

Nature and Sources of Biodiversity and Nature Conservation Law and Policy in the MENA Region

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1.1 INTRODUCTION

This book examines the laws, policies, and institutions on biodiversity, nature conservation, and the protection of cultural heritage in the Middle East and North Africa (MENA) region.¹ It analyzes the interrelationships between biodiversity, nature conservation, and the preservation of cultural heritage, as well as lessons learned from emerging nexus and integrated approaches to the implementation of multilateral environmental treaties in these fields at regional and domestic levels.

Halting the rapid loss of biodiversity is one of the triple planetary emergencies facing our present generation, the other two being climate change and pollution.² Biodiversity “refers to the different forms of plants, animals, and biological forms of life that make up the ecosystem.”³ The 1992 United Nations Earth Summit defined biological diversity as “the variability among living organisms from all sources.”⁴ All of the elements of the ecosystem are interlinked and depend on each other to survive. For example, without bees, food crops may not grow, which may lead to food scarcity, hunger, and a total collapse of the global food industry.⁵ Similarly,

¹ Twenty countries are typically included as part of the MENA region: Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, and Yemen. Some classifications also include Malta, Sudan, Turkey, and Israel as part of the MENA region. See for example, The World Bank, “Middle East and North Africa” www.worldbank.org/en/region/mena accessed January 25, 2024.

² J. Richardson et al., “Earth beyond Six of Nine Planetary Boundaries” (2023) 9 *Science Advances* 37; see also W. Steffen et al., “Planetary Boundaries: Guiding Human Development on a Changing Planet” (2015) 347 *Science* 736.

³ Damilola Olawuyi, *Environmental Law in Arab States* (Oxford University Press 2022) 245–275. See also Edward O. Wilson, *The Diversity of Life* (Harvard University Press 1992) 1–15.

⁴ Rio Declaration on Environment and Development (adopted June 14, 1992) UN Doc A/CONF.151/26 (vol I), 31 ILM 874 (1992). See also Article 2 of the CBD, which defines biodiversity as the “variability among living organisms from all sources and within species.”

⁵ Damilola Olawuyi and Elena Athwal, “Halting Biodiversity Loss and Protecting Nature: The Important Role of International Environmental Law” (*Daily Trust*, May 7, 2023) <https://dailytrust.com/halting-biodiversity-loss-and-protecting-nature-the-important-role-of-international-environmental-law/> accessed January 12, 2024. See also IPBES, “Assessment Report on Pollinators, Pollination

without plants, humans and other life-forms may lack access to the essential sources of nutrition, medicines, and clean air needed to sustain life on earth.⁶ In addition to the intrinsic and ecosystem value of these biological resources in providing pivotal support for the subsistence and survival of current and future generations, such resources also have enormous religious, cultural, recreational, and economic value, especially for diversifying revenue sources through a prosperous ecotourism industry.⁷ The need to preserve and protect the various biological and cultural resources that sustain the ecosystem has therefore remained one of the most fundamental priorities of international environmental law.⁸ Goal 15 of the United Nations Sustainable Development Goals (SDGs) expressly calls on countries to ensure “the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetland, mountains and dryland in line with obligations under international agreements” by 2020.⁹ The 2030 Agenda envisages, among other things, “a world in which humanity lives in harmony with nature and wildlife, and other living species are protected.”¹⁰

Yet environmental stresses from the destruction of wildlife habitats, overexploitation of plant and animal species, poaching, use of toxic pesticides, illicit trade in plants and animal resources, and climate change impacts, coupled with gaps in environmental awareness and education, have for many years contributed to rapid biodiversity loss across the world, including in the MENA region.¹¹ Recent studies indicate that society’s activities have pushed biodiversity loss beyond the planetary boundaries needed to sustain life on earth.¹² One alarming study found that earth’s wild mammals comprise less than 10 percent of the total biomass of humans and less

and Food Production” (2016). See also, United Nations Environment Assembly Resolution 3/4 on Environment and Health, which notes that human, animal, and plant health and the environment are interconnected.

⁶ W. G. Fernando, “Plants: An International Scientific Open Access Journal to Publish All Facets of Plants, Their Functions and Interactions with the Environment and Other Living Organisms” (2012) 6 *Plants* 1, 1–5.

⁷ For example, Saudi Arabia’s Vision 2030 identifies ecotourism – such as viewing wildlife and visiting important natural and cultural sites – as a tool for economic diversification. See also Oman’s Vision 2040 and the United Arab Emirates’ National Ecotourism Project, which emphasizes the preservation of natural and cultural heritage as tools for tourism and other ecosystems services. Qatar has also announced its priority to develop ecotourism destinations. See “MoECC, Qatar Tourism to Develop Ecotourism Destinations” (*Qatar Peninsula*, November 19, 2023). See also Anthon Garcia, “Growth of Ecotourism in the Middle East” (September 20, 2023) <https://economymiddleeast.com/news/growth-of-ecotourism-in-the-middle-east/> accessed January 12, 2024.

⁸ See Chapter 2.

⁹ United Nations General Assembly (UNGA), “Transforming Our World: The 2030 Agenda for Sustainable Development,” Resolution adopted by the General Assembly on September 25, 2015, UN Doc A/ RES/70/I.

¹⁰ Ibid. See also UNEP, Biodiversity and Health Resolution adopted by the United Nations Environment Assembly on March 2, 2022, UNEP/ EA.5/Res.6.

¹¹ Olawuyi (n 3) 245–275, see also UNEP, *Environmental Outlook of the Arab Region: Environment for Development and Human Well-being* (UNEP 2010) 287–290.

¹² Richardson et al. (n 2).

than 4 percent of that of domesticated animals.¹³ These studies highlight how biodiversity loss and land degradation are taking place at an unprecedented rate, and the urgent need for legal responses to enhance biodiversity and nature conservation. The devastating impacts of the COVID-19 pandemic have also accentuated calls for a more balanced relationship with nature and all elements of the ecosystem in order to reduce the rising scale of pandemics and zoonotic diseases – that is, infectious diseases that are transferred from animals to humans – in areas where they did not exist before.¹⁴ Furthermore, the rapid loss of biodiversity has also been highlighted as a threat to the realization of several human rights, including the right to life, right to food, and right to health.¹⁵

Halting the threat of biodiversity loss is a particularly urgent imperative for the MENA region, arguably more so than any other region in the world. The MENA region is often categorized as a biodiversity hotspot, meaning that it contains “at least 1,500 species of vascular plants found nowhere else on Earth, and has lost at least 70 percent of its primary native vegetation.”¹⁶ The region is home to more than 5,000 recorded species of plants, more than 10,000 species of animals, and 5 of the world’s 34 internationally recognized biodiversity hotspots.¹⁷ Key habitats such as the marshes and wetlands of the Jordan Valley provide critical stopover points for around 500 million migratory birds each year. Furthermore, countries in the Gulf Cooperation Council (GCC) and the Mashreq host diverse landscapes such as mountains, inland and coastal plains, sand deserts, and wetlands that are home to over 5,500 endemic plant species.¹⁸ Similarly, the MENA region is home to rare animal species, such as the Queen of Sheba’s gazelle, Arabian oryx, Arabian tahr, Arabian wolf, Asiatic jackal, Arabian camel (dromedary), Arabian leopard, striped hyena, and birds such as the Arabian bustard and honey buzzard.¹⁹

However, due to the impacts of climate change and rapid urbanization, the rise in construction activities, poaching, unsustainable agricultural practices, conflicts,

¹³ L. Greenspoon et al., “The Global Biomass of Wild Mammals” (2023) 7 *Proceedings of the National Academy of Sciences of the United States of America*. See also R. J. Scholes and R. Biggs, “A Biodiversity Intactness Index” (2005) 434 *Nature* 45–49.

¹⁴ IPBES, *Workshop Report on Biodiversity and Pandemics of the Intergovernmental Platform on Biodiversity and Ecosystem Services* (IPBES Secretariat 2020) 2–5.

¹⁵ See UNEP, “Environmental Rule of Law: Tracking Progress and Charting Future Directions” (UNEP 2023) 104–105. See also Council of the European Union, “Council Conclusions on EU Climate Diplomacy: Accelerating the Implementation of the Glasgow Outcomes” (February 21, 2022).

¹⁶ Critical Ecosystems Partnership Fund, “Biodiversity Hotspots Defined” www.cepf.net/our-work/biodiversity-hotspots/hotspots-defined accessed January 12, 2024.

¹⁷ Ibid.

¹⁸ Iyad Abumoghli and Adele Goncalves, “Environmental Challenges in the MENA Region” (UNEP) https://wedocs.unep.org/bitstream/handle/20.500.11822/31645/EC_MENA.pdf?sequence=1&isAllowed=y accessed January 25, 2024.

¹⁹ For a list of rare flora species in the MENA region, see Appendix I of the Convention on the Conservation of Wildlife and their Natural Habitats in Countries of the Gulf Cooperation Council (adopted December 30, 2001, entered into force April 2003).

and political instability, and a lack of comprehensive conservation laws and practices, among other factors, the MENA region has lost more than 95 percent of its natural habitats, resulting in accelerated loss of nature and biodiversity across the region.²⁰ In Morocco, for example, studies show that more than 1,700 plant species are endangered or threatened with extinction, while more than 600 animal species face the risk of extinction.²¹ Similarly, critical habitats such as mangroves, seagrass beds, and coral reefs in the Arabian Gulf are endangered, while several endemic species in the region are assessed as threatened with extinction in the International Union for the Conservation of Nature (IUCN) Red List.²² Estimates indicate that 17 percent of the endemic mammals in the region could become extinct before 2050 due to climate change and other factors.²³ Similarly, the increasing destruction of cultural sites and theft of cultural artifacts by militant and terrorist groups raise key concerns across the region.²⁴ Given the high potential for scarcities and exacerbated resource-driven conflict in biodiversity hotspots, MENA countries face an urgent task to halt biodiversity loss.²⁵

Despite the grim reality of the rapid loss of biological and cultural resources across the MENA region, the clear and comprehensive legal frameworks needed to halt and address the loss have not been forthcoming in many parts of the region. The absence of quality, accessible, and reliable statistics and indicators on the status, trends, and programs carried out to advance the conservation of biological and cultural heritage remains a key hindrance to monitoring progress.²⁶ For example, only a few MENA countries actively update the status of biodiversity programs through the Convention on Biological Diversity (CBD) clearing-house mechanisms. Similarly, biodiversity education is still at an alarming stage of infancy across

²⁰ Rajaa El Kassab, “Biodiversity in the Arab Region” www.greenpeace.org/static/planet4-mena-stateless/2022/08/9dd732cb-biodiversity-in-the-arab-region-rajaakassab.pdf. See also Abumoghli and Goncalves (n 18).

²¹ El Kassab (n 20) 3–4.

²² Earth’s Endangered Creatures, “Endangered Mammals of the Middle East” www.earthsendangered.com/continent.asp?gr=&view=&ID=8&nogroupall= accessed January 25, 2024. See also Sana Hussain, “Qatar’s Iconic Arabian Oryx at Risk from Plastic Pollution” (*Doha News*, March 4, 2021) www.dohanews.co/qatars-iconic-arabian-oryx-at-risk-from-plastic-pollution/ accessed January 25, 2024.

²³ In Yemen, for example, seven of the mammal species in the country face the risk of extinction, including the Queen of Sheba’s gazelle, Arabian oryx, Arabian tiger, and the Asiatic cheetah. El Kassab (n 20) 3–4. See also Alaaeldin Soultan, Martin Wikelski, and Kamran Safi, “Risk of Biodiversity Collapse under Climate Change in the Afro-Arabian Region” (2019) 9 *Scientific Reports* 955.

²⁴ Andreas Dittmann and Hussein Almohamad, “Devastation of Cultural Heritage and Memory in Syria and Iraq: Component of a Multi-level Provocation Strategy?” (2015) 5 *International Journal of Humanities and Social Science* 11, 30; A. Al-Azm, “The Threat to Cultural Heritage in Times of Conflict and Its Dynamic Relationship with Gulf Society” in M. M. Rahman and A. Al-Azm (eds), *Social Change in the Gulf Region* (Springer 2023) 271–286.

²⁵ UNEP (n 15) 153–154.

²⁶ Ibrahim Abdel Gelil, “The Sustainable Development Initiative in the Arab Region: Third Progress Report” (Council of Arab Ministers Responsible for the Environment 2011) noting the “general lack of coherent environmental information and information systems in the region.”

the region. Currently, only very few universities in the MENA region have dedicated law courses that advance knowledge and capacity on biodiversity law and policy. According to the findings of recent regional conferences on environmental law, one key reason for this slow pace of environmental legal education is the absence of an authoritative text that unpacks the nature and guiding principles of biodiversity and nature conservation law and policy in the region.²⁷ While there are many journal articles and book chapters that survey and analyze various aspects of biodiversity law and policy in the MENA region, a clear, comprehensive, and book-length exposition of the normative underpinnings, value, and best practices on biodiversity and nature law and governance in the region has yet to emerge. This book fills this gap by providing an analytical examination of best practices in the design, application, implementation, and enforcement of biodiversity and nature conservation law and policy in the MENA region.

The book introduces readers to the latest legislative developments on biodiversity, nature conservation, and the protection of cultural heritage in the MENA region, including the applicable legislation and institutions, as well as lessons learned from emerging innovative and bottom-up approaches to their implementation across the world. It also explores larger questions on legal and institutional frameworks that can help address broader issues of fragmentation, gender-based exclusions and inequality, inadequate stakeholder engagement, lack of transparency, limited access to environmental information, and lack of comprehensive domestic legislation, and how they stifle the nexus and integrated implementation of biodiversity and nature conservation treaties and the equitable sharing of the benefits derived from biodiversity and nature in the region.

This chapter provides a conceptual overview of the nature and scope of biodiversity and nature conservation law and policy in the MENA region. Section 1.2 provides an overview of the different sources of law that underpin biodiversity and nature conservation law and policy in the region. It discusses the character, status, and force of the different sources, including the interrelationships between them. Section 1.3 outlines the overall aim and structure of the book.

1.2 SOURCES OF BIODIVERSITY AND NATURE CONSERVATION LAW AND POLICY IN THE MENA REGION

Conservation is “the protection and preservation of plants, animals, and other biological and cultural resources for the benefit of current and future generations.”²⁸ Therefore, biodiversity and nature conservation law is that branch of environmental

²⁷ Salam Al-Zahrani, “Conference on Law on Biodiversity, Nature Conservation, and Cultural Heritage Protection in the Middle East and North African Region” (March 2, 2023) www.kas.de/en/web/rspno/veranstaltungsberichte/detail/-/content/conference-on-law-on-biodiversity-nature-conservation-and-cultural-heritage-protection-in-the-middle accessed January 12, 2024.

²⁸ Olawuyi (n 3) 248–249.

law that provides the general legal framework for the protection of plants, animals, and other biological and cultural resources that make up the ecosystem from overexploitation and abuse.²⁹ While biological diversity focuses mainly on natural heritage and species such as plants, animals, and humans in the ecosystem, cultural diversity refers to the wide range of “generational values, shared beliefs, customs, practices, objects, and artistic expressions” that are relevant to the overall smooth functioning of our world.³⁰ Due to their vital roles, and their interdependencies, addressing the common and multiscale threats to the conservation of biological diversity, cultural diversity, and conservation of all aspects of the ecosystem, through a nexus and integrated approach, has become an important aspect of international law for the last several decades.³¹ Since the Stockholm Conference in 1972, we have seen the adoption of a wide range of multilateral treaties relating to biodiversity, nature conservation, and the preservation of cultural heritage.³² Biodiversity and nature conservation law is therefore an amalgam of a wide range of interrelated legal regimes relating to environmental protection, trade, investment, land use, human rights, biosafety, and energy, among others.³³

Since the adoption of the CBD in 1992, the discipline of biodiversity and nature conservation law and policy has developed incrementally worldwide.³⁴ Initially, it emerged as a tool to curb the overexploitation and degradation of biodiversity. Laws focused on conserving specific threatened species, though a general approach was still rare. The continued loss of key species created urgency for targeted protection. In the second phase, there was acknowledgment that conserving biodiversity and species requires preserving natural habitats and cultural heritage.³⁵ Laws shifted to integrate species and habitat conservation efforts. Currently in the third phase, the nexus and integrated management of biological and cultural resources to advance sustainable development has become a major concept in law, embedded

²⁹ See Elisa Morgera and Jona Razzaque (eds), *Biodiversity and Nature Protection Law* (Edward Elgar 2017) 1–10; Daniel M. Bodansky, “International Law and the Protection of Biological Diversity” (1995) 28 *Vanderbilt Journal of Transnational Law* 623; William J. Snape, *Biodiversity, and the Law* (Island Press 1996) 1–10.

³⁰ See The UNESCO Universal Declaration of Cultural Diversity (adopted November 2001), which highlights the importance of culture and cultural diversity to present and future generations.

³¹ Olawuyi (n 3). See also, M. G. Bastos Lima and U. Palme, “The Bioeconomy–Biodiversity Nexus: Enhancing or Undermining Nature’s Contributions to People?” (2022) 2 *Conservation*, 7–25.

³² Olawuyi (n 3).

³³ See Guillaume Futhazar, Sandrine Maljean-Dubois, and Jona Razzaque, “Introduction: Setting the Scene” in Guillaume Futhazar et al. (eds), *Biodiversity Litigation* (Oxford University Press 2020) 8–10. See also Morgera and Razzaque (n 29).

³⁴ Désirée McGraw, “The Story of the Biodiversity Convention: From Negotiation to Implementation” in Philippe Leprestre (ed), *Governing Global Biodiversity: The Evolution and Implementation of the Convention on Biological Diversity* (Ashgate 2004) 7–10.

³⁵ See Aphrodite Smagadi, “Analysis of the Objectives of the Convention on Biological Diversity: Their Interrelation and Implementation Guidance for Access and Benefit Sharing” (2006) 31 *Columbia Journal of Environmental Law* 243, 253.

in many regional and global instruments.³⁶ The need for such harmonized efforts has assumed greater significance and urgency with the adoption of the UN SDGs. SDGs 12, 14, and 15 emphasize the need to protect various aspects of biological diversity. SDG 11.4 specifically highlights the need to protect the world's cultural and natural heritage; SDG 17 also underscores the need for enhanced partnerships – globally, regionally, nationally, and locally – as a required step for attaining all of the SDGs, including those on biodiversity and nature conservation. SDG 17.14 specifically encourages all stakeholders to enhance cooperation and policy coherence for sustainable development.³⁷ The important roles of nature and nature-based solutions as tools for economic diversification (bioeconomy), climate action, and integrated health management have also become important. For example, recent studies, including reports of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Service (IPBES),³⁸ have underlined the urgent need for a nexus approach to ecosystems governance as a framework for the coherent, holistic, and integrated implementation of biodiversity and nature conservation treaties to address fragmentations and to advance all of the associated SDGs.³⁹

Biodiversity law has therefore progressed from urgent species-specific protections to a more holistic view linking conservation to habitats, cultural heritage, bioeconomy, and broader sustainable development priorities.⁴⁰ Generally, there are three key sources of biodiversity and nature conservation law and policy in the MENA region: international law, domestic legislation, and judicial decisions and scholarly publications.

1.2.1 *International Law on Biodiversity and Nature Conservation*

International law governs relations between sovereign nations. International biodiversity and nature conservation law is therefore a field of international law that regulates the behavior of states and international organizations with respect to the protection and conservation of plants, animals, and other biological and cultural resources. As recognized in Article 38 of the Statute of the International Court of Justice, the major sources of international law, and by extension international

³⁶ J. Maradza et al., “Perspectives on the Applicability of Nexus Thinking to Private Protected Areas: A Case Study of Mokolodi Nature Reserve, Botswana” in J. Saarinen, B. Lubbe, and N. N. Moswete (eds), *Southern African Perspectives on Sustainable Tourism Management* (Springer 2022). See also Damilola Olawuyi, “Sustainable Development and the Water–Energy–Food Nexus: Legal Challenges and Emerging Solutions” (2020) 103 *Journal of Environmental Science and Policy* 1.

³⁷ See also SDG 15 on biological diversity and SDGs 4.7, 8.3, and 8.9. UNGA (n 9).

³⁸ United Nations IPBES, “Scoping Report for a Thematic Assessment of the Interlinkages among Biodiversity, Water, Food and Health” (March 21, 2021) IPBES/8/3 https://ipbes.net/sites/default/files/2021-05/IPBES_8_3_nexus%20assessment_en.pdf accessed January 25, 2024.

³⁹ Maradza et al. (n 36).

⁴⁰ See Secretariat of the Convention on Biological Diversity, “Global Biodiversity Outlook 3” (CBD 2010) www.cbd.int/gbo3/?pub=6667§ion=6711 accessed December 15, 2023; also Bastos Lima (n 31).

biodiversity and nature conservation law, are international conventions and treaties, international customs, general principles of law, and the judicial decisions and teachings of highly qualified publicists.⁴¹

As early as the 1900s, multilateral agreements that recognized how unregulated trade in plant and animal species may impact the environment and its resources began to emerge: for example, the Convention for the Preservation of Animals, Birds, and Fish in Africa, signed in London on May 19, 1900 (1900 London Convention), the first formal agreement on trade-related environmental issues.⁴² Although the 1900 London Convention never entered into force, due to lack of ratification, it started an important conversation on how the unregulated trade in African elephants and game species may lead to their extinction.⁴³ As discussed in Chapter 2, this impetus led to the adoption of a number of legally binding instruments on biodiversity and nature conservation.⁴⁴ The most important of these instruments is the CBD which in Article 1 sets out the three objectives as: the conservation of biological diversity, sustainable use, and access and benefit-sharing.⁴⁵ Each of these objectives are discussed across the book.⁴⁶

As indicated in Table 1.1, several MENA countries have adopted and ratified the CBD and other key multilateral treaties on biodiversity and nature conservation. The rise in international awareness and instruments on this subject has also resulted in the development of regional treaties aimed at enhancing the conservation of the region's rich natural and cultural heritage.

1.2.2 *Regional Instruments*

As indicated in Table 1.1, several treaties have been adopted at the regional and sub-regional levels which aim to protect and preserve flora, fauna, and cultural heritage from all sources of pollution and degradation.

⁴¹ United Nations, Statute of the International Court of Justice, April 18, 1946, 33 UNTS 993. See Olawuyi (n 3) 269.

⁴² International Union for Conservation of Nature and Natural Resources (IUCN), *An Introduction to the African Convention on the Conservation of Nature and Natural Resources* (IUCN 2004) 3–4.

⁴³ Ibid.

⁴⁴ Biodiversity and nature conservation treaties include: the Convention on Biological Diversity (adopted June 5, 1992) 1760 UNTS 79, 31 ILM 818; Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (adopted March 3, 1973, entered into force July 1, 1975) 993 UNTS 243; Convention on the Conservation of Migratory Species of Wild Animals (June 23, 1979) 1651 UNTS 331; Convention on Wetlands of International Importance especially as Waterfowl Habitat (adopted February 2, 1971, entered into force December 21, 1975) 996 UNTS 245 (Ramsar Convention); the United Nations Convention to Combat Desertification (adopted June 17, 1994, entered into force December 26, 1996); International Treaty on Plant Genetic Resources for Food and Agriculture (entered into force June 29, 2004) 2400 UNTS 303; Convention Concerning the Protection of the World Cultural and Natural Heritage (adopted November 23, 1972, entered into force December 17, 1975) 1037 UNTS 151 (World Heritage Convention).

⁴⁵ Arts. 6–8, 10–13 of the CBD, *ibid.* See also Futhazar et al. (n 33) 17–18.

⁴⁶ See Chapters 2, 3, and 9.

TABLE 1.1 *International conservation agreements ratified and acceded to by MENA states*

| Treaty | MENA states (ratification/accession) |
|--|---|
| International | |
| Convention on Biological Diversity | Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Palestine, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, Yemen |
| Convention on Wetlands | Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Sudan, Syria, Tunisia, United Arab Emirates, Yemen |
| Convention on the Conservation of Migratory Species of Wild Animals | Algeria, Djibouti, Egypt, Iraq, Jordan, Lebanon, Libya, Mauritania, Morocco, Saudi Arabia, Somalia, Syria, Tunisia, United Arab Emirates, Yemen |
| Convention on International Trade in Endangered Species of Wild Fauna and Flora | Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, Yemen |
| The UNESCO Convention for the Protection of the World Cultural and Natural Heritage | Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Palestine, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, Yemen |
| Regional and subregional | |
| Kuwait Regional Convention on Protection of Marine Environment and Protocols | Bahrain, Iran, Iraq, Qatar, Kuwait, Oman, United Arab Emirates, Saudi Arabia |
| Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment | Djibouti, Egypt, Jordan, Saudi Arabia, Somalia, Sudan, Yemen |
| African Convention on the Conservation of Nature and Natural Resources of 1968 (and revised in 2017) | Algeria, Djibouti, Egypt, Sudan, Tunisia. Signatories only: Libya, Mauritania, Somalia |
| Convention on the Conservation of Wildlife and their Natural Habitats in GCC Countries | Kuwait, Saudi Arabia, Bahrain, Qatar, United Arab Emirates, Oman |

Source: Compiled by author. Prepared using information from the United Nations Treaty Collection website, <https://treaties.un.org>, accessed January 12, 2024.

The regional instruments are discussed extensively in Chapter 2 and they include the Kuwait Regional Convention on Protection of Marine Environment and Protocols (Kuwait Convention) and its protocols; the Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (Jeddah Convention); the Convention on the Conservation of Wildlife and their Natural Habitats in

GCC Countries (GCC Wildlife Convention); and the African Convention on the Conservation of Nature and Natural Resources of 1968 (and revised in 2017) (African Convention).

In addition to these binding international and regional biodiversity and nature conservation law instruments, a number of nonbinding declarations and strategy plans have emerged at the regional level that provide foundations for the development and application of biodiversity and nature conservation law and policy in the MENA region. These include:

1. The 1991 Arab Declaration on Environment and Development and Future Prospects: which contains a commitment by all Arab countries in the MENA region to work together to preserve the biological diversity of the region and guarantee the conservation of land, marine, and freshwater resources.⁴⁷ It also encourages states to develop policies, legislation, and education initiatives aimed at the preservation and conservation of natural heritage from harmful environmental effects and calls on countries to introduce environmental subjects into syllabi and curricula at all levels of education.⁴⁸
2. The 2001 Arab Declaration to the World Summit on Sustainable Development: which enshrines the commitment of Arab countries in the MENA region to work together to preserve the ecosystems and biodiversity of the region. It also recognizes the need for states to maintain the unique cultural and religious heritage of the region and to utilize it to achieve sustainable development.⁴⁹
3. The Strategic Plans of the Arab League Educational, Cultural and Scientific Organization (ALESCO). ALESCO is a specialized institution of the League of Arab States,⁵⁰ established to promote, preserve, protect, and conserve tangible and intangible Arab cultural heritage, and to foster coordination among Arab states in the fields of education, science, and cultural heritage.⁵¹ ALESCO provides training to heritage conservation specialists across the region and promotes the restitution of stolen or missing cultural heritage items.⁵²

Although these soft law instruments are aspirational and not legally binding, they have prompted the development of a wide range of domestic laws and policies designed to enhance the conservation of nature and cultural heritage in MENA countries.

⁴⁷ Arab Declaration on Environment and Development and Future Prospects (September, 10 1991) UN Doc. E/ESCWA/ENVHS/1992/1, para 2.

⁴⁸ Arab Declaration on Environment and Development and Future Prospects (n 115), para IX.

⁴⁹ Arab Declaration to the World Summit on Sustainable Development (2002), preamble and para 1(6) www.hlm.org/img/documents/Arab_Declaration_Sustainable_Dev.pdf accessed January 25, 2024.

⁵⁰ ALESCO was established pursuant to Article 3 of the Arab Cultural Unity Charter of 1964.

⁵¹ See ALESCO, "About Us" www.alecso.org/nsite/en/component/content/article/814-who-are-we-v2?catid=63&Itemid=220 accessed January 12, 2024.

⁵² Olawuyi (n 3) 269.

1.2.3 Domestic Legislation

The aim of conservation laws across the MENA region is to ensure the conservation of flora, fauna, and natural habitats, and to halt the illicit trade and trafficking in wildlife and other biological and cultural specimens. Several of the key international and regional conventions on conservation of nature and cultural heritage adopted by MENA countries have been reflected in domestic legislation on environment and conservation.

Although the nature and scope of domestic legislation relating to biodiversity and nature conservation law varies from one MENA country to another, biodiversity and nature conservation law and policies at domestic levels can be divided into three main categories.

1.2.3.1 The Constitution

The primary source of law across the MENA region is the constitution as it sets the basic principles and norms that define other legislation enacted by the legislature or the Shura Council. The constitution is the supreme law, and it has binding force on all authorities and persons in a country.⁵³ The constitutions of several MENA countries expressly codify provisions on environmental protection and sustainable development.⁵⁴ For example, Article 33 of the Permanent Constitution for the State of Qatar declares: “The State shall conserve the environment and its natural balance for the comprehensive and sustainable use of its resources for all generations.”⁵⁵ Similarly, Article 9(h) of Bahrain’s Constitution of 2002 provides that “the State shall take the necessary measures for the protection of the environment and the conservation of wildlife.”⁵⁶ These constitutional provisions directly incorporate the protection of all aspects of the environment and conservation, from degradation to pollution, and provide strong foundational basis for subsequent policy and legislative action to address biodiversity and nature conservation.

Additionally, given that Islam is the dominant religion in the MENA region, Shari’ah law is constitutionally recognized as the principal source of law in essentially all the countries of the region.⁵⁷ For example, Article 1 of Qatar’s 2005 Constitution clearly states that Qatar is “an independent sovereign Arab State. Its religion is

⁵³ D. Olawuyi, *Principles of Nigerian Environmental Law* (Afe Babalola University Press 2015) 108–113.

⁵⁴ See D. Olawuyi, “Human Rights and the Environment in Middle East and North African (MENA) Region: Trends, Limitations and Opportunities” in J. May and E. Daly (eds), *Encyclopedia of Human Rights and the Environment, Indivisibility, Dignity and Legality* (Edward Elgar 2018).

⁵⁵ *The Permanent Constitution of the State of Qatar* (n 43), article 33.

⁵⁶ *Constitution of the Kingdom of Bahrain* (2002), article 9(h) [Bahrain Constitution].

⁵⁷ K. S. Vikør, “Shari’ah” in E. El-Din Shahin (ed), *The Oxford Encyclopedia of Islam and Politics* (Oxford University Press 2014).

Islam, and the Sharia law shall be the principal source of its legislation.”⁵⁸ The Constitution of Kuwait states: “The religion of the State is Islam, and the Islamic Shari’a shall be a main source of legislation.”⁵⁹ Article 7 of the Constitution of the United Arab Emirates states that “Islam is the official religion of the United Arab Emirates (UAE). The Islamic Shari’a is a main source of legislation in the UAE.”⁶⁰

Consequently, the four sources of Shari’ah law – the noble *Quran*; the *Sunnah* or teachings of the Prophet Muhammad (peace and blessings be upon him); *Ijma* or teachings of consensus of various scholars of Islam; and *Qiyas* or analogical reasoning both deductive and inductive – all provide pivotal foundations for the development and practice of environmental law and policy, as well as biodiversity and nature conservation across the region.⁶¹ Islamic environmental philosophy emphasizes the obligations of human beings to safeguard and conserve nature and its resources. The concept of *khilafah* and *amānah* (custodianship and trust) derived from the *Quran*⁶² and *Sunnah* emphasize the role of humans as stewards or trustees of the earth, making it a fundamental duty to protect and preserve nature.⁶³ Islamic law also includes many universal guiding principles pertaining to protecting the environment, including the protection of animals and plants, the conservation and sustainable management of land, water, and air, and the protection of the balance of nature and biodiversity.⁶⁴

1.2.3.2 Primary Legislation

Key environmental legislation across the region contain general provisions on biodiversity and nature conservation.⁶⁵ For example, in Qatar, Article 9 of Law No. 30 on Environmental Protection tasks the competent national authorities to issue regulations and decisions relating to the conservation of wildlife and endangered species, and to prohibit the catching of rare wildlife species. Articles 16–19 of Law No. 4 of 1983 on the Exploitation and Conservation of Living Aquatic Resources in Qatar elaborate on the conservation of aquatic resources and the sustainability standards for fishing and harvesting of living aquatic resources.⁶⁶ Law No. 4 of 2002 regulating hunting of wildlife animals, birds, and reptiles prohibits and criminalizes the

⁵⁸ *The Permanent Constitution of the State of Qatar* (n 43), article 1.

⁵⁹ *Constitution of the State of Kuwait 1962, as Amended to 2012*, article 2 [Kuwait Constitution].

⁶⁰ *United Arab Emirates “Constitution of 1971 with Amendments through 2009*, article 7 [UAE Constitution].

⁶¹ Olawuyi (n 3).

⁶² *Quran*, Surah Al-Baqarah: 30; Surah Sad: 26; Surah Al An’am: 165.

⁶³ See also, *Quran*, Surah As Shams: 7–8.

⁶⁴ S. Sikandar Shah Haneef, “Principles of Environmental Law in Islam” (2002) 17 *Arab Law Quarterly* 3, 241–254.

⁶⁵ Olawuyi (n 3), 33–54.

⁶⁶ See also Yemen’s Law No. 2 of 2006, regulating fishing, exploitation, and the protection of aquatic organisms (amended by Law No 3 of 2011).

indiscriminate hunting of wild animals, birds, reptiles, and marine turtles. Article 4 of Qatar's Law No. 19 of 2004 Conservation of Wildlife and their Natural Habitats specifically outlaws any "acts, transactions, activities or procedures that would dilapidate, destroy, distort or deteriorate the wildlife environment, or affect the richness of the natural reserves." Prohibited acts include hunting or killing, injuring, or polluting land or sea animals, as well as the dilapidation, transfer, or destruction of natural habitats for flora and fauna. It also prohibits the "construction of buildings or erection establishments, roads, driving vehicles, or the exercise of any agricultural, industrial, pastoral or other activity at the natural reserve." Additionally, to address the illicit trade in wildlife fauna and flora species, Article 3 of Qatar's Law No. 5 of 2006 on the Regulation of Trade in Endangered Wildlife Fauna and Flora and their Products expressly prohibits the trade, transit, and shipment of endangered species listed in the appendices to the law.⁶⁷ Similar legislation that prohibits trade in wildlife species and indiscriminate hunting can be found in other MENA countries, some of which are extensively discussed in Part II.⁶⁸

1.2.3.3 Secondary Legislation

The third main source of domestic biodiversity and nature conservation law and policies flows from the second, comprising a range of detailed regulations, by-laws, national visions and plans, ministerial decisions, and guidelines that are used to flesh out much of the detail of the primary legislation. Ministries or departments overseeing environmental regulation often issue regulations, rules, notices, permits, and guidelines under their enabling statutes. These provide specifics on implementing national strategies, visions, and policies that businesses must comply with. As state legal instruments authorized by legislation, they significantly shape policy and practice. Noncompliance can mean losing business opportunities or penalties, depending on enforcement powers granted.⁶⁹

In addition to binding legal provisions, several MENA countries have also put in place declarations, action plans, directives, and national visions that address various

⁶⁷ Article 4 of Qatar's Law No. 5 of 2006 on the Regulation of Trade in Endangered Wildlife Fauna and Flora and their Products; Jordan's Law No. 6 of 2017 on Environmental Protection, which at Article 12 prohibits activities that result in the degradation of plant and animal species inside and outside their natural habitat, while Article 20 prescribes fines and sanctions for marine pollution; see also Jordan's Regulation No. (Z/2) of 2010 Concerning the Instructions on the International Trade of Endangered Wildlife Flora and Fauna.

⁶⁸ See Chapters 5–14. See also Bahrain's Legislative Decree No. 2 of 1995 on the Protection of the Wildlife in Bahrain; Egypt's Law No. 102 of 1983 on Natural Protected Areas; Jordan's Act No. 113 on the Protection of Birds and Wildlife, and on Regulating their Hunting; Jordan's Protected Areas and National Parks Bylaw No. 29 for the year 2005; Kuwait's Resolution No. 93 of 2003 Regulating Sale and Trade in Endangered Wildlife Species; and Morocco's Dahir No. 1-11-84 portant promulgation de la loi n° 29-05 relative relative à la protection des espèces de faune et de flore sauvages et au contrôle de leur commerce, among others.

⁶⁹ Olawuyi (n 3) 12.

aspects of the sustainable management and conservation of biological and cultural resources.⁷⁰ Several MENA countries have also released national biodiversity and conservation master plans that set out targets and approaches for accelerating the conservation of biodiversity and natural heritage as part of their implementation of international treaty provisions, such as the CBD, Convention on International Trade in Endangered Species, and the World Heritage Convention.⁷¹ For example, Qatar's National Vision 2030 rests on four key pillars, the fourth of which is to "manage the environment such that there is harmony between economic growth, social development and environmental protection."⁷² Biodiversity and nature conservation is considered vital, especially in the face of its fast-paced development and industrialization and in light of challenges such as increasing groundwater salinity, degrading soil quality, air pollution, climate change, rising sea levels, and biodiversity and species under threat.⁷³

1.2.3.4 Judicial Decisions and Scholarly Publications

In the MENA region, the development of biodiversity and conservation laws is influenced not just by primary sources such as constitutions, statutes, and treaties but also by secondary sources such as the judicial decisions of courts and tribunals, as well as the scholarly works of highly qualified jurists.⁷⁴ However, contrary to the *stare decisis* rule applied in the common law system, case law does not constitute a binding source of law in civil law countries,⁷⁵ and the decisions of courts, such as the Court of Cassation and Court of Appeal, can be consulted persuasively to guide the court but do not normally bind either themselves or lower courts.⁷⁶

The geometric rise of biodiversity litigation in many parts of the world emphasize the potential legal liability and risks that governments and business enterprises may face for failing to integrate biodiversity and nature conservation in development

⁷⁰ For example, State of Qatar, Planning and Statistics Authority, "Qatar's National Development Strategy 2024–2030 (QNDS)" www.psa.gov.qa/en/ndsi/pages/default.aspx accessed January 25, 2024. See also Tunisia's Five-Year Development Plan 2016–2020 for the Agricultural, Marine Fisheries, and Natural Resources Sectors.

⁷¹ See Egyptian Biodiversity Strategy and Action Plan 2015–2030; Morocco's Stratégie et Plan d'Actions National pour la Diversité Biologique du Maroc (SPANB) 2016–2020; Oman's National Biodiversity Strategy and Action Plan; Biodiversity Strategy of the United Arab Emirates 2014–2021; and the National Strategy for Conservation of Biodiversity in the Kingdom of Saudi Arabia, among others.

⁷² State of Qatar, *General Secretariat for Development Planning*, "Qatar National Vision 2030" (General Secretariat for Development Planning 2008).

⁷³ State of Qatar, *Ministry of Environment and Climate Change*, "Qatar National Biodiversity Strategy and Action Plan 2015–2025" (MoECC 2014).

⁷⁴ Olawuyi (n 3) 12.

⁷⁵ D. Olawuyi, "Energy Poverty in the Middle East and North African (MENA) Region: Divergent Tales and Future Prospects" in I. Del Guayo, L. Godden, D. N. Zillman, M. F. Montoya, and J. J. Gonzalez (eds), *Energy Law and Energy Justice* (Oxford University Press 2020).

⁷⁶ For example, Article 7 of Qatar's Law 10/2003 of the Judiciary Act.

planning processes.⁷⁷ As biodiversity and nature conservation laws develop across the region, biodiversity litigation is expected to rise in scale and volume. While international decisions are not binding on MENA courts, they provide persuasive and instructive guidance for resolving such disputes. Furthermore, courts may also consult the commentaries and opinions of highly qualified jurists and scholars, such as law professors, attorneys, and judges, especially in shaping the development of new, emerging, and developing areas of law, such as biodiversity and nature conservation law. These include the reports of international bodies, such as the International Law Commission, the Academic Advisory Group constituted by the International Bar Association's Section on Energy, Environment, Natural Resources and Infrastructure Law, the academy of environmental law of the IUCN, the International Law Association, and the Association of Environmental Law Lecturers in Middle East and North African Universities, among others, which offer authoritative analyses of a wide variety of issues pertaining to biodiversity and nature conservation.⁷⁸

Similarly, a number of nonbinding biodiversity-related documents have been released by eminent scholars and clerics. For example, though not legally binding, the *Islamic Declaration on Climate Change of 2015* calls on Muslims worldwide to tackle “the root causes of climate change, environmental degradation and the loss of biodiversity.” It called upon Muslims to work to preserve the environment using Islamic principles such as *khalifa* (caretaker), which sees human beings as vicegerents of God on earth, responsible for all beings and the environment, and entrusted with nature to benefit society while safeguarding it from overconsumption, highlighting the importance of respecting the environment, and considering the impact of our economic activities on the environment.⁷⁹ These nonbinding declarations provide faith-based frameworks and guidance on how governments,

⁷⁷ See for example, *Friends of Nature, Shan Shui Conservation Centre, and Wild China Film v China Hydropower Engineering Consulting Group in China* (2020) in which the Chinese Kunming Intermediate People's Court ordered the suspension of work on the construction of hydropower on the Jiasa River to protect this last major habitat of the endangered green peafowl, which is the only native peafowl in China. See Li Yunqi, “Green Peafowl's Last Habitat vs. 3.7-Billion-Yuan Dam” <https://news.cgtn.com/news/2020-03-21/Green-peafowl-s-last-habitat-vs-3-7-billion-yuan-dam-P2bT7sSi5i/index.html> accessed January 25, 2024. See also African Commission on Human and Peoples' Rights, 276/ 03 Centre for Minority Rights Development (Kenya) and Minority Rights Group International on behalf of *Endorois Welfare Council v Kenya*, paras 162 and 291 (May 2009); IACtHR, *Yakye Axa Indigenous Community v Paraguay*, Judgment of June 17, 2005, Series C No 125; IACtHR, *Mayagna (Sumo) Awas Tingni Community v Nicaragua*, Judgment of August 31, 2001, Series C No 79; *Maya Indigenous Community of the Toledo District v Belize*, Case 12.053; IACtHR, Report No 40/04, OEA/Ser.L/V/II.122, doc 5 rev 1 (2004) 727; IACtHR, *Saramaka People v Suriname*, Judgment of November 28, 2007 (Preliminary Objections, Merits, Reparations, and Costs), Series C No 172; IACtHR, *Kichwa Indigenous People of Sarayaku v Ecuador*, 2012, Series C No 245 [186]. For in-depth discussion of biodiversity litigation, see Futhazar et al. (n 33).

⁷⁸ Olawuyi (n 3) 13.

⁷⁹ *Islamic Declaration on Global Climate Change* (2015) www.ifees.org.uk/wp-content/uploads/2020/01/climate_declarationmmwb.pdf accessed January 12, 2024.

national authorities, investors, and other stakeholders across the MENA region can contribute to global biodiversity and nature conservation efforts.

These sources provide a legal foundation for mainstreaming biodiversity and nature conservation into all aspects of development and investment planning across the MENA region. While the codification of specific biodiversity legislation remains in progress in many countries of the region, a wide range of environmental legislation and regulations, including constitutional principles on environmental protection and sustainable development, outlaw practices, including hunting, poaching, and illicit trade, that may deplete or degrade natural and cultural heritage and resources. Furthermore, as discussed in Chapter 4, all MENA countries have designated or established focal ministries, departments, or committees that oversee biodiversity and nature conservation programs, including forest management. The chapters in this book review and evaluate how the plethora of policies, instruments, and scientific studies are shaping responses to biodiversity loss across the region.

1.3 AIM, SCOPE, AND STRUCTURE OF THE BOOK

As discussed, the nexus approach to biodiversity and nature conservation emphasizes the need for multistakeholder and multisectoral partnerships in the design and implementation of biodiversity and nature conservation treaties. It seeks to promote hybrid, interconnected, and integrated biodiversity programs among a wide range of institution and sectors, including water, energy, food, health, climate change, and human rights.⁸⁰ While the need for a nexus strategy for mainstreaming biodiversity and nature conservation into national development is becoming increasingly recognized in the literature, the multidimensional and intersectional nature of implementing a nexus approach to biodiversity and nature conservation in practice in the MENA region has yet to receive a detailed, book-length exposition. This book fills a gap in this regard.

The chapters unpack a wide range of legal and regulatory innovations that can help unlock a nexus and integrated approach to the design, application, and implementation of biodiversity, conservation, and nature-based solutions across the region to achieve a coherent and comprehensive response to global sustainability challenges. With case studies from across the region, this book provides in-depth analysis and exposition of the latest legislative developments on biodiversity, nature conservation, and the protection of cultural heritage in the MENA region, including the applicable legislation and institutions, as well as lessons learned from emerging innovative and bottom-up approaches to their implementation across the world and the challenges that remain.

⁸⁰ At the recent COP15 conference in Montreal, Canada, the conference welcomed the nexus assessment of the interlinkages among diversity, water, food, and health by IPBES. See CBD/COP/15/L.11, para 4. www.cbd.int/doc/c/99co/97dd/71odo6fo4fdb9agoc61af454/cop-15-l-11-en.pdf accessed January 12, 2024. See also Olawuyi (n 36) and Bastos Lima (n 31).

While this book offers a scan of the sources and underpinning principles of biodiversity law and policy law and policy in the region, it is clearly acknowledged that the substantive chapters cannot unpack and analyze every applicable piece of legislation and instrument in all MENA countries. The book aims to enhance understanding of the interconnections between biodiversity, nature conservation, and attaining water, energy, and food security and resilience to disasters such as climate change and pandemics. It examines the laws, policies, and institutions on biodiversity, conservation, and cultural heritage protection in MENA. The goal is to foster an understanding of the unique legal, policy, and governance challenges faced in the region in seeking to achieve the SDGs and other international instruments and documents relating to biodiversity and conservation.

1.3.1 *Structure*

Part I introduces the interrelationships between biodiversity, nature conservation, and the attainment of water, energy, and food security, as well as resilience to global disasters such as climate change and global pandemics. It explains key concepts and underlying themes such as “biodiversity” and “nature conservation” and the wide range of multilateral environmental agreements (MEAs) in place at the international level to advance biodiversity and nature conservation.

Part II consists of a series of case studies that examine emerging approaches and challenges to the nexus and integrated implementation of biodiversity and nature conservation treaties in different sectors and countries in the MENA region. The case studies identify the various legal, policy, and governance challenges that hinder the nexus and integrated implementation of biodiversity and nature conservation treaties at national and municipal levels across the region. Concerns of fragmentation, gender inequality, inadequate stakeholder engagement, financing gaps, inadequate support for biodiversity entrepreneurship, limited access to environmental information, and lack of comprehensive legislation on biodiversity and access to benefit-sharing are unpacked.

The case studies demonstrate how inappropriately designed and implemented laws and policies on biodiversity and nature conservation could result in land rights violations in biodiversity and nature-based programs, social exclusions, and incoherent implementation. Part II also identifies positive and high-leverage laws, policies, and strategies that advance nexus thinking, the contexts in which they are being implemented, barriers to their effective implementation, and innovative legal approaches to advance such strategies.

Part III offers reflections on the case studies and addresses how lessons from diverse jurisdictions may inform thoughts on how to effectively design, apply, and implement sustainable and rights-based frameworks to enhance integrated decision-making and information sharing on biodiversity and nature conservation. The need to integrate biodiversity and nature conservation in environmental impact assessments and human rights due diligence processes for development activities and

construction projects are specifically highlighted.⁸¹ The role of higher education institutions in promoting environmental law education and capacity development on biodiversity through enquiry-based learning methods is also discussed.⁸²

All eighteen chapters provide a worldwide audience of scholars, business leaders, policymakers, and administrators with an authoritative and invaluable guidebook and toolkit to access, understand, and appreciate the legal, fiscal, and institutional frameworks applicable to the effective design, application, and implementation of biodiversity and nature conservation programs and policies in the MENA region. It also offers as an invaluable guide to ongoing efforts by the United Nations to define and conceptualize the biodiversity–climate–water–food–energy–health nexus.⁸³

1.4 CONCLUSION

There is a growing recognition and awareness across the MENA region regarding the need to protect and conserve the region's abundant biological and cultural resources, so that present and future generations can enjoy access to these resources. In addition to their environmental and ecosystems value, MENA countries have significant potential to unlock social and economic activities such as tourism and biodiversity entrepreneurship, as well as increased trade, tax, fees, and payment for ecosystem services (PES) and nature-based innovation, all of which can accelerate economic diversification.⁸⁴

Addressing the widescale adverse impacts of the loss of biodiversity on lives and livelihoods in the MENA region is therefore an urgent sustainable development priority. To achieve this objective, there is a need for clear and coherent laws and policies that mainstream biodiversity and nature conservation into all aspects of national planning. Practical challenges to the nexus and integrated implementation of biodiversity and nature conservation must be carefully unpacked and addressed. A comprehensive analysis and study of the structural and nonstructural challenges that arise in the design, application, and implementation of biodiversity and nature conservation law and policy across the region can help us to plot a comprehensive path for achieving policy coherence and reform.

The systemic and multijurisdictional survey of the unique and underlying features of biodiversity and nature conservation regulation in diverse jurisdictions offered by this book can simplify the task of advancing nature-based solutions to complex sustainability challenges in the region, as well as the integration of ecosystems approaches into key sectors and industries in MENA countries, including financing, entrepreneurship, and healthcare.

⁸¹ See Chapter 15.

⁸² See Chapter 17.

⁸³ CBD (n 80). See also UNEP (n 8).

⁸⁴ Organisation for Economic Co-operation and Development, "Biodiversity, Natural Capital and the Economy" (2021) www.oecd.org/environment/resources/Executive-Summary-ENV-Policy-Paper-no-26-Biodiversity-Natural-Capital-and-the-Economy.pdf accessed January 12, 2024. See also L. Croitoru, & H. Daly-Hassen, "Using Payments for Environmental Services to Improve Conservation in a Tunisian Watershed" (2010) <https://lib.icimod.org/record/14626>, accessed January 12, 2024.