

International Yearbook of Soil Law and Policy

Series editor

Harald Ginzky
German Environment Agency
Dessau, Germany

Advisory editors

Jerry Anderson, Drake University, Des Moines, USA
Ralph Bodle, Ecologic Institute, Berlin, Germany
Ben Boer, Wuhan University, Wuhan, Hubei
Eduardo Chiziane, Eduardo Mondlane University, Maputo, Mozambique
Victor Castillo, UNCCD, Bonn, Germany
Maylis Desrousseaux, Aix-Marseille University, Marseille, France
Qun Du, Wuhan University, Wuhan, Hubei
Alexander Erlewein, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn, Germany
Ian Hannam, University of New England, Armidale, Australia
Robert Kibugi, University of Nairobi, Nairobi, Kenya
Marcia Leuzinger, University of Brasilia, Brasilia, Brazil
Paul Martin, University of New England, Armidale, Australia
Grammenos Mastrojeni, Department of Foreign Affairs, Roma, Italy
José Rubens Morato Leite, Federal University of Santa Catarina, Brazil
Kamunde Nelly, Kenyatta University, Nairobi, Kenya
William Rees, University of British Columbia, Vancouver, Canada
Jesse Richardson, West Virginia University, Morgantown, USA
Oliver Ruppel, Stellenbosch University, Stellenbosch, South Africa
Bernard Vanheusden, University of Hasselt, Hasselt, Belgium
Patrick Wegerdt, European Commission, Brussels, Belgium
Michael Windfuhr, German Institute for Human Rights, Berlin, Germany

The *International Yearbook of Soil Law and Policy* is a book series that discusses the central questions of law and policy with regard to the protection and sustainable management of soil and land. The Yearbook series analyzes developments in international law and new approaches at the regional level as well as in a wide range of national jurisdictions. In addition, it addresses cross-disciplinary issues concerning the protection and sustainable management of soil, including tenure rights, compliance, food security, human rights, poverty eradication and migration. Each volume contains articles and studies based on specific overarching topics and combines perspectives from both lawyers and natural scientists to ensure an interdisciplinary discourse.

The *International Yearbook of Soil Law and Policy* offers a valuable resource for lawyers, legislators, scholars and policymakers dealing with soil and land issues from a regulatory perspective. Further, it provides an essential platform for the discussion of new conceptual approaches at the international, national and regional level.

More information about this series at <http://www.springer.com/series/15378>

Harald Ginzky • Elizabeth Dooley •
Irene L. Heuser • Emmanuel Kasimbazi •
Robert Kibugi • Till Markus • Tianbao Qin •
Oliver Ruppel
Editors

International Yearbook of Soil Law and Policy 2019

 Springer

Editors

Harald Ginzky
German Environment Agency
Dessau, Germany

Elizabeth Dooley
University of Exeter
Exeter, UK

Irene L. Heuser
Specialist Group on “Soils, Desertification
and Sustainable Agriculture”
IUCN World Commission on
Environmental Law
Kleinmachnow, Germany

Emmanuel Kasimbazi
School of Law
Makerere University
Kampala, Uganda

Robert Kibugi
School of Law
University of Nairobi
Nairobi, Kenya

Till Markus
Helmholtz-Centre for Environmental Research
UFZ
Leipzig, Germany

Tianbao Qin
Research Institute of Environmental Law
Wuhan University
Wuhan, China

Oliver Ruppel
Development and Rule of Law
Programme [DROP]
University of Stellenbosch
Stellenbosch, South Africa

ISSN 2520-1271

ISSN 2520-128X (electronic)

International Yearbook of Soil Law and Policy

ISBN 978-3-030-52316-9

ISBN 978-3-030-52317-6 (eBook)

<https://doi.org/10.1007/978-3-030-52317-6>

© Springer Nature Switzerland AG 2021

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors, and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Switzerland AG.
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Foreword

It is with great pleasure that I write this foreword for the volume of the *International Yearbook of Soil Law and Policy* that includes as the theme the presentations held at the workshop “Implementing LDN in Africa: Means, legal instruments and institutional challenges?”. This workshop was co-organised in cooperation between the German Environment Agency (UBA), the Konrad-Adenauer-Stiftung—Climate Policy and Energy Security Program for Sub-Saharan Africa, the GIZ and the University of Nairobi and held at Windsor Hotel, Nairobi, in August 2018.

The objective of the workshop was to enable an effective implementation of policies on land degradation and soil protection, in particular in Africa. It was the second conference of its kind, the first one being held in September 2017 in Kampala, Uganda. To this end, the organisers not only managed to assess how an enabling environment for the implementation of sustainable land use practices could be established, with respect to legislation, as well as institutional and organisational necessities, but they also investigated how international cooperation could support the creation of such an enabling environment.

One of the outcomes from the workshop was that African governments must handle the challenge of adapting and coping with the consequences of climate change on soils, biodiversity and ability to sustainably manage our land and natural resources. The law plays an important role in this regard.

Africa requires sufficient technical, technological, financial and human resources to face the soil challenge in a coordinated, synergistic manner involving all stakeholders. The Pan-African Parliament (PAP) could play a key role in this endeavour. As set out in Article 17 of the African Union Constitutive Act, the PAP has “to ensure the full participation of African peoples in the development and economic integration of the continent”. The Parliament can thus serve as a platform for the people from all African states to be involved in the discussion and decision-making towards more soil protection, and the harmonisation and coordination of Member States’ laws.

Pan-African Parliament, Johannesburg,
South Africa

Janet Oongera

Preface

The International Panel on Climate Change (IPCC) has published two reports in the past 2 years that highlight the enormous challenges for land and soil protection and submit recommendation for future actions. The special report of 2018 stated that scientific evidence shows that temperature increase has to be held by 1.5 degrees above pre-industrial levels. Otherwise, humanity will face the risk of disastrous effects caused by tipping points of the climate system. Moreover, the report stressed the need for immediate and far-reaching emission's reduction (80–95% worldwide by 2050). In addition, the IPCC clearly stated that appropriate measures to achieve the so-called negative emissions are inevitably necessary as the 1.5-degree objective could not be met by emission's reductions alone. The IPCC called for sustainable agriculture and forestry as one important means to achieve these “negative emissions”.

Another IPCC report, published in August 2019, focused on “climate change and land”. Herein the IPCC stresses that food production is a relevant source of CO₂ emissions and that land use, climate change and food security are closely interlinked and interdependent. The IPCC strongly advocates for sustainable land use, for substantive reductions of food waste and for more sustainable consumption patterns, as well as for sustainable agriculture and forestry. Otherwise, the challenge both to ensure food security for all human beings on the earth and to cope with climate change requirements will fail—causing effects one hardly dares to envisage.

What does that mean for soils and for soil governance? What does that mean for the “International Yearbook of Soil Law and Policy”? In essence, the two aforementioned IPCC reports underline the importance of soils as the “melting pot of all ecological functions”—not neglecting a similar importance of the world's oceans. If humanity could find the ways and means to use soils sustainably—throughout the continents and on a permanent scheme—it would contribute significantly to ensuring food security and combatting climate change and preventing major climate-induced migration streams and political conflicts.

“Soil Law and Policy” is—understood broadly—a means to establish sustainable soil management. “Law and Policy” not only needs to encompass legal provisions, statutes and ordinances but also equally needs to address scientific issues, enabling institutional arrangements as well as sufficient financial resources. Moreover, “Law and Policy” has to ensure the involvement of all relevant stakes and stakeholders.

As sustainable soil management is critically important for humanity’s needs and survival, the *International Yearbook of Soil Law and Policy* is deemed to play a crucial role by providing a platform for discourse on the best practices, strategies and legal concepts ensuring increased sustainable soil management—for academics, legislators and policymakers.

This fourth volume attempts to cope with these high expectations. The “theme” of the volume is coined to address how an “enabling environment for effective implementation of soil governance in Africa” can be achieved more effectively. This volume consists of about 19 chapters, which can inter alia be considered as an outcome of a two-day workshop held in Nairobi, Kenya, in August 2018. This workshop was successfully co-organised by the German Environment Agency, the Konrad-Adenauer Foundation and the University of Nairobi. Both the workshop and the chapters on this “theme” in Part I are intended to contribute to a more focused debate in Africa on the interplay of soils as a natural resource, food security and climate change.

Part II—“Recent International Developments”—entails a discussion on the future of international soil governance. Bodle et al. provide an overview of the current legal frameworks at international level and present the recommendations to develop this further. Fowler and Hannam’s chapter entails meaningful comments on these recommendations. The chapter by Rodriguez elucidates, in particular, the role of the Food and Agriculture Organization (FAO) in the aforementioned context.

Part III—“Regional and National Reports”—provides insights on the soil protection governance in Mexico (Gonzales), California (Desai), Brazil (Silveira et al), Germany (Ginzky) and the European Union (on Common Agriculture Policy—Raffelsiefen).

In Part IV—“Cross-cutting Issues”, numerous topics are addressed. First, the perception of soils within the Catholic Church is explained (Voigt). Another chapter by Bartke et al. addresses the challenges of the urban and rural linkages with regard to sustainable soil management and works out the ways and means of how to solve them. Finally, the chapter by Hannam addresses the aspects of a legislative and policy framework to manage soil carbon sequestration.

In conclusion, we as the editors hope that by including a variety of perspectives ranging from international to regional to national level, the diversity of topics such as Christian soil perspectives or the land-urban linkages and the involvement of authors from all regions of this planet, the volume of *International Yearbook of Soil Law and Policy* will contribute in addressing the challenges expressed by the IPCC.

Finally, we would like to express our deepest gratitude to all authors of this volume for their engagement, commitment and contributions, to the members of the advisory board for providing their continued insight during the review process, and last but definitely not the least, to the publishing house SPRINGER, in particular Anke Seyfried, for the ongoing operational support and their technical assistance.

Dessau, Germany
Exeter, UK
Kleinmachnow, Germany
Kampala, Uganda
Nairobi, Kenya
Leipzig, Germany
Wuhan, China
Stellenbosch, South Africa

Harald Ginzky
Elizabeth Dooley
Irene L. Heuser
Emmanuel Kasimbazi
Robert Kibugi
Till Markus
Tianbao Qin
Oliver Ruppel

Contents

Part I Enabling Environment for an Effective Implementation of Soil Governance in Africa	
Challenges to Soil Protection and Sustainable Management in Africa	3
Francis Marthy Tetteh	
Local Agricultural Intensification Practices and Soil Degradation in Momo Division, North West Cameroon	15
Tassah Ivo Tawe	
Persistent Organic Pollutants and Soil Protection: National and Global Imperatives	33
Patricia Kameri-Mbote	
Prospects and Challenges for Soil Protection Law in Zambia	59
Pamela Towela Sambo	
Combatting Desertification Through Soil and Water Conservation and Environmental Rehabilitation Measures: Experiences from the Tigray Region, Ethiopia	89
Kelemework Tafere Reda and Desta Gebremichael Gidey	
Indigenous Knowledge and Soil Protection: Anthropological Remarks on Experiences in Namibia	107
Manfred O. Hinz	

Land Rights, Land Use Patterns and Soil Fertility Significantly Contribute to the Two-Decade Long Regional Conflagration in Eastern Congo	127
Bila-Isia Inogwabini	
Workshop “Implementing Land Degradation Neutrality in Africa: Means, Legal Instruments and Institutional Challenges?”: Outcome Document	143
Harald Ginzky, Oliver Ruppel, Robert Kibugi, and Walter Engelberg	
Part II Recent International Developments	
The Future of International Soil Governance	155
Ralph Bodle, Heidi Stockhaus, Franziska Wolff, and Sebastian Oberthür	
Critique of the Report “Improving International Soil Governance: Analysis and Recommendations”	177
Robert John Fowler and Ian Hannam	
The Global Soil Partnership: Tackling Global Soil Threats Through Collective Action	197
Natalia Rodríguez Eugenio	
Part III Regional/National Reports	
Soil Law in Mexico	225
José Juan González Márquez and Ana María Pacheco Ruiz	
Brumadinho’s Disaster, Mine Tailing Dams and the Environmental Licencing in Brazil: Preventing Risks to Human Wellbeing, Soils, and the Environment	241
Paula Galbiatti Silveira, Marina Demaria Venâncio, and José Rubens Morato Leite	
The Healthy Soil Program	261
Danika Desai	
Soil Protection Governance in Germany	295
Harald Ginzky	
The EU Common Agricultural Policy and Its Contribution to the Protection and Sustainable Use of Soils: New Approaches for the Period 2021–2027	335
Markus Raffelsiefen	
Part IV Cross-Cutting Issues	
Perceptions of Soil in Catholic Theology	357
Markus Vogt	

**The UN-Habitat Urban-Rural Linkages Guiding Principles:
Assessment of the Adoptability to Topical Land Management
Challenges in Germany, Kenya and Tanzania 369**
Stephan Bartke, Thomas Forster, Grace Githiri, Almut Jering,
Jackson Kago, Sina Schlimmer, and Remy Sietchiping

**Aspects of a Legislative and Policy Framework to Manage Soil
Carbon Sequestration 399**
Ian Hannam