Max-Planck-Institut für
ausländisches öffentliches Recht und Völkerrecht

Beiträge zum ausländischen öffentlichen Recht und Völkerrecht 235

Susanne Wasum-Rainer · Ingo Winkelmann
Katrin Tiroch (eds.)

Arctic Science, International Law and Climate Change

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Arctic Science, International Law and Climate Change

-Legal Aspects of Marine Science in the Arctic Ocean-

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Preface and Acknowledgements

This book is the product of the Second International Berlin Conference on Arctic issues. The Conference titled 'Arctic Science, International Law and Climate Change: Legal aspects of Marine Science in the Arctic Ocean' was organized in March 2011 by the German Federal Foreign Office together with the Finnish Foreign Ministry. It is a sequel to the first such Conference in 2009 organized jointly by Denmark and Norway on 'New Chances and New Responsibilities in the Arctic Region'.

The melting of the Arctic Ocean's ice masses is causing dramatic changes in the area's natural environment, especially for Arctic fauna. At the same time new opportunities are opening up for resource exploration and exploitation, easier or entirely new shipping routes and for fisheries. Since 2007 most of these issues have been discussed intensively in a large number of political and scientific forums. There have also been documents on the Arctic published by the EU Council, the European Commission and the European Parliament. Numerous Arctic countries have formulated Arctic strategies.

One aspect, however, which has been largely neglected in the international discussion to date are the parameters within which marine science research in the Arctic Ocean is conducted. Given the current challenges, this is a key concern. The Arctic Ocean is both a showcase for global climate change and a scientific site supplying crucial data for foundational research into climate change. So it is extremely important to focus not only on the economic, logistical and fisheries-related aspects of the Arctic but also on the role of polar scientists and the parameters within which they pursue their research.

What framework does international law currently provide for Arctic marine science? Is it likely to change in future? Will it remain in its present form? What are the future priorities for Arctic marine science? What can it tell us about climate change, what legal aspects are involved here? How can international cooperation on Arctic issues be strength-

ened? How far does the common (ecological) heritage of mankind principle shape the answers to these questions?

Bringing together the views of prominent experts in the field of international law, scientists, researchers and diplomats, this book will open up new horizons, we hope, for combating global climate change through unhampered marine science research in an Arctic Ocean accessible to all.

We would like to express our sincere thanks to all Conference moderators and contributors for their valuable input. Our colleagues from the Finnish Foreign Ministry did sterling work as co-organizers of the Conference. Special thanks go to Ambassador Hannu Halinen and Petri Hakkarainen for their close and excellent cooperation. Volker Rachold and Bernhardt Coakley contributed greatly to the conceptual design of the Conference.

The support we received from five renowned academic institutions in Bremerhaven, Fairbanks, St. Petersburg, Heidelberg and Rovaniemi and their respective directors was critical to the Conference's success. In this connection we would particularly like to thank Karin Lochte from the Alfred-Wegener-Institut für Polar- und Meeresforschung; Larry Hinzman from the International Arctic Research Center, Ivan Frolov from the Arctic and Antarctic Research Institute, Rüdiger Wolfrum from the Max Planck Institute for Comparative Public Law and International Law as well as Paula Kankaanpää from the Arctic Center of the University of Lapland.

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Berlin, März 2012

Susanne Wasum-Rainer
Ingo Winkelmann
Katrin Tiroch

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List of Abbreviations

AARI	Arctic and Antarctic Research Institute
ABE-LOS	Advisory Body of Experts on the Law of the Sea
AC	Arctic Council
ACEX	Arctic Coring Expedition
ACIA	Arctic Climate Impact Assessment
ACOBAR	Acoustic Technology for Observing the interior of the Arctic Ocean
AD	*Anno domini*
AEPS	Arctic Environmental Protection Strategy
AERONET	Aerosol Robotic Network
AIRSS	Arctic Ice Regime Shipping System
AITP	Acoustic Ice Tethered Platforms
AMAP	Arctic Monitoring and Assessment Programme
AMEC	Arctic Military Environmental Cooperation
AMSR-E	Advanced Microwave Scanning Radiometer for the Earth Observing System
AOD	Atmospheric optical depth
AON	Arctic Observing Network
AOSB	Arctic Ocean Science Board
approx.	Approximately
ARM	Atmospheric Radiation Measurement

Art(s)	Article/Articles
ASPPR	Arctic Shipping Pollution Prevention Regulations
ATS	Antarctic Treaty System
AUVs	Autonomous underwater vehicles
AWI	Alfred Wegner Institute for Polar and Marine Research
BASC	Barrow Arctic Science Consortium
BEAC	Barents Euro-Arctic Council
BGR	Bundesanstalt für Geowissenschaften und Rohstoffe
C	Celsius
CAA	Chinese Arctic and Antarctic Administration
CAFF	Conservation of Arctic Flora and Fauna
CAO	Cold air outbreaks
CCOM	University of New Hampshire's Center for Coastal and Ocean Mapping
CHINARE	Chinese National Arctic Research Expedition
CliC	Climate and Cryosphere
CLCS	Commission on the Limits of the Continental Shelf
cm	Centimeter
CO	Carbon monoxide
Cs	Caesium
CTD	Conductivity, Temperature and Depth
DAMOCLES	Developing Arctic Modeling and Observing Capabilities for Long-term Environmental Studies
DDT	Dichlorodiphenyltrichloroethane
Declaration of Principles	Declaration of Principles Governing the Seabed and the Ocean Floor and the Subsoil Thereof

DF	Directorate of Fisheries
DOALOS	United Nations Division of Ocean Affairs and Law of the Sea
DOE	Department of Energy
E	East
EA	Environmental Assessment
ECASE	Eastern Canadian Arctic Seismic Experiment
ECMWF	European Centre for Medium-Range Weather Forecasts
EEZ(s)	Exclusive economic zone(s)
e.g.	for example
EIS	Environmental Impact Statement
EM	Electromagnetic sensor
eNGO	Environmental Non-Governmental Organization
Eos Trans. AGU	Eos, Transactions, American Geophysical Union
EPPR	Emergency preparedness, prevention and response
ERS	European Remote Sensing
ESA	Endangered Species Act
ESFRI	European Strategy Forum for Research Infrastructures
etc.	*et cetera*
EU	European Union
FAO	Food and Agriculture Organization
FARO	Forum of Arctic Research Operators
Fig.	Figure
FP 7	Seventh EU Framework Programme
FWS	Fish and Wildlife Service
FYI	First-year ice
GCHS	1958 Geneva Convention on the High Seas

GEUS	Geological Survey of Denmark and Greenland
GHG	Greenhouse gases
GOOS	Global Ocean Observing System
GPS	Global Positioning System
HCB	Hexachlorobenzene
HCH	Lindane
hPa	Hectopascals
IABP	International Arctic Buoy Program
iAOOS	Ice, Atmosphere, Ocean Observing System
IARC	International Arctic Research Center
IASC	International Arctic Science Committee
IASI	Infrared Atmospheric Sounding Interferometer
IASSA	International Arctic Social Sciences Association
Ibid.	*ibidem* (the same place)
IBRU	International Boundaries Research Unit
ICES	International Council for the Exploration of the Sea
ICJ	International Court of Justice
ICSU	International Council for Science
id.	*idem* (the same)
i.e.	*id est* (in other words)
IHA	Incidental Harassment Authorization
ILM	International Legal Materials
IMB	Ice Mass Balance
IMO	International Maritime Organization
INC	Intergovernmental Negotiating Committee
INSU/DT	Institut national des sciences de l'univers/Division technique