POLAR OCEANS GOVERNANCE IN AN ERA OF ENVIRONMENTAL CHANGE. Tim Stephens and David L. VanderZwaag (editors). 2014. Cheltenham: Edward Elgar. xvii + 354 p, hardcover, illustrated. ISBN 978-1-78195-544-4. \$130.50.

The book is the outcome of the Australia Canada Oceans Research Network (ACORN) and is the third publication thereunder. 'Polar oceans governance' therefore does not entail a biand circumpolar perspective on the issues, but, by and large, aims to screen issues of polar oceans governance through a Canadian and Australian lens 'as these governments seek to advance their objectives through global and regional institutions operating in their respective polar domains' (page xv). To this end, 16 contributions, subdivided into five parts, Environmental change in the polar oceans; Geostrategic dynamics in the polar oceans; Resources, environment, sovereignty and jurisdiction bipolar perspectives; Developing national and foreign policy responses; and The future of polar oceans governance, tackle the multidimensional and interdisciplinary issue of governing polar oceans. It must be noted that a focus on Canadian and Australian issues emerges only after 7 contributions, which all are more of a general character.

Following the preface by the editors, Howard's and Jabour's chapter entitled Environmental change and governance challenges in the Southern Ocean tackles the difficulties of governance adaptation, in this case of the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR), to changing environmental conditions. The chapter briefly outlines the role of CCAMLR within the Antarctic Treaty System (ATS) and its functioning while presenting in a brief and easily understandable manner which environmental changes occur, primarily caused by climatic changes. The authors do highlight that the ATS is a robust governance system and that therefore CCAMLR has the capacity to adapt alongside changing environmental conditions. This assessment is encouraging as the timeliness of the ATS has been criticised by others, given that it was crafted more than 50 years ago and showing significant gaps concerning the system's adaptive capacity (see for example Hemmings 2014).

Change is also the primary element in Kriwoken's contribution on *Environmental change in the Arctic region*. While certainly relevant, this chapter does not provide any significantly new information and this reviewer felt that it is in essence a summary of the Arctic Climate Impact Assessment (ACIA), the Arctic Human Development Report (AHDR) and literature on Arctic governance. This is a pity as the author's intention was to focus on socio-ecological systems, which unfortunately occurs only in a very general manner. A case study, for instance, could have contributed to a clearer understanding of the degree of pressure on the integrity and capacities of Arctic socioecological systems.

Huebert takes pressure points on stability in the Arctic into consideration in his chapter with the slightly lurid title *Rising temperatures, rising tensions: power politics and regime building in the Arctic.* Through the identification of four Arctic pressure points, shipping, resources, new actors in the Arctic and US-Russia relations, he shows that while the Arctic states are modernising their militaries and war-fighting capabilities in an Arctic environment, although pressure is indeed exerted

on Arctic stability, a conflict based on these pressure points is very unlikely. Instead, outside developments, such as political tensions due to other conflict regions, especially with regard to Russia, could put Arctic cooperation at risk. Indeed, and similarly, Kadir argues in *Is joint development possible in the Arctic?* and presents cooperative efforts with regard to the law of the sea and the past and potential future establishment of special sea areas in case of overlapping claims between states. Also here, although merely subtly, the notion of good will and conflict resolution between the Arctic states is the underlying principle of settling potential maritime area disputes.

Cooperation is also the keyword in Weber's highly recommendable contribution on *Power politics in the Antarctic Treaty System* in which she traces the balance of power in the ATS and motivations of new members such as Pakistan or China to join, given their differing degrees of scientific contribution to Antarctic research. But Weber goes further and looks at the implementation of ATS standards as well as institutional interplay with other organisations, namely the International Association of Antarctica Tour Operators (IAATO) and the International Maritime Organization (IMO). While not consistently and to the same degree followed, Weber observes that ATS principles have found their way into international fora and are in principle internationally recognised.

An article which this reviewer find particularly noteworthy is that of Leary in which he tackles From hydrocarbons to psychrophiles: the 'scramble' for Antarctic and Arctic resources, in essence being a counterpart to media depiction portraying (Ant)Arctic developments as a 'race' for resources. By briefly looking into polar history, Leary shows that interests in resources are nothing new and that they occurred already hundreds of years ago. With the continuing developments in international law, especially the law of the sea, and the will for peaceful cooperation in the Arctic, best exemplified by the Norway-Russia Barents Sea Agreement, as well as the lack of knowledge on resources in the Antarctic, the sophisticated legal regime in the form of the ATS and the lack of technology rather have created 'a "slow dawdle for resources" than a "rush for resources" (page 145). Leary notes moreover that bioprospecting has been largely ignored by the media and that its commercialisation for the food industry, for pollution control or for medical uses is indeed continuing and is a specific type of resource exploitation that also ignores any kind of traditional knowledge of the Arctic's indigenous peoples.

Now the book turns to more national issues pertaining to Canada and Australia, while nevertheless maintaining a rather broad focus. Stephens, for instance, deals with *Polar continental shelves* and draws a comparative picture between Canadian Arctic and Australian Antarctic continental shelf claims. Lalonde, on the other hand, looks at the applicability of *The IMO's PSSA* [particularly sensitive sea areas] *and the Northwest Passage* by drawing comparisons between PSSA applicability in the Torres Strait, a sea strait between Australia and New Guinea, and the NWP, concluding that after all that 'Canada's sovereign control of the Northwest Passage remains the best guarantee of its effective protection' (page 186).

But what about the Inuit's part in this protection? Wright exclusively deals with this issue in her very personal and moving contribution on *Inuit perspectives on governance in the Canadian Arctic*, portraying how social change affects the everyday life of the Inuit while Inuit interests are omitted, using

a case study of a planned mine on Baffin Island. This reviewer felt reminded of Strandsbjerg's contribution, once again, in Polar geopolitics? (Powell and Dodds 2014) on similar issues in Greenland (Strandsbjerg 2014) and this reviewer would recommend Collings' treatise on young Inuit men's lives in a changing society (Collings 2014). Indeed, the question of selfdetermination is also tackled by Moelle in the very enlightening chapter on Arctic climate governance in Canada. Here, he sketches Canada's decreasing efforts to reduce emissions since 1988 and in how far the three northern territories, Yukon, Northwest Territories and Nunavut, are in principle forced to focus resource extraction, given the federal government's identification of such 'as the main economic driver for the Arctic region' (page 233). It is thus 'unlikely that a territorial government would, on its own, pursue a different development path' (page 233). For a more comprehensive understanding of the complex interplay between industry and aboriginal peoples, the mention of impact benefit agreements would have been beneficial in either of the two chapters.

The book then leaves the land areas again and turns to several chapters on polar oceans governance. Issues such as Coastal state jurisdiction and the Polar Code by Rayfuse, Canada, the United States and international law in the Arctic by McDorman as well as Austalian perspectives on Antarctic competition and cooperation by Rothwell, which depicts Australia's delicate role as a middle power in Southern Ocean governance and within the ATS, are tackled. Especially McDorman's chapter allows for nice bridge-building to Michael Byer's International law and the Arctic (Byers 2013) which deals extensively with the sovereignty disagreements between the US and Canada. Both authors complement information provided by the others and having read Byer's sections and McDorman's chapter, the reader will have gained a significant understanding on the issue.

The final chapters of the book, *The durability of the 'Antarctic model'* by Ruth Davis and *The Arctic Council and the future of Arctic Ocean governance* by David VanderZwaag constitute something of a summary and evaluation of all preceding chapters. The authors maintain that both institutions, the ATS and the Arctic Council, are capable of being the safeguards of sustainable and cooperative polar oceans governance in light of global change.

As the reader may have noticed, this reviewer has found several parallels to *Polar geopolitics?* (Powell and Dodds 2014) while all in all the present volume focuses more on Antarctica than its British relative. Not all chapters provide necessarily new information, but they nevertheless provide valuable insight into working procedures and the status quo of specific developments, such as in the context of the claims of the Antarctic claimant states, as shown in Stephens' chapter. While the book title suggests a focus on the law of the sea, this reviewer found this book to go much further, covering international relations, geopolitics and environmental law. Readers will therefore get a very multifaceted picture on bipolar governance and gain insight into important developments in polar governance. Given their similarity in content and structure (and publisher for that matter), this reviewer strongly suggests that readers having an interest in this volume also consider reading Powell's and Dodds' book. Although they are indeed stand-alone works, both books read in conjunction paint a very diverse and highly interesting picture on the differences as well as similarities in bipolar governance and (geo-) politics. (Nikolas Sellheim, Faculty of Law, University of Lapland, PO Box 122, 96101 Rovaniemi, Finland) (nikolas.sellheim@ulapland.fi)).

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