regarding the competitive and specialising behaviour of IOs, while giving an outlook on further research.

Combining observational data collection and SNA at international negotiations to fill the data gap

We studied the emerging marine-biodiversity regime complex by collecting data at ongoing negotiations. We consider negotiation sites as organised social spaces, in which the regime complex forms through interaction and recognition between state and IO actors that can become codified in legal text. This study addressed the gap in active fieldwork, as regime complex research has relied ‘too heavily on desk research’.¹³¹ We filled in detail two empirical gaps: (1) the delimitation occurring before a regime complex is codified in legal documents; and (2) IO interactions during the negotiations of the regime complex.

We demonstrate how data collected at intergovernmental negotiations can be used to apply social network analyses,¹³² which in turn are interpreted qualitatively. We believe that this combination of observational methods of data collection and SNA shows great potential for further research on regime complexes to complement work that so far has used shared membership,¹³³ treaty text citations,¹³⁴ or participants’ biographies¹³⁵ to gather data that captures elements of relations such as structured interactions between actors. It uses the strengths of CEE to gather data collectively

¹³⁰ Kenneth W. Abbott, Jessica F. Green, and Robert O. Keohane, ‘Organizational Ecology and Institutional Change in Global Governance’, *International Organization*, 70:2 (2016), pp. 247–77.

¹³¹ Gomez-Mera, Morin, and Van de Graaf, ‘Regime complexes’, p. 9.

¹³² Paterson, ‘Using negotiation sites’.

¹³³ Emilie M. Hafner-Burton and Alexander H. Montgomery, ‘Power positions: International organizations, social networks, and conflict’, *Journal of Conflict Resolution*, 50:1 (2006), pp. 3–27.

¹³⁴ Kim and Mackey, ‘International environmental law’.

¹³⁵ Morin, Louafi, Orsini, and Oubenal, ‘Boundary organizations in regime complexes’.

in highly interactive settings, while being sensitive to the minutiae of social interaction and the strengths of qualitative SNA, focusing on structures that emerge from interactions. In this way, SNA helped to uncover interactional patterns that would have been invisible to a network-insensible observer and guided our qualitative interpretations, adding a social dimension to the delimitation problem of regime-complex research.¹³⁶

While this approach has advantages when it comes to identifying the elements and overlaps of a regime complex, it also suffers from some limitations. First, the collected data was used to study a regime complex in the making, offering a live window into regime-complex emergence, but failing to capture the whole life cycle of regime complexes. Once the negotiations are finished and the new treaty is in place, one would need to adapt the research approach by (1) looking at potential conference of the parties (COPs) meetings of the new regime or (2) looking at other relevant meetings and negotiations to track the involvement of the IOs identified in this paper. Secondly, CEE requires access to negotiation sites and shared fieldnote-taking practices, which is resource- and time-consuming and may not be a feasible research design for single researchers or scholars who do not get access to the negotiation site.¹³⁷

The problem of regime-complex delimitation

We show that a regime complex can be delimited through state references to IOs. States recognise different IOs in relation to the issue area, expressing different preferences regarding the development of the marine-biodiversity regime complex. In this way, the regime complex can be delimited by going beyond rather static legal texts and considering the perception of actors and the varying levels of integration of elements in the regime complex. We hereby contribute to defining the boundaries of the ‘array of ... institutions.’¹³⁸ We demonstrate that IOs play a role – to a varying extent – in relation to the treaty because representatives of states and IOs perceive them to be a part of the regime complex even if they do not become legally codified elements of it.¹³⁹ This different way of delimiting the regime complex becomes crucial when analysing the final treaty text. By looking only at the text of the finalised agreement, one would perceive the GEF, IOC, ISA, IMO, and FAO as part of the regime complex but would potentially fail to recognise the key role played in the eyes of states by the CBD, UNEP, or regional organisations such as OSPAR in relation to the governance of marine biodiversity. In this way, our method can make visible what is not in the final text but, nevertheless, continues to influence the governance of the marine-biodiversity regime complex. However, no delimitation will ever be final, as the regime complex also continues to evolve outside or after international negotiations.

IOs are involved to different extents – some make statements in the negotiations, some are perceived by states to be important, and some may receive a formal mandate under the new treaty. However, the fact that the final text mentions fewer IOs than previous drafts and much fewer than mentioned by states, and all IOs except for the GEF in only one provision (on the clearing-house mechanism), may indicate that, with increasing complexity, international documents tend to have fewer references to IOs, as it could become too contested and ‘messy’. This outcome, both the lack of mention of many IOs and the mention of four IOs in one provision, raises the question of how a division of work may materialise in the future.

The marine-biodiversity regime complex is particular in its awareness and explicit recognition of inter-institutional dependencies, which may limit the applicability of the proposed delimitation

¹³⁶ Kim, ‘The emergent network structure’; Kim and Mackey, ‘International environmental law’; Merry, ‘Global legal pluralism and the temporality of soft law’.

¹³⁷ Campbell, Corson, Gray, MacDonald, and Brosius., ‘Studying global environmental meetings to understand global environmental governance: Collaborative event ethnography at the Tenth Conference of the Parties to the Convention on Biological Diversity’.

¹³⁸ Raustiala and Victor, ‘The regime complex for plant genetic resources’; Orsini, Morin, and Young, ‘Regime complexes’.

¹³⁹ Orsini, Morin, and Young, ‘Regime complexes’.

method. Still, we argue that some aspects can be considered for future research into regime complexes in other issue areas: it is not only the legal overlaps in treaty texts but also the perception of policymakers that makes the regime complex.¹⁴⁰ This implies that there is not one correct way to delimit the regime complex – rather, there are different levels of integration and interdependence,¹⁴¹ and the right delimitation may depend on the interest and analytical focus of the researcher. While we acknowledge that state statements and, hence, the delimitation of the regime complex reflect larger geopolitical interests and conflicts, we do not address them in this paper but encourage research into the geopolitical conflicts and configuration of authority and legitimacy in complex international governance that may be represented in the delimitation of a regime complex.¹⁴²

IO behaviour in regime complexes

This paper proposes a structural view of competition and specialisation among IOs during negotiations and places its insights into the discussion on IO behaviour in regime complexes. While the analysis suggests that overlaps in statements mean competition, this interpretation leaves room to further study the behaviour and intentions of IOs in negotiations. For example, a more systematic qualitative analysis of the overlaps shown in Figures 2–7 may highlight different strengths and qualities of statements, giving insights about the underlying intentions. Conducting interviews with IO representatives could also further strengthen analyses of their behaviour at negotiations. The results of this paper can support the view that IOs engage in competitive behaviour¹⁴³ when facing regime complexity but add important depth to the dynamics during the negotiation phase.

We show that the negotiation phase is a process itself, and dynamics change over time. After the first round of negotiations, the number of overlaps in IO statements decreased, suggesting that IOs started moving towards a division of labour and specialisation (Figures 5–7).¹⁴⁴ At the same time, while some (WIPO, CBD, ISA, IOC) specialised, other IOs (UNEP, IUCN, FAO, IMO) seemed to intensify competition. This IO behaviour seemed to correlate with their being mentioned in the draft text. IOs tended to specialise when states identified a role for them and codified this in the relevant treaty provisions. IOs that were continuously not mentioned in the draft text seemed to have intensified their competition, making an increased number of statements in overlapping provisions. This contradiction between making statements and being mentioned in the text extended to the final text. The GEF – the IO that did not make any statement during the three analysed IGCs – is mandated a special role as part of the financial framework of the new treaty. But two of the IOs that made many statements are not mentioned at all (UNEP and IUCN), and four other IOs are mentioned as potential examples and contributors to the clearing-house mechanism of the BBNJ instrument.

These findings speak to Orsini, Morin and Young and Morin and Orsini,¹⁴⁵ who theorised that in the formation of a new regime complex, elements first compete, then manage their competition and specialise, before becoming a stable regime complex. While our findings support the notion that a regime complex evolves, we suggest that the view of the different phases may be too simplistic, as both competition and specialisation already seem to occur simultaneously during the negotiations. We also add that not all IOs specialise, but some may increase their competition instead. Negotiations may be a particularly interesting moment to study these dynamics because the regime

¹⁴⁰ Orsini, Morin, and Young, 'Regime complexes'.

¹⁴¹ Hollway, 'What makes a "regime complex" complex?'

¹⁴² Green and Auld, 'Unbundling the regime complex'; Steffen Bauer, 'Does bureaucracy really matter? The authority of intergovernmental treaty secretariats in global environmental politics', *Global Environmental Politics*, 6:1 (2006), pp. 23–49.

¹⁴³ Alter and Meunier, 'The politics of international regime complexity'; Morin and Orsini, 'Regime complexity and policy coherency'.

¹⁴⁴ Downie, 'Competition, cooperation, and adaptation'.

¹⁴⁵ Morin and Orsini, 'Regime complexity and policy coherency'; Introducing a co-adjustments model'; Orsini, Morin, and Young, 'Regime complexes' A buzz, a boom, or a boost for global governance?' *Global Governance*, 19 (2013), pp. 27–39 (p. 27).

complex seems to influence the behaviour of IOs and states while at the same time being shaped by their statements.

Looking forward, it remains to be seen how the described dynamics evolve once the BBNJ treaty has entered into force – and how far this can be studied with similar methods. While we expect the IOs to further specialise, our results also suggest that a regime complex constantly changes as states and IOs adapt their strategies and behaviour to the regime complex.¹⁴⁶

Annexe

List of IOs:^a

Abbreviation	Full Name
BARCELONA CONVENTION	Mediterranean Action Plan
CBD	Convention On Biological Diversity
CCAMLR	Convention for the Conservation of Antarctic Marine Living Resources
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on Migratory Species
FAO	Food and Agriculture Organization of the United Nations
GBIF	Global Biodiversity Information Facility
GCF	Green Climate Fund
GEF	Global Environment Facility
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection
HELCOM	Baltic Marine Environment Protection Commission
IAEA	International Atomic Energy Agency
ICES	International Council for the Exploration of the Sea
ICJ	International Court of Justice
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission UNESCO
IPBES	Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
ISA	International Seabed Authority
ITLOS	Tribunal for The Law of the Sea
IUCN	International Union for Conservation of Nature
MINAMATA	Convention on Mercury
NAFO	North-West Atlantic Fisheries Organisation
NEAFC	North-East Atlantic Fisheries Commission
NPFC	North Pacific Fisheries Commission
OECD	Organisation for Economic Co-operation and Development
OSPAR	Ospar Commission for the Protection of the Marine Environment of the North-East Atlantic
PACIFIC ISLAND FORUM	Pacific Island Forum
SEAFO	South East Atlantic Fisheries Organization
UNDOALOS	Division for Ocean Affairs and the Law of the Sea – Office Of Legal Affairs
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFSA	United Nations Fish Stocks Agreement
UNIDO	United Nations Industrial Development Organization
WCPFC	Western and Central Pacific Fisheries Commission
WIPO	World Intellectual Property Organization
WMO	World Meteorological Organization
WORLD BANK	The World Bank Group
WTO	World Trade Organization

^aFor a more comprehensive list, see Langlet and Vadrot, ‘Not “undermining” who?’ or <https://phaidra.univie.ac.at/detail/0:1613830>).

¹⁴⁶Gomez-Mera, Morin, and Van de Graaf, ‘Regime complexes’, p. 146.

Acknowledgements. We would like to thank James Hollway, Jean-Frédéric Morin, Matthew Paterson, and the three anonymous reviewers for their valuable feedback on this manuscript. This article would not have been possible without the work of Ina Tessnow-von Wysocki, Paul Dunshirn, Silvia C. Ruiz R., and Simon Fellinger, who contributed to the ethnographic data collection. Finally, we would like to thank the International Studies Association (ISA) for providing us with access to the BBNJ negotiations and the European Research Council (ERC) for funding the research presented in this article under the European Union's Horizon 2020 research and innovation programme (grant agreement No 804599 – MARIPOLDATA – ERC-2018-STG).

Funding statement. The research presented in this article was funded by the European Research Council (ERC) Horizon 2020 research and innovation programme (grant agreement No [804599](#) – MARIPOLDATA (www.maripoldata.eu) – ERC-2018-STG, grant holder: Alice Vadrot).

Arne Langlet is a PhD student in the ERC research project MARIPOLDATA. He gained his Bachelor's degree in European Studies at Maastricht University. After visiting the Universities of Coimbra (Portugal) and Sciences Po Paris, he completed a joint Master's in International Relations at Humboldt University Berlin, Freie University Berlin, and the University of Potsdam in 2019. His interest lies in international and European environmental policy, and the study of international institutions and regimes. Methodologically, he is interested in quantitative methods and the application of network and system analysis methods to international politics.

Alice Vadrot is Associate Professor for International Relations, with a focus on Environmental Politics, at the Department of Political Science of the University of Vienna and Visiting Research Fellow at the Centre for Science and Policy (CSaP) at the University of Cambridge. Vadrot holds a PhD in Political Science from the University of Vienna, which she completed in 2013. From 2015 to 2018, she was an Erwin Schrödinger Fellow of the Austrian Science Fund. She did her postdoctoral research at the University of Cambridge and returned to Vienna as a senior post-doctoral fellow in 2017. In 2018, she won a Starting Grant from the European Research Council (ERC) and since November 2018 has been Assistant Professor at the University of Vienna. She has conducted extensive research on the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) and marine-biodiversity negotiations, focusing on the Convention on Biological Diversity (CBD) and a new legally binding instrument for the conservation and sustainable use of biodiversity beyond national jurisdiction (BBNJ). Vadrot is the author of *The Politics of Knowledge and Global Biodiversity* (2014) and has published in *Global Environmental Politics*, *Environmental Politics*, *Nature*, and *Marine Policy*.