



BOOK ABSTRACT

Producing enough food is a basic human priority and a critical challenge in the face of a growing population and the deteriorating ecological health of the planet. Modern agricultural practices promise to maximise the productive efficiency of available land but are one of the main drivers of agro- and biodiversity loss. Agroecology, which places ecological sustainability and diversity at the heart of agriculture, is one response to these challenges. It presents agriculture not only as the process through which food is produced but as a dynamic socioecological phenomenon that exists through networks comprising natural and human stakeholders at global, national and subnational levels. Drawing on a combination of agroecological and legal literature, this book explores where there is space in international law to pursue agroecology. Using a range of case studies, it demonstrates how concepts, mechanisms and regulatory approaches in the law advance, and can be reformed to further advance, an agroecological legal framework that allows humanity to meet its agricultural needs in a way that protects the natural and cultural diversity that is fundamental to the ecological integrity of the planet.

CHAPTER ABSTRACTS

1. Conservation of Agrobiodiversity

Agrobiodiversity is being increasingly eroded by anthropogenic activities. Diversity in crops, livestock and associated species is decreasing; land productivity is falling; and the drivers of biodiversity loss are growing. How the law provides for the conservation of agrobiodiversity and connected ecosystems is an important indicator of how much space exists for agroecology in international legal frameworks. This chapter focuses on two of the main conservation treaties – the 1992 Convention on Biological

Diversity and the 2001 International Treaty on Plant Genetic Resources for Food and Agriculture – offering new insights on each as tools to advance agroecology.

2. Monocultures and Genetic Diversity

Protecting the agrobiodiversity essential for the long-term sustainability of agriculture requires more than maintaining diversity between species; there must also be sufficient diversity within species. International law has developed in a way that frustrates farmers' ability to freely exchange seed to promote this genetic diversity, however. After discussing the ecological and socioeconomic risks of relying on genetically-uniform crops, this chapter analyses international laws concerning intellectual property rights and the protection of local and indigenous agricultural knowledge. It demonstrates how these laws present a barrier to advancing agroecology and identifies key reforms.

3. Genetically Modified Organisms and Organic Agriculture

Agroecology's emphasis on diversity should not be considered as limited to diversity within individual farms. Ensuring the diversity of the wider agricultural networks of which these are part is just as important for long-term food security. A farm that utilises genetically modified organisms (GMOs) can contribute to that diversity and GMOs may therefore be considered as a legitimate element of an agroecological system. Their use poses risks to socioecological networks, however, particularly to farms that employ organic farming methods. This chapter looks at the regulation of GMOs and explores how the position of pro- and anti-GMO lobbyists might be reconciled through an agroecological framework.

4. Landscapes

Agricultural systems are integral to landscapes, reflecting not just humanity's physical interventions in the environment but also the cultural connections between communities and land. Many landscapes are under increasing threat from environmental and socioeconomic pressures, which are driving changes in agricultural practices that may themselves hasten the deterioration of agricultural systems. How these threats are addressed through legal measures for landscape protection reveals a lot about the current support in international law for the socioecological networks that underpin agroecological understandings of agriculture.

5. Ecosystem Services

Simply defined, ecosystem services are benefits that people enjoy from functioning ecosystems, with services provided to agriculture (eg pollination and soil renewal) being key examples. That nature's

capacity to deliver ecosystem services is being degraded both locally and globally is therefore concerning and raises questions over the efficacy of measures in international law designed to protect them. Critically, adopting agroecological approaches to agriculture has been identified as an important means through which the decline of ecosystems might be addressed. The purpose of this chapter, therefore, is to explore the ways in which international law supports agroecological approaches to the management of ecosystem services.

6. Soil Conservation and Land Degradation

Healthy soil is critical to agriculture and connected ecosystems. A healthy soil system, ie one in which high yields of nutritious crops can be grown with minimal environmental impact, contributes to ecosystem resilience, supports high levels of biodiversity and delivers a range of other ecosystem services. This chapter explores the different contexts in which soil conservation has been addressed in international law. It begins by considering the programmes of work adopted under the Convention on Biological Diversity and UN Food and Agriculture Organisation. Consideration is then given to the question of whether a binding soil treaty should be adopted, and what form this might take. Finally, the wider problems of desertification and land degradation are discussed.

7. Water Conservation

It should go without saying that society depends on fresh water for a host of different reasons. One of the most important of these is the growing of crops. Agriculture extracts significant amounts of finite water resources, however, with concerns raised over whether there is enough water to meet growing demand. The first half of this chapter explores the changing perceptions of water in international law and the core legal principles governing the conservation of use of transboundary fresh water resources. The second half examines the regulation of aquaculture and the extent to which this reflects agroecology.

8. Climate Change

The purpose of this chapter is to explore how agroecology can enhance the resilience of agricultural systems and the communities these support so that they are better able to adapt to the inevitable impacts of climate change. Framing this discussion will be a case study on Kiribati. As a small island developing state, Kiribati is a prime example of the inherent injustice of climate change, ie that it is those communities that have contributed least to climate change that are most at risk from its consequences. It also represents a relatively contained socioecological network but one that reveals how such networks are nevertheless impacted by, and impact on, the wider world.

9. Environmental Assessment

By accounting for the environmental impacts of decisions, and the respective interests of different members of a socioecological network, environmental assessment should allow for the socioeconomic development of that network in a way that is cognisant of its ecological foundations. Different forms of environmental assessment have evolved, each of which has its own strengths and weaknesses in advancing agroecology in international law. Ecological reforms to environmental assessment can also be identified, which could potentially lead to a fundamental shift in our understanding of sustainable development so that the law is not only better able to advance agroecology, but also deliver genuine sustainability.

10. Transboundary Pollution

The relationships between agriculture and pollution are complex. That a farm cannot be isolated from its surrounding ecosystems means that it will inevitably be impacted if those ecosystems are polluted, but agriculture is also a major contributor to local and global pollution. The nature of this pollution varies considerably but common features are its pervasiveness and its persistence in the environment. To illustrate whether international law responds to these challenges in a way that reflects agroecology, this chapter examines the Conventions on Long-Range Transboundary Air Pollution and Persistent Organic Pollutants. Consideration is also given to proposals for a more unified approach to pollution in international law.

11. International Trade

Neoliberalism is one of the dominant framings of international law and policymaking, manifested in particular through the World Trade Organisation's rules on international trade. The objective of these rules is to ensure free trade and may therefore conflict with trade-restrictive national policies that pursue agroecological approaches to agricultural management. This chapter considers how the relationship between environmental protection and free trade as competing policy objectives has evolved, and the space for agroecology in that relationship, using the Agreement on Agriculture as a case study. It also examines the consequences of international trade, and the broader impacts of neoliberalism, on the health of the planet. Reflecting on the COVID-19 pandemic, it evaluates the agroecological merits of international rules on wildlife trade and discusses the concept of One Health as an alternative framework for managing humanity's exploitation of nature.

12. Tracing a Path from Food Security to Food Justice

The social imperative of ensuring that everyone has enough food has been given numerous labels in scholarship. This chapter focuses on four: food security; the right to food; food sovereignty; and food justice. It argues that food security, the right to food, food sovereignty and food justice are progressively linked. Food justice enables the food sovereignty that communities must enjoy if they are to exercise their right to food to achieve food security. Each emphasises a different aspect of agroecological agenda, with the ideal of food justice in particular showing how broader social objectives can be achieved through agricultural policies that are grounded in agroecology.