Country report for Cameroon[1]

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Abstract

This chapter examines soil protection in Cameroon. It highlights the fragmented and insufficient legal framework addressing soil management, particularly emphasising the weak enforcement of existing laws and the lack of integration of soil protection into broader environmental policies. The chapter explores the implications of these shortcomings, especially their impact on sectors such as agriculture, mining, and industrial development, which contribute to soil degradation and affect food security and ecosystem health.

An analysis of the existing legal framework reveals significant gaps, including outdated soil-related data, inadequate public awareness, and insufficient protection from harmful agricultural practices. Specific attention is given to the 1996 Framework Law on Environmental Management, Decree No. 2011/2584/PM, and sectoral regulations for agriculture, mining, and forestry. The complexities arising from governance issues, such as weak institutional coordination and land tenure problems, further complicate soil protection efforts.

The chapter also presents key critiques of the current system, particularly the lack of community involvement, capacity-building, and enforcement. Recommendations are offered aimed at strengthening the legal framework, improving public education, enhancing enforcement mechanisms, and integrating soil management into broader climate change and land tenure policies. It concludes by emphasising the urgent need for a dedicated soil protection law, particularly given the increasing pressures from industrial development, mining, and unsustainable agricultural practices.

1 This chapter is an update of the one authored by Tamasang, Effala & Tassah (see Reference List).

Chapter contents

Summary

This chapter provides an in-depth analysis of soil protection in Cameroon, identifying the gaps and challenges within the existing legal and regulatory frameworks. While soil protection is addressed through various legal instruments, such as the Constitution, the Framework Law on Environmental Management, and sector-specific laws related to agriculture, mining, and forestry, the overall approach is fragmented and insufficient. For example, Decree No. 2011/2584/PM specifically deals with soil and subsoil

protection but is limited in scope, failing to address crucial areas such as public participation, education, policy advocacy, and monitoring. These gaps weaken the overall effectiveness of soil protection efforts.

Although the 1996 Framework Law acknowledges the importance of environmental information and public participation, its implementation remains weak. Soil-related information is often outdated, inadequate, and not georeferenced, leading to a lack of awareness among the public regarding the severity of soil degradation. Furthermore, key sectors such as agriculture, mining, and industrial development contribute significantly to soil degradation, yet existing laws provide limited protection. For instance, while the 2023 Mining Code indirectly addresses soil protection, its implementation remains ineffective due to the absence of enabling instruments.

Foreign investors, particularly in the mining sector, often neglect environmental concerns, contributing to soil degradation through harmful practices such as mercury use. Additionally, the industrial sector lacks specific legislation to govern its environmental impact, leading to harmful effluent discharges that degrade soil health, especially in cities such as Douala. Agricultural practices, involving the overuse of chemicals and unsustainable methods including slash-and-burn, exacerbate soil degradation. Although regulations on pesticides and fertilisers exist, they are poorly enforced, and illegal practices persist.

Land tenure issues, such as the persistence of colonial-era laws and difficulties in obtaining land titles, further complicate sustainable soil management. Many farmers lack secure land rights, which limits their ability to implement long-term soil conservation measures. As a result, soil protection remains a challenge in Cameroon, with weak legislative frameworks, poor enforcement, and inadequate institutional coordination.

The chapter outlines several recommendations to improve soil protection in Cameroon. First, it suggests that a specific provision for soil protection should be added to the Constitution, in addition to the existing references to natural resources. Legislation should then be passed to integrate soil protection into existing laws, creating clear and effective regulations for implementation. This includes developing detailed soil protection laws, incorporating soil management into educational curricula at all levels, and providing capacity-building programmes for farmers.

Additionally, the chapter advocates for the empowerment of local governance structures, enabling them to enforce soil protection laws effectively. An inter-ministerial committee should be established to ensure better coordination between government departments and facilitate land-use decisions that promote sustainable soil management. Public access to soil-related information should also be improved, alongside strengthening monitoring structures and enforcing Environmental and Social Impact Assessments (ESIAs) to better regulate industrial and agricultural practices.

On land rights, the chapter recommends harmonising land tenure laws to recognise customary land rights as private property. This would provide greater security for local

communities and enable more sustainable soil management practices. It also proposes that foreign investors should be required to pay an environmental tax, particularly in sectors such as mining, to incentivise responsible environmental practices. Furthermore, the government should limit land acquisition by foreign investors to prevent land grabbing and hold investors accountable for their social and environmental impact.

To address harmful agricultural practices, the chapter calls for policies that raise awareness of soil degradation and promote sustainable alternatives. A moratorium on the most damaging farming techniques should be considered, alongside greater public access to soil data to support better decision-making.

Ultimately, the success of soil protection in Cameroon depends on strong political will, backed by effective public advocacy, lobbying, and collaboration with key stakeholders. Gaining the support of politicians and government officials is crucial for creating and implementing comprehensive soil protection laws. Clear and focused messaging, along with sustained public awareness campaigns, are essential to garner support for effective soil protection policies.

In conclusion, while Cameroon's current approach to soil protection faces significant challenges, there is potential for improvement. By implementing the recommendations outlined in this chapter, Cameroon can strengthen its legal frameworks, enhance coordination between institutions, and better address the causes of soil degradation, ensuring the long-term sustainability of its soil resources.

1 Country information

Often referred to as 'Africa in miniature' due to its remarkable geographical and cultural diversity, Cameroon is a key member of the Central African Subregion, a significant political and economic bloc in Africa.

1.1 Geography and climatic conditions

Cameroon, located in Central Africa, spans latitudes 2°N to 13°N and longitudes 9°E to 16°E, stretching from Lake Chad in the north to the Atlantic Ocean in the southwest.[2] It shares borders with Nigeria, Chad, the Central African Republic, Congo, Equatorial Guinea, and Gabon. Strategically positioned in the Gulf of Guinea, Cameroon serves as a gateway between West and Central Africa, with key deepwater ports in Douala and Kribi supporting regional trade and access for landlocked countries such as Chad and the Central African Republic.[3]

2 Neba (1987: 2).
3 Ngoh (1996: 3); Yahmed et al. (2007: 18); Tajoche (2008: 12).

Covering 475,442 km², Cameroon features diverse climates and landscapes.[4] It experiences equatorial and tropical climates, with high temperatures year-round.[5] The equatorial climate dominates the southern regions, with heavy rainfall and a mix of wet and dry seasons, while the tropical climate includes humid and dry subtypes, found in the highlands, plateaus, and northern lowlands.[6] Rainfall decreases from south to north, with the north experiencing a drier Sahel climate.

1.2 Economy

Cameroon's economy is predominantly agro-based, with nearly 70% of the population engaged in agriculture.[7] It relies heavily on exporting unprocessed primary commodities, while the industrial sector remains underdeveloped. Rapid urbanisation has driven growth in the service sector. Once among Africa's fastest-growing economies following independence in 1961, the country experienced economic decline due to falling export prices, an overvalued currency, and mismanagement, resulting in rising poverty.[8] However, initiatives such as the IMF's Heavily Indebted Poor Countries Programme and Cameroon's Growth and Employment Strategy Paper (GESP) aim to revive economic growth.

In 2018, Cameroon's gross national product (GNP) was USD 36.37 billion, a 10.66% increase from 2017, while public debt reached 35% of GDP, driven by large-scale infrastructure projects.[9] Foreign direct investment (FDI) remains low compared to the country's potential, with most investment originating from the European Union and China, focusing on sectors such as mining, oil, and infrastructure.[10] China's significant contributions include the Kribi Port and the Memve'ele Hydroelectric Dam. Despite its potential, Cameroon struggles to attract FDI due to corruption, inadequate infrastructure, high taxes, and a challenging business environment, ranking 167th out of 190 in the 2020 Doing Business index.[11]

4 Neba (1987: 8).
5 Ayonghe (1999: 19).
6 Dobgima (2008: 238).
7 Tassah (2018: 3).
8 Ngoh (2019: 2); Mbu (2014: 21).
9 See https://www.macrotrends.net/countries/CMR/cameroon/gnp-gross-national-product, accessed 3 October 2019; https://www.businessincameroon.com/finance/0705-9098-cameroon-public-debt-reached-xaf7-494bln-in-q1-2019-35-of-gdp, accessed 19 July 2019.
10 See https://en.portal.santandertrade.com/establish-overseas/cameroon/investing, accessed 23 May 2019.
11 See https://www.indexmundi.com/Cameroon/economy_profile.html, accessed 28 January 2021; https://archive.doingbusiness.org/content/dam/doingBusiness/country/c/cameroon/CMR.pdf, accessed 16 December 2024.

1.3 Society

Population data for Cameroon is inconsistent. One source estimates the population at 24 million, with a density of 50.5 people per km², while another gives a figure of 40.8 people per km² across 475,442 km².[12] Population distribution is uneven, with high concentrations in urban centres including Douala, Yaoundé, and Bafoussam, and areas such as the Western Highlands and Coastal Lowland. These regions have fertile soil, a strong transport network, and industrial concentrations.

Cameroon's adult literacy rate stood at 75% in 2015, a significant increase from 41.2% in 1976.[13] Education has expanded at all levels, particularly in secondary and higher education.[14]

Cameroon guarantees religious freedom, with Christianity, Islam, and traditional religions being the main practices.[15] Christianity is the dominant religion, with the Roman Catholic Church comprising 39.2% of the population, followed by Protestantism (28.1%) and Islam (19.5%).[16] Traditional African religions account for 4.3%, and other beliefs including atheism and Hinduism make up smaller percentages. These religious groups influence cultural practices and national holidays, with large land acquisitions by Christian denominations for religious purposes.

1.4 Information on the organisational structure of Cameroon

Cameroon has three main branches of government: the Bicameral Legislature, the Judiciary, and the Executive. While the country is officially a democracy, it has been dominated by a strong, centralised government led by the President since 1972. Although Cameroon was once a federal system, it is now a decentralised unitary state, according to Article 1(2) of the Constitution. The country is divided into a central government and ten regions.[17]

12 National population census data, 2005; BUCREP (2010: 19).
13 See https://bit.ly/3s9dtau, accessed 19 July 2019.
14 Republic of Cameroon (2013).
15 See https://www.studycountry.com/guide/CM-religion.htm, accessed 19 July 2019.
16 See https://www.worldatlas.com/articles/religious-beliefs-in-cameroon.html, accessed 28 January 2021.
17 See Art 1(2) of the Constitution instituted by Law No. 96/06 of 18 January 1996 to amend the Constitution of 2 June 1972, amended and supplemented by Law No. 2008/001 of 14 April 2008.

1.4.1 Legal system and legal tradition

Cameroon is a bilingual and bijurial country, with two legal systems operating side by side.[18] Its legal system, a legacy of colonialism, is unique in that it combines English common law, French civil law, and customary law. These systems often coexist, sometimes in tension. However, Cameroon is actively working towards harmonising the laws from both legal traditions, representing the major English and French cultural influences.

1.4.2 Competence of legislation

In Cameroon, both the legislative and executive powers contribute to the creation of legal acts.[19] Article 26 of the Constitution grants Parliament the power to legislate, while Article 27 gives the executive the authority to issue regulations to implement legislation. The government can also issue regulations on matters not reserved for Parliament. Additionally, Article 28 allows Parliament to empower the President to legislate by ordinance for specific purposes and timeframes. The legislative body drafts and adopts bills, while the President promulgates them into law. The executive has exclusive authority over regulatory acts.

1.4.3 Competence of law enforcement

In Cameroon, law enforcement is the responsibility of the executive and judiciary, supported by law enforcement officials such as the national police, gendarmerie, bailiffs, and the military. However, law enforcement is hindered by widespread corruption, bribery, and delays in court procedures, with particularly severe issues in the judiciary and finance sectors.[20] The executive is tasked with implementing the law at both central and decentralised levels, with the assistance of government departments, regional entities, local councils, and traditional authorities, as outlined in the Constitution (Article 57(2)) and various laws on regions,[21] local councils,[22] and chieftaincy.[23]

18 See https://www.nyulawglobal.org/globalex/Cameroon1.html#_The_Cameroonian_Legal, accessed 23 May 2019.
19 See Arts 14(1), 8(8), 26 & 28 of the Constitution.
20 See https://www.business-anti-corruption.com/country-profiles/cameroon/, accessed 23 May 2019.
21 Law No. 2004/019 of 22 July 2004 fixing the rules applicable to regions.
22 Law No. 2004/018 of 22 July 2004 fixing the rules applicable to councils.
23 Decree No. 77/245 of 15 July 1977 to organise Chiefdoms. See Arts 19, 20(1)-(2) & 21.

1.4.4 The Constitution, statutory, and customary law: Role of traditional entities

Although the Constitution does not explicitly mention the role of traditional entities in customary law, Article 1(2) affirms that Cameroon recognises and protects traditional values that align with democratic principles, human rights, and the law. These traditional values can be understood as customary law, which is upheld and enforced by traditional entities. The role of these entities is further acknowledged in the 2011 Judicial Organisation Ordinances and the 1977 Law on Traditional Chieftaincies.

2 Soil degradation

2.1 The state of the environment

The environment is crucial for the survival of many Cameroonians, supporting activities such as agriculture, grazing, timber and non-timber forest exploitation, mining, and fishing. Cameroon's diverse climate has created an environment that varies across the country. Overall, environmental degradation remains relatively low, though there are significant differences in regions. Large-scale degradation is most prevalent in the northern Sahel zone and the Western Highlands, primarily due to continuous land use without adequate fallow periods.[24]

2.2 Different types of soil and their vulnerability in terms of degradation

Soil types in Cameroon vary due to topography, rainfall, and natural occurrences. The soils are classified into zonal, azonal, and intrazonal categories.[25] Zonal soils, such as ferralitic and ferruginous soils, are influenced by climate.[26] Ferralitic soils are reddish or brownish and found in the southern region's Equatorial Rainforest, characterised by heavy rainfall and high temperatures.[27] These soils are low in nutrients due to rapid decomposition and leaching. Ferruginous soils, found in the Adamawa Plateau and Northern Lowlands, are hard, skeletal, and have low nutrients, suitable for grain crops including groundnuts and maize.[28]

Azonal soils, including volcanic and alluvial soils, are young and rich in minerals.[29] Volcanic soils, found around Mount Cameroon and the Western Highlands, are fertile

24 Fogwe et al. (2001: 9).
25 Ndzeidze (2008: 6–7 & 146); Dobgima (2008: 323); Neba (1987: 74).
26 Dobgima (2008: 120–123, 134–136 & 323); Nchangvi (2010: 46–47 & 199).
27 Neba (1987: 28–30 & 71).
28 See Nchangvi (2010: 51–62 & 199).
29 Ndzeidze (2008: 146).

and support a variety of crops, including cocoa and maize.[30] Alluvial soils, deposited by rivers, are found in the Coastal Lowlands, the Logone Valley, and other flood plains, and are highly fertile for crops including rice.[31] Intrazonal soils, such as hydromorphic soils, occur in waterlogged areas such as coastal swamps and wetlands.[32]

2.3 Main drivers of soil degradation

Cameroon's soils vary in quality, with some naturally poor and others degraded due to human activities. Soil degradation refers to a decline in soil health, reducing the ecosystem's ability to provide essential goods and services. Degraded soils fail to deliver the normal benefits expected from them in their ecosystem.[33]

2.3.1 Agriculture

Cameroon's economy is primarily agrarian, with over 80% of the population relying on agriculture, mainly through subsistence small-scale farming, which is a key driver of soil degradation.[34] Common practices such as slash-and-burn, bush burning, and the ankara system degrade soil quality. Slash-and-burn farming involves clearing forests, burning plant debris, and cultivating land temporarily before allowing it to fallow. This practice harms vegetation and soil carbon stocks, contributing to soil degradation and climate change.[35]

The ankara method, used in the Western Highlands, involves burning dry plant waste to improve soil fertility. However, it leads to carbon emissions and long-term soil fertility loss.[36] Agriculture in these highlands also faces erosion from intense rainfall and overgrazing, further degrading soil quality.[37] In the South Low Plateau, bush fallowing and shifting cultivation are common, while the northern part relies on monocropping, which lacks proper soil regeneration. Traditional grazing methods also contribute to overgrazing and soil erosion.

In the Coastal Lowlands, large-scale plantations rely heavily on chemical fertilisers and pesticides, harming both soil and underground water, while small-scale farming

30 See Neba (1987: 33–37 & 74); Dobgima (2008: 140); Ndzeidze (2008: 12–24).
31 See Nchangvi (2010: 62–66 & 199); Neba (1987: 30–38); Dobgima (2008: 145–148); Ndzeidze (2008: 26-29 & 146).
32 See Neba (1987: 28–29); Dobgima (2008: 146–148 & 323).
33 FAO (2015: 71).
34 FAO (2009: 192).
35 See Pollini (2015: v); Ministry of the Environment and Nature Protection & FCPF (2008: 4).
36 See Njoh et al. (2018: 24).
37 Fogwe et al. (2001: 10).

suffers from declining soil fertility and overuse. The growing population and demand for food have reduced fallow periods, worsening soil degradation across the country.

2.3.2 Mining

Cameroon is rich in mineral deposits, with major mining sites such as iron ore in Mballam and Betare-Oya, bauxite in Fongo-Tongo, and limestone around Fugil Hill.[38] However, large-scale mining has a detrimental impact on soil quality. Mining releases toxic chemicals and acidic water, contaminating the soil and making it unsuitable for plant growth. It also disrupts the nitrogen flow in soil ecosystems, leading to further degradation. Mining activities cause erosion, sinkholes, and additional soil contamination from waste products.

The exploitation of mineral resources generates significant solid and liquid waste, which is often not treated before disposal, exacerbating soil degradation. The construction of a railway to facilitate mineral transport has also resulted in deforestation, exposing soils to further degradation in the affected regions. Mining companies in Cameroon frequently operate without adequate environmental protection measures, leading to serious negative impacts on soil and the surrounding ecosystem.

2.3.3 Wildfires, farming, hunting, and cattle rearing

Human-induced wildfires are a major driver of soil degradation in Cameroon. Uncontrolled fires cause extensive forest destruction, degrade topsoil, and expose land to erosion from wind and rain. Fire is commonly used by communities for subsistence farming and hunting.

With over 30% of the country's land used for pastoral activities, including six million cattle and seven million small ruminants, livestock farming is widespread.[39] As farmers expand grazing areas, especially in mountainous regions, they resort to burning forests to regenerate vegetation for livestock, further exacerbating soil degradation. Climate modelling predicts that the frequency and severity of wildfires will increase due to climate change, worsening the impact on soil and ecosystems.[40]

38 Lambi (2009: 28); Cameroon Tribune No. 8036/4325 of 18 January 2004.
39 Forest Carbon Partnership Facility Cameroon (2013: 39).
40 CPF (2008: 13).

2.3.4 Industrial sites

Cameroon is largely industrially underdeveloped, with most raw materials extracted from the country undergoing minimal processing. Key industrial zones include Douala, Yaoundé, Mbandjock, Belabo-Mbalmayo, and the Western Highlands. However, environmental management in many of these industries remains inadequate, with poor implementation despite political promises. For example, the Chad-Cameroon oil pipeline has caused oil spills, further degrading the environment.

Most industries in Cameroon lack international environmental certifications such as ISO 14001, which ensures proper management of environmental impacts. As a result, industries emit pollutants that contribute to soil degradation, including air pollutants causing acid rain and untreated chemical waste.[41] Additionally, refinery activities, including those at SONARA in Limbe, contribute to soil and marine pollution through the disposal of sludge.[42]

2.3.5 Urban sprawls

Cameroon is rapidly urbanising, particularly in rural areas, leading to deforestation and the conversion of forestland into settlements and agricultural spaces to meet growing food demands. This expansion exposes soil to erosion, as poor farming practices and excessive use of chemical fertilisers degrade soil quality.

Urban sprawl and unsustainable development have also led to wetland degradation, as wetlands are reclaimed for agriculture, housing, and industry.[43] This conversion threatens the ecosystem services provided by wetlands, such as nutrient cycling, soil formation, and erosion control. The absence of a comprehensive legal framework for wetland management exacerbates this issue, and the population's limited understanding of the value of wetlands further contributes to their degradation. Protecting wetlands is essential for soil protection, as they play a critical role in preventing soil erosion and maintaining soil health.

2.3.6 Demographic growth rate

Cameroon is experiencing rapid population growth, particularly in rural areas, driven by policies from the 1960s to 1980s that encouraged population expansion for economic development and national pride.[44] This growth has led to increased agricultural

41 Ekane & Oben (2001: 120); Fogwe et al. (2001: 8).
42 Fogwe et al. (2001: 14).
43 Kang (2013: 3); see also Kwame (2006: 10).
44 Bella (1993: 22).

extensification and unsustainable grazing practices to meet food demands. As a result, forests and wetlands are being cleared for farming and housing, exposing the land to erosion and landslides, particularly on hilly terrain. This demographic growth is contributing to environmental degradation and declining soil productivity. In 1984, Cameroon officially shifted its population policy to focus on improving the quality of the population rather than encouraging large families.[45]

2.3.7 Weather and climate factors: The symbiotic relationship between soil and climate change

Weather refers to short-term atmospheric conditions in a specific location, while climate is the long-term average of these conditions. Climate change, driven by greenhouse gases including CO_2 and CH4, impacts soil in various ways. Direct effects include changes in organic carbon transformations, nutrient cycling, and increased erosion from intense rainfall.[46] In Cameroon, climate variations affect soil degradation, with droughts and high evapotranspiration in the north, leaching in the south, and erosion in the western highlands. Indirect effects come from climate change adaptation, which alters soil processes. Soils, as carbon sinks, play a crucial role in mitigating climate change by storing carbon.[47] Protecting soils is essential to reduce GHG emissions and combat climate change.[48] However, practices such as ploughing, aggressive tillage, and draining wetlands can release stored carbon, exacerbating climate change.

2.3.8 Topographic constraints

Cameroon's topography is diverse, comprising the Coastal Lowlands, South Cameroon Low Plateau, Western Highlands, Adamawa Plateau, and Northern Lowlands. This variation affects soil quality and quantity.[49] The Western Highlands, with steep volcanic slopes, experience erosion, landslides, soil creep, and rockfalls, which degrade soil. In contrast, low-lying areas such as the Northern Lowlands and Coastal Plains, as well as depressions such as the Ndop, Mbaw, and Santchou Plains, have fertile alluvial soils. These soils are replenished by streams and rivers that wash them down from the highlands.

45 Ibid.: 24.
46 Hamidov et al. (2018).
47 Brevik (2012: 1).
48 Pareek (2017: 136); Zomer et al. (2017: 1).
49 Lambi (2000: 139).

2.3.9 Land-grabbing

Land-grabbing refers to the large-scale acquisition or leasing of land, often in developing countries, by domestic and transnational companies, organisations, and individuals.[50] This practice is linked to soil degradation, as large agro-investors, in collusion with governments, appropriate land and use it unsustainably. In rural areas, land is mostly held under customary tenure, but this no longer guarantees security, as lands are forcefully acquired by governments, powerful corporations, and some traditional leaders. The influx of investors in Cameroon, acquiring vast land for plantations, increases pressure on soils through deforestation, the use of harmful chemicals, and poor waste management, driving soil degradation.

2.3.10 Other causes or drivers of soil degradation

Soil degradation in Cameroon is driven by deforestation, pollution, compaction, salinisation, erosion, loss of organic matter, and migration.[51] Deforestation exposes soils to high temperatures, increasing evaporation and erosion. Industrial pollutants, agrochemicals, and poor waste management in coastal and agro-industrial zones contribute to soil contamination. Soil compaction in the northern Sahel, due to cattle herding and drought, leads to barren landscapes. Salinisation affects the coastal lowlands, with saltwater intrusion threatening soil and groundwater. Soil erosion, exacerbated by human activities, is a major concern in the Western Highlands.[52] Loss of organic matter, due to increased chemical use and reduced soil restoration, lowers soil productivity. Migration, driven by socio-political unrest and environmental changes, further pressures land and contributes to deforestation and soil degradation, especially in regions affected by internal displacement.[53]

2.4 Key actors in soil degradation

Soil degradation in Cameroon is driven by multiple actors, making it challenging to pinpoint a single cause. Foreign investors, particularly in agriculture and mining, play a significant role. The mining sector leaves large areas of land barren, contributing to soil degradation. Agro-industrial operations, especially in the Coastal Lowlands, use harmful chemicals that degrade soil quality. Small-scale farmers, reliant on soil for

50 See Fru (undated: 3).
51 Ekane & Oben (2001: 130); Sanz et al. (2017: 49).
52 Tassah (2019).
53 McLeman (2017: 3); see also IOM & UNCCD (2019: 1 & 6); Olimova & Olimov (2012: 8).

their livelihoods, also contribute to degradation through unsustainable farming practices.

Industries in Cameroon, particularly in urban centres such as Douala, further exacerbate soil degradation through the discharge of effluents and waste.[54] Weak enforcement of environmental laws, corruption, and poor urban planning have compounded the problem. These actors—foreign investors, large- and small-scale farmers, and industrial operators—are all key contributors to soil degradation in Cameroon.

2.5 Conclusion

The drivers of soil degradation in Cameroon vary in importance, with some having a more significant impact than others. The primary causes include mining and industrial operations, which lead to soil contamination; unsustainable agricultural practices by small-scale farmers; pesticide use by both small- and large-scale farmers; urbanisation, particularly on wetlands; climate change and weather patterns; wildfires from farming, hunting, and cattle rearing; topographic constraints; and land-grabbing.

Other contributing factors include deforestation, contamination from industrial chemicals and pesticides, soil compaction, salinisation, erosion, and the loss of organic carbon and soil biodiversity. Key actors in soil degradation include foreign investors, small- and large-scale farmers, and industrial operators.

3 General information on public soil legislation

Soil is essential for life on earth and serves as the foundation of biodiversity.[55] Its ecological and socio-economic functions make its legal protection crucial. In Cameroon, soil protection and management are addressed through a range of legal instruments, rather than a single law. The legal framework is organised hierarchically, including the Constitution, international treaties, parliamentary laws, presidential decrees, and various ministerial and local orders. While multiple public administrations oversee soil management, the Ministry of Environment, Protection of Nature and Sustainable Development (MINEPDED) is the primary authority responsible for soil protection.

54 Fogwe et al. (2001: 8).
55 Hannam & Boer (2004: 1).

3.1 Policy frameworks, government strategies, action plans, etc.

The government of Cameroon has developed soil protection policies aimed at safeguarding living beings and the environment, particularly in areas prone to soil degradation. National policy frameworks, strategies, and action plans for soil protection align with international instruments focused on sustainable soil management. This section will explore both international and national policies relevant to soil protection in Cameroon.

3.1.1 International policies relevant to soil protection

3.1.1.1 The land degradation neutrality initiative

At its 12th Conference of the Parties (COP), the United Nations Convention to Combat Desertification (UNCCD) defined land degradation neutrality (LDN) as a state where the quantity and quality of land resources necessary for ecosystem functions and services, and to enhance food security, remain stable or improve over time and across ecosystems.[56] The goal of LDN is to sustain and improve natural land and its ecosystem services.[57] The UNCCD provides an international framework for developing and implementing the LDN concept, which includes efforts to protect soil. The Science–Policy Interface of the UNCCD developed the 'Scientific Conceptual Framework for Land Degradation Neutrality,' offering a scientific approach for planning, implementing, and monitoring LDN initiatives at national or regional levels. Key actions to achieve LDN include sustainable land management practices that prevent or mitigate degradation, and efforts to restore degraded lands. LDN implementation is carried out at the landscape level through integrated land-use planning, aiming to avoid further loss of land-based natural capital.[58]

3.1.1.2 The 2030 Agenda for Sustainable Development instituting the Sustainable Development Goals

Adopted by the United Nations General Assembly, the global 2030 Agenda for Sustainable Development consists of 17 Sustainable Development Goals (SDGs) with 169 associated targets, designed as integrated and indivisible commitments for both developing and developed countries. The most relevant SDG for soil protection is Goal 15, which aims to protect, restore, and promote sustainable use of terrestrial ecosystems,

56 Decision 3/COP.12, UNCCD, 2015.
57 See Cowie et al. (2017: 25).
58 See Orr et al. (2017: 3).

combat desertification, halt land degradation, and reverse biodiversity loss. Specifically, Target 15.3 calls for achieving a land degradation-neutral world by 2030, making it a critical target for soil protection.

Other SDGs linked to soil protection include Goal 12, which promotes sustainable consumption and production patterns; Goal 13, which urges urgent action to combat climate change; and Goal 17, which focuses on strengthening the means of implementation and revitalising global partnerships for sustainable development. Soil plays a key role in climate change mitigation as a carbon sink, and maintaining soil carbon is a cost-effective way to limit climate change. Therefore, preventing soil degradation is crucial for mitigating climate change, and these SDGs are essential for achieving sustainable soil management.

3.1.1.3 The African Union Vision 2063: The Africa We Want

The African Union (AU) Vision 2063, also known as Agenda 2063: 'The Africa We Want', adopted in September 2015, is Africa's strategic framework for transforming the continent into a global powerhouse by 2063.[59] It aims for inclusive and sustainable development, reflecting the pan-African ideals of unity, self-determination, freedom, and collective prosperity. Agenda 2063 outlines seven Aspirations for the future, with Aspiration 1 being most relevant for soil protection. This aspiration seeks a 'prosperous Africa based on inclusive growth and sustainable development,' though it does not explicitly mention soil.

Paragraph 10 of Agenda 2063 highlights Africa's goal to harness its resources for sustainable development, ensuring that its natural environments and ecosystems, including soil, are healthy, valued, and protected. In Paragraph 72(b), there is a focus on accelerating actions to ensure effective land planning, tenure, and management systems, which are essential for soil protection.

3.1.1.4 The Regional Implementation Plan for the African Soil Partnership

Cameroon is part of the Regional Implementation Plan for the African Soil Partnership (AfSP), adopted in 2016, which highlights the importance of soil as a key resource in sub-Saharan Africa. The AfSP calls for strong support from governments and regional entities to achieve sustainable soil management, structured around five pillars: promoting sustainable soil management for protection, conservation, and production; encouraging investment, policy, education, and technical cooperation; supporting targeted soil research; improving soil data collection and integration; and harmonising

59 See https://au.int/en/agenda2063/overview, accessed 5 June 2019.

methods for sustainable soil management. The plan also prioritises addressing soil degradation, promoting sustainable practices, enhancing soil data, developing climate resilience, training experts, and establishing networks to support soil health.

3.1.1.5 The Green Wall for the Sahara Initiative

The Green Wall for the Sahara Initiative, launched in December 2006 by the AU in collaboration with the FAO, UNEP, UNCCD, and others, was adopted by African heads of state in January 2007. The programme spans several countries, including Algeria, Tunisia, Libya, Egypt, Mauritania, Mali, Niger, Chad, Sudan, Eritrea, Ethiopia, Djibouti, Cameroon, Nigeria, Benin, Burkina Faso, Senegal, Gambia, Western Sahara, and Cape Verde. Its goals are to slow the Sahara Desert's expansion, enhance environmental sustainability, control land degradation, promote integrated natural resource management, conserve biodiversity, reduce poverty, and create jobs.[60] These objectives are directly linked to sustainable soil management.

3.1.1.6 Other regional and sub-regional commitments of Cameroon relevant to sustainable soil management

Cameroon participates in sub-regional initiatives relevant to sustainable soil management, including within the Economic Community of Central African States (ECCAS), Central African Economic and Monetary Community (CEMAC), and the Congo Basin, under the Central African Forests Commission (COMIFAC). COMIFAC's treaty commits member states to prioritise forest conservation and sustainable management in national development programs, including agriculture, which impacts soil protection.[61] COMIFAC also adopted the Sub-regional Action Plan for Combating Land Degradation and Desertification (PASR-LCD) and has a thematic working group on land degradation.[62] Additionally, the revised 2015 COMIFAC Convergence Plan includes priorities such as conserving biodiversity and combating climate change and desertification, both relevant to the soil. Cameroon, as part of the COMIFAC Convergence Plan, is involved in combating land degradation and implementing strategies for sustainable forest and soil management.[63] Through its subregional programs, COMIFAC integrates the UNCCD's objectives into regional frameworks, promoting

60 For information on the Green Wall for the Sahara Initiative Commission of the African Union, see https://www.unccd.int/actions/great-green-wall-initiative, accessed 31 January 2021.

61 Treaty on the Conservation and Sustainable Management of Forest Ecosystems in Central Africa, 2005.

62 The Convergence Plan for the Conservation and Sustainable Management of Forest Ecosystems in Central Africa, February 2005, revised and adopted in July 2015.

63 Hannam & Boer (2004: 1); GEF (2007: 34).

sustainable agriculture and natural resource management.[64] While these instruments may not directly address soil, they indirectly protect it by focusing on land, natural resources, and ecosystems.

3.1.2 National policies relevant to soil protection

3.1.2.1 The National Environmental Management Plan

The National Environmental Management Plan (NEMP), established in 1996, guides strategies for environmental protection and resource management to promote sustainable development.[65] Its five priorities include land-use management, natural resource sustainability, land restoration, soil fertility improvement, capacity-building, and shared resource management. NEMP has important implications for soil management, especially in restoring degraded land and improving soil fertility. However, it is a non-binding policy, with no legal enforceability. Restoration methods vary by type of degradation, and while the NEMP addresses soil improvement, it lacks specific standards to measure successful restoration. This is a major weakness, and updating the NEMP to include restoration standards is essential.

3.1.2.2 Intended nationally determined contributions of Cameroon

Ahead of the 2015 Paris COP, countries submitted Intended Nationally Determined Contributions (INDCs) outlining their climate actions, which became binding Nationally Determined Contributions (NDCs) upon ratification of the Paris Climate Change Agreement (PCCA). On 28 September 2015, Cameroon pledged to reduce carbon emissions by 32% by 2035, compared to business-as-usual levels, with support from international financing, capacity-building, and technology transfer.[66] Soils, recognised as natural carbon sinks, were highlighted in Cameroon's NDC as vital for achieving this target, promoting better soil management practices including restoration. However, the 2021 updated NDC falls short, offering only a passive mention of sustainable soil management in the context of climate mitigation.[67]

64 UN Economic Commission for Africa (2007: 39).
65 See http://theredddesk.org/countries/plans/national-plan-environmental-management-cameroon, accessed 3 June 2018.
66 See Republic of Cameroon (2015: 4-5).
67 See République du Cameroun, Nationally Determined Contribution (NDC) – Updated in September 2021 and submitted on 11 October 2021.

3.1.2.3 The National Action Plan for the Fight Against Desertification

The National Action Plan for the Fight Against Desertification (NAP-FAD), established in 2007 by the government with MINEPDED, aims to combat desertification and protect soils.[68] Ratified in 1994, Cameroon committed to addressing desertification through this plan, to reverse degradation to fight poverty and promote sustainable development.[69] The plan focuses on restoring degraded lands and improving soil fertility, especially in the Sudano-Sahelian zone, particularly in the North and Extreme North regions. While progress is ongoing, challenges remain in achieving these objectives. The NAP-FAD also identifies the causes and effects of soil degradation, and several projects have been implemented to address these issues. However, desertification leads to significant environmental and social problems, such as reduced agricultural productivity, food insecurity, biodiversity loss, and increased poverty, with an estimated CFA F100 million losses annually.

3.1.2.4 The National Biodiversity Strategy and Action Plan II

The National Biodiversity Strategy and Action Plan II (NBSAP II) offers a renewed approach to reversing biodiversity loss.[70] Since soil is a fundamental component of biodiversity, NBSAP II is directly relevant to soil protection.[71]

3.1.2.5 The Readiness Plan Idea Note and REDD+ Readiness Preparation Proposal of Cameroon

Cameroon's Readiness Plan Idea Note (R-PIN, 2008) and REDD+ Readiness Preparation Proposal (R-PP, 2013) were developed for implementing the REDD+ initiative, aimed at reducing emissions from deforestation and forest degradation. REDD+ incentivises sustainable forest management in developing countries through financial rewards for emissions reductions. Although not directly addressing soil, both the R-PIN and R-PP highlight slash-and-burn agriculture, extensive livestock breeding, and bushfires as major contributors to deforestation, greenhouse gas emissions, and soil degradation, including decreased fertility and desertification.[72] Therefore, these documents are relevant for soil protection in Cameroon.

68 See Republic of Cameroon (2012: 43).
69 GEF (2007).
70 See Republic of Cameroon (2012: 43).
71 Hannam & Boer (2004: 1).
72 See Ministry of the Environment and Nature Protection & FCPF (2008); Forest Carbon Partnership Facility Cameroon (2013).

3.1.2.6 Cameroon's National REDD+ Strategy

The National REDD+ Strategy emphasises soil protection through landscape restoration in northern regions, focusing on restoring degraded soils, setting up private wood energy plantations, regaining soil fertility, and protecting water catchments with agroforestry techniques.[73] It promotes sustainable agriculture by advocating for practices that reduce deforestation and degradation, such as growing food crops with low environmental impact, carbon-conserving systems including cocoa and coffee, improved seed use, bio-fertilisation, and the recovery of fallow land. The strategy also supports agro-sylvo-pastoral management, including securing pastures to reduce bushfires.

3.1.2.7 The 1995 Indicative Land Use Framework or Zoning Plan

Soil is a multi-use resource that requires coordinated management to prevent environmentally unsustainable practices that harm soil quality. The land-use framework, adopted in 1995, includes provisions for permanent forest estates, which help protect soil in these areas.[74] However, the zoning plan is considered outdated and poorly consulted with local communities.[75] Despite government efforts to create a land-use policy, these initiatives fall short, particularly in addressing soil protection. A comprehensive land-use plan is needed to effectively protect the soil.

3.1.2.8 Other relevant national policy instruments for soil protection in Cameroon

Key policy documents relevant to soil protection in Cameroon include the 1995 National Forest Action Programme, the 2035 Vision, Poverty Reduction Strategy Papers (PRSPs) 2003–2010, and the GESP 2010–2020. These documents emphasise modernising the agricultural sector and addressing rural poverty, but they also create soil pressures that could lead to degradation. Cameroon's 2009 climate change position paper and the NAP-FAD are aligned with international policies promoting sustainable soil management, though no specific legislation addresses the Land Degradation Neutrality

73 Cameroon's National Strategy for Reducing Emissions from Deforestation and Forest Degradation, Sustainable Management of Forests, Conservation of Forest and Enhancement of Carbon Stocks, (National REDD+ Strategy), 2018.

74 See Arts 1(2) & 6(2) of Decree No. 95/678/PM of 18 December 1995 to institute an indicative land use framework. In addition to Decree No 95/678, there are additional texts addressing zoning and land tenure, including Decision No. 135/D/MINEF/CAB of 26 November 1999 establishing the procedures for the classification of the forests in the permanent forest areas of the Republic of Cameroon; Ordinances No. 74/2 and No. 74/1; See http://theredddesk.org/countries/policies/indicative-land-use-framework-cameroon, accessed 17 October 2017.

75 See http://www.forestlegality.org/risk-tool/country/cameroon-0, accessed 31 January 2021.

(LDN) initiative. The National Development Strategy 2020-2030 (SND30) includes priority actions for soil protection, such as promoting responsible agricultural practices, soil restoration, reforestation, and the development of soil maps. The SND30 outlines key actions to ensure sustainable soil management and climate change adaptation, thus, supporting soil protection goals.

3.2 Relevant international law for the protection of soils

Cameroon's national legislation and policies align with its international commitments, though there is no specific global soil instrument. While an early proposal for a 'convention on sustainable use of soil' was made in 1998, international soil regulation remains fragmented.[76] However, existing global, regional, and subregional instruments contain provisions relevant to soil protection.

Article 45 of the Cameroonian Constitution stipulates that "duly approved or ratified treaties and international agreements" override national laws, implying the direct applicability of international law without the need for national transposition measures. This principle of 'direct applicability' ensures that international law is integrated into the national legal system, and the principle of 'primacy' ensures that international law prevails in case of conflicts with national law.

Cameroon is a signatory to various international instruments for soil protection, though these agreements differ in nature, with some being binding ('hard law')[77] and others non-binding ('soft law').[78]

3.2.1 Relevant international soft law commitments

While not legally binding, soft law instruments have significantly influenced the development of binding "hard law" agreements. Relevant international soft law instruments for soil protection, to which Cameroon is a signatory, include:

- The Stockholm Declaration (1972), which laid the foundation for environmental governance.
- The Rio Declaration on Environment and Development and Agenda 21 (1992), which emphasise sustainable development principles.
- The Future We Want (Rio+20 Conference, 2012), which reaffirmed commitments to sustainable development.

76 See Boer et al. (2016: 56).
77 Hard law instruments consist of conventions, protocols, covenants, charters, pacts, constitutive instruments, final acts, etc. See Tamasang (2014: 29).
78 Soft law instruments consist of declarations, resolutions, recommendations, directives, statements, guidelines, stipulations, targets, decisions, plans, etc. See Tamasang (2014: 29).

- The 2030 Agenda for Sustainable Development (2015), which includes the Sustainable Development Goals (SDGs) guiding global development, including soil protection.
- The Johannesburg Declaration on Sustainable Development (2002), which furthered the implementation of sustainable practices.

These instruments have shaped global environmental policies, including those related to soil management and conservation.

3.2.2 Relevant international hard law instruments[79]

Relevant international hard law instruments for the protection of soil to which Cameroon is a signatory are the following:

- The United Nations Convention to Combat Desertification, 1994;
- the Convention on Biological Diversity, 1992;
- the United Nations Framework Convention on Climate Change, 1992;
- the Kyoto Protocol to the United Nations Framework Convention on Climate Change, 1997;
- the Paris Climate Change Agreement, 2015;
- the Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, 1998 (as amended in 2004, 2008, 2011, 2013, and 2015);
- the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal, 1989;
- the Stockholm Convention on Persistent Organic Pollutants, 2001;
- the African Convention on the Conservation of Nature and Natural Resources, 1968 (revised by the Maputo Convention in 2003);
- the Bamako Convention on the Ban on the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, 1991;
- the Convention for the Establishment of the African Centre for Fertiliser Development, 1985;
- the Phyto-Sanitary Convention for Africa, 1967;
- the Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction. Opened for Signature at London, Moscow, and Washington, 1972;
- the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction, Geneva, 1992;

79 See also Ruppel & Owona Mbarga (2018: 100).

- the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, New York, 1976;
- the Convention on the Conservation of Migratory Species of Wild Animals, 1979;
- the Ramsar Convention on Wetlands of International Importance, especially as Waterfowl Habitat, 1971;
- the Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Montreal, 2000;
- the Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, 1981;
- the Protocol Concerning Co-operation in Combating Pollution in Cases of Emergency, 1981;
- the International Plant Protection Convention, 1951; and
- the African Charter on Human and Peoples' Rights, Banjul, 1981.

3.3 Relevant national legal provisions for the protection of soil

Cameroon lacks a comprehensive and coherent policy or legislation specifically dedicated to soil protection. Instead, relevant provisions are embedded in various legal and policy frameworks, including the Constitution, land tenure regulations, agriculture, environmental and natural resource laws, urban and spatial planning laws, and cross-cutting areas such as environmental and social impact assessments (ESIA), public participation, access to environmental information, and rights to appeal administrative decisions. These scattered legal instruments provide guidelines for soil access, land dispossession, and land use. While they include provisions for soil protection, they also inadvertently incentivise soil degradation, highlighting the strengths and weaknesses of the existing framework in promoting sustainable soil management.

3.3.1 The Constitution

The 1996 Cameroonian Constitution does not contain specific provisions directly addressing soil protection. However, it recognises the broader category of natural resources, which includes soil, as essential for national development.[80] The Constitution's Preamble establishes the right to a healthy environment and imposes a duty on both citizens and the state to protect and improve the environment. While the

80 Para 3 of the Preamble and Art 26(2)(d)(5) of Law No 96/06 of 20 January 1996 as amended.

Constitution does not provide detailed provisions on soil, this commitment to environmental protection can be interpreted as covering soil conservation.[81]

Article 65 clarifies that the Preamble is binding, making the rights and obligations outlined therein enforceable.[82] Although the Constitution does not explicitly address environmental protection in detail, it grants the legislative power the authority to enact laws concerning natural resources, which includes soil. Thus, while the Constitution does not directly address soil protection, it provides a foundation for legislative actions on environmental and soil management.

3.3.2 Legislation on land tenure (landownership, access, and users' rights)

3.3.2.1 Historical overview of landownership

Landownership significantly affects livelihoods and human development in both urban and rural Cameroon. Historically, land was communally owned by families or villages with traditional leaders as custodians, and it held religious significance.[83] However, colonial rule transformed landownership systems. Under German rule (1884-1916), the Crown Lands Act of 1896 gave the state ownership of land, depriving natives of land rights.[84] France implemented a land registration system, while under British rule, land was divided into regions with native rights protected by traditional rulers.[85]

Post-independence, Cameroon inherited two land tenure systems and attempted to harmonise them through legislation. The 1974 land reforms categorised land into private, national, and public land, allowing government control over land use. Despite these regulations, customary land rights were reduced, and the government maintained supremacy in land ownership. This legal pluralism continues to create power imbalances, with the wealthy and well-connected having easier access to land, while marginalised groups struggle to assert land claims. The conflict between customary and statutory land rights often results in land and soil degradation, as the poor resort to unsustainable practices.

3.3.2.2 Modern landownership

The Constitution of Cameroon guarantees the right to ownership, allowing individuals to use, enjoy, and dispose of property, with deprivation only possible for public

81 Ibid.: Art 26(2)(d).
82 Ibid.: Art 65.
83 Belaunde et al. (2010: 18).
84 See Lemmens (2010).
85 Belaunde et al. (2010: 18).

purposes and compensation as determined by law. However, environmental obligations are not subject to compensation, as the Constitution mandates everyone to protect the environment. Land ownership is recognised through a land certificate, which is difficult for the average citizen to obtain, and the process varies depending on the land's origin.

Public law on land access and use is governed by Ordinances No. 74/1 and No. 74/2 of 6 July 1974, along with several other decrees and regulations, including those on expropriation, indemnities, and land transactions. Key laws also include the 1996 Environmental Management Law and the 1994 Forestry, Wildlife, and Fisheries Law.

Ordinance No. 74/1 categorises land into public lands (for roads, rivers, etc.), private state lands (acquired by the state), and national lands (including untitled lands used by rural communities). National lands are managed by the state for public good, a distinction that can be confusing, especially regarding the concept of "private property of the state."

3.3.2.3 Acquiring land under statutory law

3.3.2.3.1 Acquiring land from the national domain

In Cameroon, land acquisition occurs through a concession process where the state authorises individuals with development projects to acquire unoccupied land from the national domain. The process is divided into two phases: provisional and final. During the provisional phase, the applicant submits a request to the Department of Lands, which is reviewed by a consultative commission led by the Senior Divisional Officer (SDO). The commission assesses the land and the feasibility of the project and then submits a report to the Minister of Land Affairs. The applicant is granted five years to develop the land according to specified terms (*cahier de charge*). If the conditions are met, the final concession is granted; otherwise, the concession is revoked. The procedure for obtaining a provisional concession includes purchasing fiscal stamps, obtaining a certified copy of the national identity card, paying fees for file opening and application, submitting the concession request, obtaining a Prefectural Order for a site visit, receiving the Ministerial Order for the provisional concession, and paying the land fee. For the final concession, the applicant must submit proof of land development, the SDO conducts a site visit to confirm the development, and upon approval, the applicant receives the Ministerial Order for the final concession, pays the land fee, applies for a land title, and finally collects the title or certificate.

3.3.2.3.2 Acquiring private land of the state

A private estate of the state in Cameroon can be allocated for use or ownership by individuals or legal entities. Sales of state property are only valid after obtaining authorisation and approval from the minister responsible for state property and land affairs. Full payment of the agreed price, following the minister's authorisation, grants the right to subdivide, partition, or transfer the land title. The procedure for acquiring ownership through sale by negotiation involves purchasing fiscal stamps, obtaining a certified copy of a national identity card, paying the application fee, submitting the application for mutual consent, obtaining the Prefectural Order for a site visit, securing Ministerial Authorisation for the sale, paying the land fee, submitting the necessary documents for the land title, and finally collecting the title.

3.3.2.3.3 Acquiring private land of an individual

A land title is the official proof of land ownership. Land transactions in Cameroon can occur through transfer or parcelling out, with land titles being transferred after full cession, either with or without obligations. Successive sales or divisions lead to parcelling out of the original title for the benefit of the buyers. Cameroonian law requires all land transactions to be done through a notary, who registers documents at the taxation office and submits applications for land titles. A land certificate, the sole proof of ownership, is issued after a Deed of Conveyance is signed, following due diligence by a property attorney.[86] Notary officers draft deeds, conduct site surveys, and ensure no encumbrances. Vendors must disclose all relevant information before a sale to avoid legal penalties.

Land certificates are governed by Decree No. 76/165 of 1976 and its 2005 amendment. A Deed of Conveyance is not the same as a land certificate. The process to obtain a land certificate involves applying with a survey plan, paying a processing fee, boundary demarcation, cadastral mapping, publication, and eventual issuance. For transferring land titles, a technical file must be obtained, involving the purchase of fiscal stamps, completing necessary forms, and payment of fees. Similarly, parcelling out land requires buying fiscal stamps, submitting applications, and collecting the technical file.

The process of obtaining land titles is bureaucratic, slow, and costly, creating uncertainty about tenure rights. State-controlled land ownership benefits the state, large corporations, and elites, potentially leading to unsustainable practices that hinder soil protection.[87]

86 As per Sec 8(1) of Ordinance No 74/1 and Sec 74 of Law No. 90/059 of 19 December 1990.

87 See *Divisional Officer of Ndop v Yenkong*, (1994) CAJ-CLC 56; *C. Chekeba v Divisional Officer of Mezam*. (1994) CAJ-CLC 18. (1994) CAJ-CLC 18; also see *Martin Fobuzie v SDO*

3.3.2.4 Traditional law

In Cameroon, land tenure is governed by traditional/customary law, influenced by over 250 ethnic groups, each with its own customs.[88] Customary law recognises land ownership under customary tenure, which was initially acknowledged by Ordinance No. 74/1 until 5 August 1974. After this date, the law mandated that all lands under customary ownership must be registered or cease to exist under customary tenure.[89] As a result, statutory law effectively abolished customary landownership after 5 August 1974, leading to widespread landownership conflicts. Despite long-standing claims by local communities, most lands in Cameroon are classified as national or state-owned.

3.3.2.5 Conflicts and means of conflict resolution

In Cameroon, land tenure is diverse, encompassing state-owned lands (public, private state, and national lands), private lands, and lands owned communally by communities. These lands fall under statutory and customary tenure systems, both of which often lead to conflicts and unsustainable land management practices. Many civil cases in Cameroonian courts are rooted in land disputes, underscoring the importance of land as a core resource. In cases of conflicting claims, ownership is granted to the individual who can prove a stronger title to the land. If no title document is available, possession of the land can be demonstrated through activities such as cultivation, construction, or demarcation with beacons. Traditional evidence may also be used to establish ownership, provided the court is convinced of the land's history and lineage. Land disputes are resolved in courts of ordinary jurisdiction, with a judicial hierarchy that includes the Supreme Court, Court of Appeal, High Court, Court of First Instance, and, where applicable, Traditional or Customary Courts. Any citizen can approach the court if their rights in a land transaction are violated.

3.3.3 Public environmental law

3.3.3.1 Soil-specific legal acts

Decree No. 2011/2584/PM of 23 August 2011 is Cameroon's primary legal text focused on soil and sub-soil protection. Article 3 mandates that soil exploitation must

Mezam BCA/2/78 unreported decision of the Bamenda Court of Appeal. Cited by Munge (2011: 209).

88 Ngwafor (1996).

89 Art 17(2) of the Land Tenure Ordinance, 1974 read in conjunction with Art 15 classifying land into two categories.

minimise erosion and desertification, while Article 5 prohibits activities that degrade or alter the quality or structure of arable land. The decree, an enabling instrument of Law No. 96/12 on Environmental Management, tasks the environmental administration with its enforcement, including imposing sanctions for violations.

Key provisions include the prohibition of exploitation in high erosion-risk zones (Article 4) and the requirement for ESIAs for agricultural activities involving intensive use of fertilisers, pesticides, or soil-conditioning apparatuses (Articles 9 and 10). Similarly, manufacturers or processors of fertilisers and pesticides must conduct ESIAs.

However, implementation challenges persist. Corruption undermines inspections and reporting, and sanctions, though issued, are often insufficiently deterrent. Judicial outcomes are hampered by a lack of expertise in environmental law and occasional corruption. Furthermore, the ESIA requirement for intensive use is criticised as impractical, as smaller scale but cumulative activities may still degrade soils. Without a comprehensive soil law, soil governance in Cameroon relies on fragmented environmental legislation and regulations.

3.3.3.2 Environmental law, relevant provisions concerning soils

In Cameroon, soil and subsoil protection is addressed in Law No. 96/12 of 5 August 1996, the framework law on environmental management, and its enabling instrument, Decree No. 2011/2584/PM of 23 August 2011. Article 36 of the framework law mandates the rational management and protection of soil and subsoil against degradation, desertification, erosion, and pollution, while prescribing conditions for the use of fertilisers, pesticides, and chemicals to safeguard soil quality. However, unauthorised substances are still used, degrading the soil, and highlighting the need for better enforcement.

Article 37 requires mining and quarrying permit holders to rehabilitate exploited sites, but the absence of enabling instruments has delayed implementation despite significant mining activities. This is emblematic of a broader issue in Cameroon's legislative process, where laws are crafted with broad provisions, leaving details to enabling instruments, which are often delayed, rendering laws ineffective.

The framework law also includes provisions for sustainable land use (Article 38), conservation of biodiversity (Articles 62-66), and rational management of resources (Articles 63-69). While Cameroon has ratified international conventions on soil protection, enforcement remains weak due to fragmented responsibilities and limited coordination among public administrations. For example, MINEPDED, the ministry responsible for environmental protection, struggles to enforce restoration requirements on industrial sites because these activities often fall under other ministries' jurisdiction, leading to conflicts between local communities and industrial operators.

To enhance soil protection, it is crucial to improve coordination among public administrations, enforce restoration requirements, and ensure enabling instruments are drafted alongside primary laws to avoid delays in implementation.

3.3.3.3 Nature conservation

3.3.3.3.1 Law No. 98/005 of 14 April 1998 (Water Code)

The following provisions address soil protection concerning water management: Article 2(1) of the Water Code requires the state to ensure water protection. Article 4(1) prohibits the disposal, leakage, or deposit of any materials or wastes into waters if they may alter water quality, harm public health, or aquatic life, or compromise economic and tourism development. Article 4(2) allows the minister in charge of water to regulate and potentially withdraw authorisations for such disposals after consultation with other ministries. Article 7 establishes protection perimeters around water capture, treatment, and storage points, declaring lands within these areas as of public utility.

While the Water Code focuses on water, it indirectly addresses soil concerns by emphasising soil's role in water management. Protecting soils is essential to ensuring sustainable water resources for domestic and industrial uses. By implication, the Water Code and its enabling instruments demonstrate a commitment to soil protection as a fundamental component of effective water management.

3.3.3.3.2 Law No. 94/01 of 20 January 1994 on Forests, Fauna, and Fisheries Regulation

Law No. 94/01 serves as the fundamental legislation for forest exploitation in Cameroon, addressing critical issues such as desertification and deforestation, which significantly contribute to soil degradation. Deforestation, particularly when trees are not replaced, exposes soil to erosion and degradation, leading to the transformation of fertile lands into barren deserts.

To mitigate these effects, the law mandates reforestation and the reinstatement of exploited tree species. However, compliance with this provision remains a major challenge, especially among illegal forest exploiters. In response, the state, civil society organisations, and development partners have introduced licensing and certification procedures to regulate forest exploitation and combat unsustainable practices. These initiatives aim to ensure better adherence to reforestation requirements and to protect soil and forest ecosystems from further degradation.

3.3.3.4 Subsidiary regulations on environmental thresholds, environmental quality standards, and more

A document on environmental protection norms is under homologation at the Norms and Quality Agency. Beyond the Framework Law on Environmental Management, several regulations address soil protection in Cameroon. Key laws include: Law No. 89/027 (1989) on toxic and hazardous waste, requiring industries to declare and safely manage such waste; Law No. 98/015 (1998) and related orders on dangerous, unhealthy, or uncomfortable establishments; Decree No. 99/818/PM (1999) on procedures for operating dangerous establishments; Decree No. 2011/2581/PM (2011) regulating harmful chemicals; Decree No. 2012/2809/PM (2012) on waste sorting, collection, and disposal; and Decree No. 2000/092/PM (2000), amending the 1995 forest regime, alongside wildlife and forestry regulations ensuring controlled fires and forest use. These legal frameworks aim to protect public health, prevent deforestation, safeguard wildlife, and preserve ecosystems, which indirectly protect soil.

3.3.4 Environmental monitoring

Environmental monitoring is crucial for effective environmental management, particularly soil protection.[90] It involves systematic soil sampling to assess ecological conditions, monitor the impacts of harmful activities, ensure regulatory compliance, and guide policymaking.[91] In Cameroon, environmental monitoring is conducted through EIA, which tracks and addresses biophysical and social changes during projects. The Ministry of Environment oversees this through its service dedicated to monitoring and climate follow-up, which develops ecological alert systems, climate strategies, geographic information systems, and disaster management plans. Article 45 of Decree No. 2012/431 outlines these responsibilities, while Law No. 96/12 (1996) and Decree No. 2013/0171/PM (2013) establish conditions for EIA and Environmental Management Plans (EMP). EMPs are subject to administrative surveillance, requiring biannual reports for projects. Articles 27–29 of the 2013 decree ensure environmental monitoring of projects, implicitly protecting soil, and allow the administration to engage expert assistance. Monitoring may involve government agencies, NGOs, private firms, or individuals.

90 FAO (2009: v).
91 Taza-Asaba (2013).

3.3.4.1 Execution of the law

The executive arm of government implements laws at both central and decentralised levels with the support of law enforcement agents. Government departments handle implementation centrally, while regional entities,[92] local councils,[93] and traditional authorities manage it locally.[94] However, these decentralised entities operate within institutional frameworks established by law, raising the question of whether these arrangements foster effective collaboration and cooperation for sustainable resource management, including soil. Unfortunately, this is not the case, as the transfer of authority and resource management is incomplete. Central government departments overseeing territorial administration retain control, complicating the execution of projects by decentralised entities.

3.3.4.2 Enforcement issues

One challenge in soil protection is the enforcement of existing legislation. While public prosecutors and judicial police have general enforcement authority, officials under oath in various administrations—such as cadastral surveys, town planning, public works, forestry, mining, industry, and tourism—are tasked with applying regulations relevant to their sectors. They investigate and establish violations to enforce the legal frameworks within their domains, as outlined in Article 88 of the 1996 Framework Law on Environmental Management. Similar provisions exist in Article 202(1) of the Mining Code[95] and Articles 159 to 164 of the new Mining Code under Law No. 2023/014 of 19 December 2023, which repeals the 2016 Mining Code under Section 200.

3.3.4.3 Competences of enforcement entities

Each administration manages its area of competence through dedicated control services. For the environment, an environmental inspection brigade identifies acts that violate environmental laws. This unit comprises environmental inspectors and controllers. While the brigade does not handle routine administrative monitoring, it can be called upon when public agents uncover serious environmental violations during their monitoring activities.

92 Law No. 2004/019 of 22 July 2004 fixing the rules applicable to regions.
93 Law No. 2004/018 of 22 July 2004 fixing the rules applicable to councils.
94 Decree No. 77/245 of 15 July 1977 to organise Chiefdoms.
95 Law No. 2016/017 of 14 December 2016 repealing Law No. 001 of 16 April 2001 establishing the Mining Code and its modification by Law No. 2010/011 of 29 July 2010.

3.3.4.4 Available and accessible data

The ministry in charge of the environment in Cameroon has a Centre for Information and Environmental Documentation, responsible for collecting, storing, and disseminating environmental information. The centre is equipped with clearing house mechanisms (CHMs), which correspond to the number of multilateral environmental agreements Cameroon has ratified. The ministry also operates a website that publishes key information within its domain. While environmental data is generally accessible to the public, information specifically on soil is not available on the website.

3.3.4.5 Sufficient expertise and support from research institutions

For many years, various research institutions, including state universities and private entities, have established study centres focused on environmental matters. These institutions provide training in environmental fields, producing skilled professionals. However, the administration responsible for the environment struggles to employ all these qualified individuals. While the private sector is increasingly seeking environmental experts, the number of recruits remains limited. State universities are at the forefront of environmental research, and the environmental ministry occasionally taps into the expertise of these institutions and their research centres.

3.3.4.6 Staff and technical equipment

MINEPDED, established in 2004 and reorganised in 2012, still faces staffing challenges, with many offices in its new structure unoccupied due to a shortage of personnel. Several factors contribute to this, such as the absence of a legal framework for environmental professionals, outdated training institutions, and a temporary halt in public service recruitment. Despite efforts to establish its institutional framework and raise public awareness of environmental issues, MINEPDED's technical teams are underdeveloped. The administration urgently requires updated equipment and training to strengthen its capacity for environmental inspections and control.

3.3.4.7 Science-policy interface of soil data/information

Scientific data is essential for sustainable soil management, but in Cameroon, such data on soil degradation and management is not widely available, especially to small-scale farmers. This lack of accessible information hinders informed agricultural practices and sustainable soil management. While legal frameworks for environmental

monitoring exist, weak implementation due to limited resources, poor coordination, and lack of monitoring methodologies further exacerbate the issue. Additionally, ineffective land-use planning, with conflicting land-use maps, contributes to soil degradation. Environmental monitoring remains inadequate, and there is a need for regulatory reforms and independent, accountable monitoring systems to enhance soil protection. International NGOs and research institutions can play a key role in strengthening these efforts and building capacity for better monitoring and enforcement.

3.3.5 Cross-cutting issues

3.3.5.1 Need for environmental impact assessments

EIA is required by both international and national laws to evaluate the potential adverse effects of projects on the environment.[96] In Cameroon, the Framework Law on Environmental Management mandates EIAs for projects that could harm the environment.[97] However, the law faces challenges in implementation, including ineffective public participation, inadequate personnel, corruption, and poor monitoring.[98] These issues hinder effective soil protection. Furthermore, small-scale agriculture, which impacts soil health, is not adequately addressed by the EIA process, despite its widespread practice.[99] To improve soil protection, all agricultural projects should be subject to EIA, but challenges such as the cost of assessments and control over millions of small-scale farms need to be addressed.[100] Providing extension services to educate and monitor farmers could be a potential solution.

3.3.5.2 Provisions of public participation and access to environmental information

Public participation is a key principle in international environmental law, emphasised in the 1992 Rio Declaration.[101] It includes the right to participate in decision-making, access relevant information, and seek justice.[102] In Cameroon, laws including the 1996 Framework Law on Environmental Management and the 2013 ESIA Decree mandate

96 Such as the Rio Declaration on Environment and Development, 1992; the Convention on Biological Diversity, 1992; etc.
97 Dashaco & Tarh (2018: 196).
98 Alemagi et al. (2007).
99 See Ginzky et al. (2019: 4).
100 Tchoffo (2009: 3).
101 It is reflected in the Rio Declaration 1992; the Non-Legally Binding Instrument on All Types of Forests; the Convention on Biological Diversity, among others; Report of the UN Conference on Environment and Development: Annex 1. Rio Declaration on Environment and Development, UN Doc A/CONF.151/26 (Vol.I), 12 August 1992, Principle 10.
102 See Ngwome (2018: 257); Costenbader (2009: 36).

public consultation and access to environmental information. However, the implementation of these rights is often insufficient, particularly regarding soil management. Information on soil degradation is outdated, not easily accessible, and poorly understood by the public.

Despite the legal framework, public participation is not fully realised, and laws are poorly enforced. For example, consultations are sometimes missing during land concessions. The need for adequate soil management information, including integrating it into educational curricula, is urgent. The lack of enabling instruments further complicates effective implementation. Case law, such as the African Commission's rulings on land-grabbing, underscores the importance of free, prior, and informed consent in environmental matters.[103] These cases highlight violations of indigenous peoples' rights and the need for stronger protections and consultations.

3.3.5.3 Right to appeal administrative decisions – access to courts

The right to appeal administrative decisions and access to justice is essential for sustainable environmental and soil management. Conflicts often arise in natural resource management, and without adequate access to justice, stakeholders cannot protect their rights, making governance ineffective.[104] In Cameroon, environmental justice is underdeveloped, and the lack of an environmental court means soil protection is poorly enforced.[105] There is a need for stronger, independent dispute resolution mechanisms, as well as better capacity among court officials.

Access to justice involves having effective and accessible systems for resolving conflicts, such as litigation, alternative dispute resolution, or administrative review.[106] These mechanisms need to be strengthened to ensure sustainable soil protection. International law requires governments to provide citizens with access to judicial proceedings, free legal services, and community support for marginalised groups.[107]

103 See 276/2003 – *Centre for Minority Rights Development (Kenya) and Minority Rights Group International on behalf of Endorois Welfare Council v Kenya*, at https://www.hrw.org/sites/default/files/related_material/2010_africa_commission_ruling_0.pdf, accessed 17 October 2019; Secretary African Commission on Human and Peoples' Rights, Banjul, Communication, *Social and Economic Rights Action Center v Nigeria*, at http://www.hlrn.org/img/documents/SERAC%20v%20%20Nigeria%20Communication.pdf, accessed 17 October 2019.

104 Costenbader (2009: 53).

105 Denier et al. (2014: 129).

106 Ngwome (2018: 318); Denier et al. (2014: 129).

107 Reference to the right of access to justice under international law includes: Principle 10 of the Rio Declaration on Environment and Development; Arts 2, 9, 14, 26 & 50 of the International Convention on Civil and Political Rights and its First Protocol; Arts 8, 11, 13, 20, 28, 32 & 40 of the UN Declaration on the Rights of Indigenous Peoples; Art 15 of the Convention for the Elimination of All Forms of Discrimination Against Women; Arts 9,12 & 14 of the ILO Convention No. 169; Arts 7, 8 & 10 of the Universal Declaration of Human Rights; Art XVI of the 2003 African Convention on the Conservation of Nature and Natural Resources.

Increasing legal awareness at the community level is essential for vulnerable groups to enforce their rights.[108] The government should ensure citizens can easily access courts, provide legal aid, and promote awareness of legal rights.[109] Strengthening dispute resolution systems will enhance accountability, protect stakeholders' rights, and support soil management.

3.3.5.4 Specific instruments to control the behaviour of foreign investors

3.3.5.4.1 Compliance with public law

Each administration in Cameroon is responsible for ensuring that investors comply with relevant regulations in their sectors. For example, the hydrocarbons administration ensures investors follow the Petroleum Code, while the water and mining administrations enforce regulations in their respective fields. The same applies to forestry and environmental protection.

However, despite these regulations, illegal operators often ignore the rules, such as some mining exploiters who operate outside the law. This is partly due to inadequate mining data and the negligence of some authorities, which contributes to soil and environmental degradation.

Cameroon also has a law (Law No. 2017/015) that encourages private investment, treating all foreign investors equally. This law establishes a single body to guide investors, allowing them to complete necessary procedures without navigating multiple administrations.

3.3.5.4.2 No unfair or illegal land acquisition

Access to land for foreign investors in Cameroon is governed by Ordinance No. 47/01 of 6 July 1974, which allows foreign individuals and companies to lease or purchase land, excluding border areas. These transactions require prior approval from the minister in charge of lands, or they will be void. For diplomatic missions and international organisations, approval from both the Minister of External Relations and the Minister of Lands is required. The state has a pre-emptive right to purchase property upon resale.

The new Mining Code (Law No. 2023/014) outlines land access for mining activities. Under Section 87, exploration permit holders can apply for land necessary for mining after approval of their pre-feasibility study. Expropriation for public interest

108 Ngwome (2018: 318).
109 Denier et al. (2014: 130-131).

must precede this, and the expropriated land is registered in the state's name and leased to the permit holder. Section 88 addresses mining for semi-mechanised artisanal and industrial operations, where operators may receive leases or concessions. Section 89 requires operators to repair damages to private property or neighbouring structures, with compensation determined by agreement or state intervention. Damages include loss of land use, environmental harm, and interruption of farming activities (Sections 90-91).

3.3.5.4.3 Fair taxation

Law No. 2018/012 of 11 July 2018, governing the financial regime of the state and public entities in Cameroon, establishes the ministry in charge of finance as the sole authority for regulating taxation. While many legal texts mention financial provisions, all such provisions must be formulated in consultation with this ministry. Each fiscal year, the ministry prepares and presents a finance law, which is implemented through a circular outlining instructions for budget execution, monitoring, and control. These two documents define the financial expectations for the public treasury and all sectors of activity.

3.4 Relevant ministries and state institutions and their responsibilities

3.4.1 Ministry of Agriculture and Rural Development

Decree No. 2005/118 of 15 April 2005 assigns the Ministry of Agriculture and Rural Development (MINADER) the responsibility for developing, implementing, and evaluating government policies related to agriculture and rural development. The ministry is also tasked with establishing standards and regulations for agriculture, as well as identifying and preparing agricultural investment projects and programs. Given that agriculture contributes to soil degradation, MINADER's role is crucial for ensuring soil protection.

3.4.2 Ministry of State Property, Surveys, and Land Tenure

Article 1 of Decree No. 2012/390 of 18 September 2012 assigns the Ministry of State Property, Surveys, and Land Tenure (MINDCAF) the responsibility for developing and implementing government policy on land tenure, land registration, and land surveying. This includes drafting legislative and regulatory texts, managing public and private government property, proposing land allocations, and creating and maintaining

cadastral plans. Since activities linked to soil degradation, such as mining and agriculture, often begin with land acquisition, MINDCAF's role is critical for soil protection.

3.4.3 Ministry of Environment, Protection of Nature, and Sustainable Development

According to Decree No. 2012/431 of 1 October 2012, the Ministry of Environment, Protection of Nature, and Sustainable Development (MINEPDED) is tasked with defining sustainable management principles for natural resources, developing environmental management measures in collaboration with other ministries, and preparing sectoral master plans for environmental protection. It coordinates and monitors regional and international organisations' interventions related to the environment and natural resources and ensures compliance with environmental regulations in large projects. MINEPDED also educates the public on environmental management, negotiates environmental treaties, and enforces environmental and social commitments. Given that soil degradation is a form of environmental degradation, MINEPDED plays a crucial role in overseeing proper ESIA and ensuring compliance with environmental standards.

3.4.4 Ministry of Forests and Wildlife

The Ministry of Forests and Wildlife (MINFOF) is responsible for developing and implementing national policies related to forestry and wildlife.[110] It manages protected areas and conservation concessions, oversees regeneration, reforestation, and forest inventories, and ensures compliance with logging standards. Given the direct link between forest management and soil protection, MINFOF plays a crucial role in addressing soil degradation. Sustainable forest management practices help protect soil, while unsustainable practices can lead to soil degradation. Therefore, MINFOF is a key stakeholder in soil protection efforts.

3.4.5 Ministry of Economy, Planning, and Regional Development

According to Article 1(2) of Decree No. 2008/220 of 4 July 2008, the Ministry of Economy, Planning, and Regional Development (MINEPAT) is responsible for developing, monitoring, and coordinating the government's economic policy, as well as

110 See Decree No. 2005/099 of 6 April 2005 to organise the Ministry of Forest and Wildlife. See also Republic of Cameroon (2012: 48).

creating and enforcing regional planning norms and rules. Since poor land-use planning is a major driver of soil degradation, MINEPAT's role is crucial for environmental and soil protection, especially when it comes to managing investments and economic activities that could contribute to soil degradation.

3.4.6 Ministry of Urban Development and Housing

Created by Presidential Decree No. 2004/320 of 8 December 2004, the Ministry of Urban Development and Housing (MINDUH) collaborates with decentralised territorial entities (urban and rural councils) to address urban challenges and create well-planned cities. As the supervisory ministry of the Cameroon Real Estate Company (Société Immobilière du Cameroun), MINDUH is central to urban policy in Cameroon. According to Decree No. 2005/190 of 3 June 2005, MINDUH is responsible for developing, implementing, and evaluating government policies on urban development and housing, planning city growth, ensuring sanitation and drainage, beautifying urban centres, and overseeing social housing policies. Its role is crucial in ensuring that urban development projects do not contribute to soil degradation.

3.4.7 Ministry of Trade

By Decree No. 2011/408 of 9 December 2011, the Ministry of Trade is responsible for developing and implementing government policy on trade. In terms of soil degradation or protection, the ministry promotes and defends quality labels for local products, monitors import standards in collaboration with relevant authorities, oversees conservation and distribution circuits of consumer products, and ensures compliance with storage and presentation standards. It also applies sanctions for fraud or non-compliance. The Ministry of Trade's role is crucial in preventing the importation and transportation of products that could negatively impact soil quality.

3.4.8 Ministry of Mines, Industry, and Technological Development

The Ministry of Mines, Industry, and Technological Development (MINMIDT) is responsible for formulating and implementing mining and industrial policies, as well as developing strategies for technological advancement across various sectors of the national economy. Given that mining and industrial activities are significant drivers of soil degradation, the role of MINMIDT is critical in addressing soil protection and degradation, and it should be carefully considered in this context.

3.4.9 Ministry of Scientific Research and Innovation

The Ministry of Scientific Research and Innovation (MINRESI) is responsible for formulating and implementing national policies related to scientific research and innovation. It coordinates and supervises scientific research activities in collaboration with various sectoral ministries and organisations.[111] Given the significant implications of scientific research on soil protection and degradation, MINRESI's role is crucial in this context and should be further strengthened.

3.4.10 Ministry of Livestock, Fisheries, and Animal Industries

The Ministry of Livestock, Fisheries, and Animal Industries (MINEPIA) plays a crucial role in implementing policies to reduce soil degradation caused by animal husbandry practices. Its focus on sustainable livestock management is essential in mitigating the impact of overgrazing and other practices that can lead to soil erosion and degradation.

3.4.11 Institute of Research for Agricultural Development

The Institute of Research for Agricultural Development (IRAD) is tasked with conducting high-level scientific research aligned with Cameroon's agricultural priorities across its five agro-ecological zones.[112] IRAD's focus on sustainable resource management and environmental conservation makes it a key player in preventing soil degradation caused by agricultural development in the country.

3.4.12 Inter-Ministerial Committee for the Environment

The Inter-Ministerial Committee for the Environment, hosted by MINEPDED and consisting of fourteen key ministerial departments, plays a crucial role in coordinating and overseeing environmental policies. Given that soil is an integral component of the environment, this committee's function in evaluating and controlling the environmental impacts of various sectoral policies and projects is essential for preventing soil degradation and ensuring sustainable land management across the country.

111 Republic of Cameroon (2012: 48).

112 IRAD was created by Presidential Decree No. 96/050 of 12 March 1996 as modified by Decree No. 2002/230 of 6 September 2002.

3.4.13 National Consultative Commission for the Environment and Sustainable Development

The National Consultative Commission for the Environment and Sustainable Development, created by the environmental framework law, plays a key role in ensuring broad stakeholder participation in the development and implementation of environmental management policies and strategies. Given its inclusive approach, the commission's involvement is crucial for fostering collaborative efforts in soil protection, ensuring that all relevant sectors and communities contribute to the sustainable management of soil resources.

3.4.14 Regional and local authorities

Regional and local authorities in Cameroon, as part of their delegated responsibilities from the central government, play a crucial role in ensuring the implementation of environmental provisions relevant to soil protection. Through monitoring and inspection, these authorities ensure that activities conducted by individuals and enterprises do not result in environmental degradation. They carry out this responsibility in collaboration with the relevant central administrative departments, following the guidelines and regulations established by law. This decentralised approach ensures that soil protection efforts are applied at both local and regional levels, contributing to effective environmental governance.

3.4.15 National Council for Planning and Sustainable Development of the Territory

The National Council for Planning and Sustainable Development of the Territory, established by Law No. 2011/008, will play a key role in soil protection by advising on spatial planning and sustainable development policies. It will also review major laws related to these areas. However, the overall institutional framework provides minimal direct support for soil protection. Ministries, through regional and local delegations, are tasked with implementing policies, and decentralisation laws require them to transfer some responsibilities and resources to local entities for better management of soil and environmental issues.

3.5 Conclusion

The assessment of Cameroon's environmental and natural resources policies reveals a lack of a comprehensive soil policy or legislation to address soil degradation. While some provisions related to soil protection exist, they are fragmented across various laws and are often poorly implemented. As a result, soil protection is not effectively enforced, and soil as a resource is not adequately integrated into the legal framework. Sustainable soil management is not a priority, as it has not been directly addressed in specific legal instruments. Additionally, the institutions responsible for implementing soil-related laws often work in isolation, leading to a lack of coordination and cooperation in improving soil health.

4 Legislation on main drivers of soil degradation: Strengths and weaknesses

Soil degradation in Cameroon is driven by both natural factors and human activities, with the latter being influenced by sectoral legislation. This section examines the legal aspects of the main drivers of soil degradation, including agriculture, mining, industrial development, demographic growth, urban sprawl, land planning, climate change, land tenure insecurity, and wildfires in farming, hunting, and livestock management. While legislation governing these sectors contributes to soil degradation, it also contains provisions for soil protection, highlighting both the strengths and weaknesses of these laws in addressing soil health.

4.1 Agriculture

4.1.1 Relevant legal provisions

4.1.1.1 Law No. 2003/003 of 21 April 2003 on phytosanitary protection

The 2003 law on phytosanitary protection governs agricultural practices and aims to safeguard human, animal, and environmental health. It restricts the import, distribution, and use of unapproved phytosanitary products and mandates their use in line with good agricultural practices. The law also calls for integrated pest management and encourages collaboration with farmers, researchers, and other stakeholders. However, poor implementation and lack of effective monitoring, especially at border controls, contribute to soil degradation.[113] While the law covers key areas of phytosanitary protection, its enforcement remains weak due to inadequate cooperation between

113 Law No. 2003/003 of 21 April 2003 on plant protection.

ministries and non-compliance by farmers. To address this, stronger coordination and stricter enforcement are needed.

4.1.1.2 Law No. 2003/007 of 10 July 2003 governing the activities of the fertiliser subsector

The law regulating fertilisers in Cameroon aims to enhance farm productivity and ensure sustainable natural resource management. It covers the production, import, export, packaging, distribution, and use of fertilisers to prevent harmful effects. However, the law's effectiveness is hindered by the absence of an enabling instrument, making its implementation and monitoring difficult. Fertilisers not in compliance with regulations are still used, often due to illegal practices and weak enforcement. To address this, the government must enforce compliance and ensure proper implementation of fertiliser regulations to prevent soil degradation.

4.1.1.3 Decree No. 2011/2584/PM of 23 August 2011 laying down soil and subsoil protection modalities

Most agricultural projects in Cameroon contribute to soil degradation, mainly due to the misuse of chemicals (pesticides and fertilisers) and unsustainable practices such as slash-and-burn, bushfire, and ankara methods. Decree No. 2011/2584/PM of 23 August 2011 regulates land use to prevent erosion, desertification, and loss of arable land. It mandates that fertilisers and pesticides meet national and international standards and requires soil assessments and regular evaluations of environmental impacts. However, many farmers ignore these provisions, continuing harmful practices. To address this, policies should focus on educating farmers about the risks of non-homologated chemicals and unsustainable farming techniques.

4.1.1.4 Common Provisions on the Homologation of Pesticides in the Economic and Monetary Community of Central Africa Zone

The use of pesticides in Cameroon is governed by the Common Provisions on the Homologation of Pesticides within the Common Provisions on the Homologation of Pesticides in the Economic and Monetary Community of Central Africa (CEMAC) zone. The goal is to ensure the rational use of pesticides while protecting human health and the environment. The regulation covers all activities related to pesticides, including testing, import, export, transport, and use. However, enforcement is weak due to challenges such as porous borders, which allow contraband pesticides to enter, bypassing

the Homologation Committee. These products, often sold at low prices, are used by farmers unaware of their harmful effects.

CEMAC laws have supranational status, meaning they override national laws in member states including Cameroon. The Cameroonian Constitution affirms the direct application of CEMAC regulations, giving them supremacy over national legislation.[114] Despite this, effective implementation of pesticide regulations remains a challenge. Authorities must ensure compliance to protect soil health.

4.1.2 Enforcement issues

In addition to the public prosecutor and judicial police, officials in various environmental and administrative sectors are responsible for enforcing regulations. This includes ensuring the implementation and control of environmental laws, as outlined in Article 88 of the 1996 Framework Law on Environmental Management. These officials, once sworn in, are tasked with identifying and prosecuting offenders. The same responsibility applies to ministries overseeing water, energy, mines, and other sectors, as per Article 202(1) of the Mining Code.[115] Similar provisions can be found in Article 157 of the new Mining Code instituted by Law No. 2023/014 of 19 December 2023.

However, soil protection enforcement is hindered by inadequate monitoring, poor communication between ministries, and corruption among law enforcement agents, which complicates the enforcement of agricultural and environmental regulations. This undermines efforts to achieve sustainability in the agricultural sector.

4.1.3 Monitoring

The Ministry in charge of the environment is responsible for ecological monitoring, which includes developing systems for environmental surveys, climate change programs, and strategies for nature protection and sustainable development. It also manages geographic information systems, coordinates international environmental agreements, and centralises data on environmental issues, as outlined in Article 45 of Decree No. 2012/431.

However, corruption, lack of information and data, and poor communication between institutions hinder effective monitoring. These challenges have serious implications for soil degradation.

114 Art 21 of the Additive to the CEMAC treaty. This principle has as its basis the integration of the community legal order.

115 Law No. 2016/017 of 14 December 2016 repealing Law No. 001 of 16 April 2001 establishing the Mining Code and its modification by Law No. 2010/011 of 29 July 2010.

4.1.4 And what is more?

The National Agriculture Investment Plan (PNIA) for 2014–2020 aims to boost agricultural growth by at least 10% through four key areas: improving food security, modernising rural infrastructure, sustainably managing resources, and fostering good governance. Tax exemptions have also been introduced to support the sector, benefiting soil protection. However, the shift to second-generation agriculture may rely on unsustainable practices, such as the use of non-homologated fertilisers and chemicals harmful to soil. To ensure soil protection, issues relating to corruption, inadequate monitoring, and poor communication between institutions must be addressed.

While these legal and policy instruments seek to protect soils and promote sustainable practices, they also have weaknesses. For example, they encourage actions such as forest clearance and increased chemical inputs, which contribute to soil degradation. Effective implementation and enforcement of these laws remain critical challenges.

4.2 Mining

4.2.1 Relevant legal provisions

Cameroon's new Mining Code, established by Law No. 2023/014, repeals the 2016 Mining Code. While the Code includes general environmental protection provisions, it does not directly address soil protection. The provisions that indirectly support soil protection include requirements for compliance with environmental laws, ESIAs, and rehabilitation of mining sites. Mining operators are responsible for waste management, preventing geo-hazards, and restoring mining sites to stable conditions. However, the Code's major weakness is its lack of direct references to soil protection and its reliance on regulations that have not yet been implemented, hindering effective enforcement. The establishment of a Mining Site and Quarry Restoration Fund aims to support environmental rehabilitation, but without the necessary regulations, soil protection remains difficult to achieve. It is recommended that the enabling regulations be developed alongside the main law to ensure effective implementation.

4.2.2 The role of foreign investors

Foreign investors play a significant role in Cameroon's mining sector due to the country's lack of technical equipment and technology. While the government encourages collaboration with national investors for technology transfer, many foreign investors neglect environmental protection, often starting activities without proper

environmental authorisation and failing to rehabilitate exploited sites. This leads to soil degradation and pollution, particularly from hazardous chemicals such as mercury.

Although the Mining Code mandates compliance with environmental regulations for soil protection, its application is hindered by the lack of enabling instruments, which are still missing under the new Code. This delays effective enforcement and potentially contributes to soil degradation. To address this, the government could either enact complete legislation or ensure that enabling instruments are created alongside the main law to facilitate implementation and soil protection.

4.3 Industrial development

Cameroon has low industrialisation, but its Vision 2035 and the GESP focus on industrial development as a path to becoming an emerging economy. This growth, however, may pressure the environment, especially soil. Currently, there is no specific industrial sector legislation, with regulation spread across various laws. Waste treatment, particularly industrial waste, is governed by several legal provisions, including the 1996 Framework Law on Environmental Management, which controls hazardous waste disposal, and the 1994 Forestry Law, which bans dumping in national forests without permits.

The Water Code restricts discharges of pollutants into water bodies, while Order No. 002/MINEPDED requires operators handling toxic waste to submit waste management plans and ensure traceability. Other orders regulate waste sorting, collection, and transport, and require environmental permits.

The Petroleum Code,[116] while neglecting soil-specific protection, includes provisions for environmental conservation during petroleum operations. It mandates ESIAs, public inquiries, and compliance with environmental protection standards. The Petroleum Code's Decree No. 2023/232 of 4 May 2023 complements these regulations, focusing on pollution control, emergency response, and mandatory waste management plans, though soil protection remains indirect.

The creation of a Pollution Prevention Committee, though consultative, aims to assist in enforcing environmental protection laws, including soil preservation. The Decree also mandates remedial actions for environmental damage, including soil, if operations cause harm.

116 Law No. 99/013 of 22 December 1999 to institute the Petroleum Code. See Arts 82-83.

4.4 Demographic growth, urban sprawl, and land-planning regulatory frameworks

Population growth and urban sprawl are major drivers of environmental degradation, including soil erosion. As the population grows and urbanisation accelerates, natural ecosystems such as forests and wetlands are transformed into urban and agricultural areas to meet the demand for housing and food. This places immense pressure on the environment, leading to soil degradation.

Cameroon's urban and spatial planning laws, in theory, aim to manage natural resources sustainably, including soil. The 1996 Constitution and Law No. 2011/008 on spatial planning emphasise decentralisation and sustainable development. Policies such as Decree No. 77/193 (1977) and the National Land Use Planning for Sustainable Development Scheme (SNADDT) are intended to protect soils. The first phase of SNADDT has zoned the territory by resources and development potential, and the second phase is creating a national land-use plan.

Despite these policies, implementation is hindered by poor coordination among ministries and a lack of direct references to soil protection. To improve outcomes, reforms are needed to strengthen legal frameworks, promote participatory planning, and enhance stakeholder capacity to protect soils effectively.

4.5 Climate change law and soil degradation

Climate change is a major cause of soil degradation, while soil also plays a crucial role in mitigating climate change through carbon sequestration. Unfortunately, Cameroon lacks specific climate change legislation addressing soil's role in this process. Both international and national climate policies have largely overlooked soil as a key element in combating climate change and its impacts.

Though Cameroon lacks a dedicated climate change law, it has developed policies to implement the REDD+ initiative since 2005, including the 2008 R-PIN, the 2013 R-PP, and the 2018 National REDD+ Strategy. While these documents do not directly mention soil, they highlight activities such as slash-and-burn agriculture and bushfires as significant drivers of deforestation, GHG emissions, and soil degradation. Cameroon's NDCs aim for a 32% reduction in GHG emissions by 2035, identifying soil management as critical to this target, particularly through restoration efforts.[117]

The National REDD+ Strategy includes plans for restoring degraded soils through landscape management, agroforestry, and promoting sustainable agricultural practices. However, challenges remain, particularly in securing international support for financing and technology transfer.

117 See Republic of Cameroon (2015: 4-5).

Cameroon's national climate change observatory tracks climate evolution and alerts the government to ecological threats.[118] Despite these efforts, soil's role in climate change mitigation needs specific legal protection to address the interconnected challenges of climate change and soil degradation.

4.6 Land tenure insecurity: Relevant legal provisions and associated problems

4.6.1 Ordinance No. 74/2 of 6 July 1974 establishing the rules governing state lands

Ordinance No. 74/2 governs both public and private property in Cameroon, as outlined in Article 1. It distinguishes between natural and artificial public properties. Natural public property includes coastlands, waterways, subsoil, and airspace, with a particular focus on maritime, landed, and fluvial public properties.

Maritime public property includes the soil and subsoil of territorial waters, which, though not typically exploited by the general population, are affected by offshore petroleum extraction and the disposal of pollutants, such as plastic waste. Landed public property refers to the subsoil, subject to legal devolution for exploitation or valorisation, meaning its transfer from one owner to another for such purposes.

Fluvial property, including marshlands, is generally not available for use by the public. These areas are designated as non-aedificandi zones, where construction and similar activities are prohibited under Cameroonian law.

4.6.2 Ordinance No. 74/1 of 6 July 1974 establishing the rules governing land tenure

Ordinance No. 74/1, which establishes the land tenure regime in Cameroon, guarantees land ownership for both individuals and corporations. It allows anyone, whether Cameroonian or foreign, to acquire land, but the process often involves high costs and bureaucratic hurdles. This has led to a rise in land grabs, where large parcels of land are acquired by foreign corporations or influential local elites, often resulting in displacement and soil degradation.[119]

One notable case is Herakles Farms' acquisition of 73,086 hectares in the Southwest Region, where the company cleared forest land, causing severe soil degradation and other environmental issues.[120] Similarly, the Bakweri people's claims to ancestral lands in the Fako Division highlight long-standing disputes over land ownership,

118 Amougou et al. (2018: 722).
119 FAO & ITPS (2015: 92); Tafon & Saunders (2019: 42); Amin & Jaha (2016: 19).
120 See Fraser & Mousseau (2016: 3); Tafon & Saunders (2019: 50); Ndi (2017).

particularly regarding the Cameroon Development Corporation (CDC), which has been accused of expropriating local lands.[121]

While land grabs are commonly associated with large corporations, religious institutions, such as the Catholic Church, have also been involved in acquiring vast land holdings for their social missions.[122] However, unlike corporate land grabs, the church's land acquisitions have not been linked to soil degradation.

The growing economic value of land has led to increased land grabbing, often displacing vulnerable groups and exacerbating conflicts. In regions such as the Northwest, local elites use their wealth and power to acquire large tracts of land, further marginalising the disadvantaged populations who rely on this land for their livelihoods.[123]

4.6.3 Decree No. 76/166 of 27 April 1976 establishing the terms and conditions for the management of national lands

Decree No. 76/166 implements Ordinance No. 74/2 of 6 July 1974, outlining the rules for state land allocation. It allows individuals or corporations to obtain unoccupied or unexploited national lands for development projects through temporary grants, which can evolve into leases or absolute grants. These grants are contingent upon alignment with the country's economic, social, or cultural policies. However, the law does not specify limits on the amount of land that can be acquired, raising concerns about overexploitation and soil degradation.

The decree limits the duration of temporary grants to five years, with possible extensions if the project aligns with national policies, including soil management. Additionally, land use must comply with ESIA to ensure minimal negative impact, particularly on soil conservation.

4.6.4 Circular No. 001/CAB/PM of 1 April 2014 relating to measures applicable to investors on access to land

In the hierarchy of norms, circulars lack binding force but can be interpretative or imperative. Interpretative circulars clarify laws without creating rights or obligations, while imperative circulars are mandatory and create rights and obligations for specific parties. The 2014 Prime Ministerial Circular falls into the latter category, addressing irregularities in land allocation for development projects.

121 See Tande (1999); Ngwoh (2019).
122 See Lang (2017: 120).
123 Lang (2017: 116); Sone (2012).

The Prime Minister observed that some administrations acted contrary to existing laws, while investors sought land without proper feasibility or financing assessments. Large land requests were often used to secure financing, undermining land's developmental role. The circular redefined procedures, rights, and obligations for land allocation, reducing land-grabbing and illegal occupations, and improving soil access and management.

4.6.5 Law No. 85/009 of 4 July 1985 relating to expropriation on grounds of public utility and the modalities for the payment of indemnities

Law No. 85/009 governs land expropriation in Cameroon for development projects serving the public interest. Article 1(1) states that the state can expropriate land for public utility, while Article 3(1) ensures owners receive compensation—financial or in-kind—unless illegal activities, such as unauthorised construction, are involved (Article 10(3)).

Expropriation requires a specific decree from the President or Prime Minister. While the law provides for compensation, disputes often arise over payment calculations and delays. These delays may incentivise landowners to engage in soil-degrading activities out of frustration, impacting soil management.

4.6.6 Traditional law

Customary land tenure in Cameroon is complex, reflecting its over 250 ethnic groups, each with distinct customs.[124] Before the 1974 land tenure legislation, land ownership was purely customary. However, the law required all customary lands to be registered or lose their legal status, making the state the exclusive owner.[125] Since then, rural communities have retained only access and use rights, such as hunting and fruit picking, which have minimal soil impact.[126]

This legal shift sparked conflicts, as communities continued to claim rural lands, especially when these were allocated for public purposes or to investors without compensation or resettlement. While the 2005 land reform simplified the titling process, issues including poor record-keeping and contradictory laws persist. Untitled lands remain classified as National Land, enabling the state to evict occupants for 'effective exploitation.' Communities can only title land used before 1974, excluding unoccupied or non-farmland vital to their livelihoods.

124 Ngwafor (1996).
125 Art 17(2) of the Land Tenure Ordinance, 1974 read in conjunction with Art 15 classifying land into two categories.
126 Ibid.: Art 17(3).

Elites now exploit this system by financing land registration in exchange for large portions of land. Though this offers limited tenure security, disputes remain unresolved. Weak customary recognition incentivises unsustainable land use, threatening soil protection. Strengthening customary tenure—legally ceding ownership and management rights to communities—while enforcing legal reforms is essential to ensuring sustainable land and soil management.

4.6.7 Conflicts and means of resolution

Diverse land tenure types often create conflict and unsustainable land management. Customary rules governing land claims frequently clash with national legislation, leaving communal lands vulnerable to state acquisition for development.[127] This legal insecurity incentivises soil degradation, as communities lack motivation to protect lands, they do not feel secure on. Lang noted that such dual rules cause "confusion and difficulties" in regulating land rights. Strengthening customary land tenure can enhance legitimacy, local support, and sustainable soil protection, offering economic, social, and environmental benefits.

Several court cases highlight recurring issues of overlapping land certificates, administrative errors, and unclear regulations:

- *Nkamgang Mingeu Joseph v The State*: The court dismissed the petition due to irregularities, despite claims of fraudulent land certificates.[128]
- *Noumsi Jean Bosco v The State*: The Supreme Court ordered the cancellation of a land certificate issued under dubious circumstances.[129]
- *Yongo Marc v The State*: The court ruled administrative faults, and fraud invalidated a contested land title.[130]
- *Watson Mbua Maliva v The State*: The petition was inadmissible due to procedural oversights regarding disputed land.[131]

Other notable cases include *Ousmanou Dairou v The State*,[132] *The University of Buea v Bulu Village Council*,[133] and *Barrister Ebai Helen v The State*.[134] These disputes emphasise the importance of resolving tenure conflicts and securing fair access, ownership, and use rights for sustainable land and soil management.

127 See Lang (2017: 118–119).
128 Suit No. SWAC/LPM/006/2014.
129 CS/CA Judgment No. 34/04-05 of 29 December 2004.
130 CS/CA Judgment No. 76/04-05 of 27 April 2005.
131 Suit No. SWAC/LSP/007/2017, Judgment No. 014/2018.
132 Suit No. 01/RG/F/016 of 2 February 2016, Judgment No. 08/AFD/ 2017.
133 Suit No. SWAC/LSP/003/2017, Judgment No. 015/2018.
134 Suit No. SWAC/PND/001/2016, Judgment No. 006/2018.

4.6.8 Land tenure legislation and associated land-grabbing

Land-grabbing is a major driver of soil degradation, enabled by a provision in the Land Law stating that "the state shall be the guardian of all lands" and may intervene for rational land use or national interests (Section 1(2)). This provision has facilitated large-scale land acquisitions by powerful actors—such as the state, corporations, elites, and the wealthy—at the expense of vulnerable groups including local communities and the poor. As a result, the generous land tenure legislation risks accelerating soil degradation in the country.

4.6.9 Relationship between landownership and environmental responsibility

Cameroon's land tenure laws guarantee ownership rights, including exclusive possession, mortgage, and transfer, but remain silent on the owners' responsibility for sustainable land management. While the Constitution indirectly assigns environmental duties to citizens and the state, these pronouncements lack the force of specific land legislation. The Land Law must be revised to impose clear environmental responsibilities on landowners and users to protect soil health.

Decree No. 2013/0171/PM mandates ESIAs for large projects, ensuring environmental compliance and requiring public consultations (Article 3(1)). However, small-scale subsistence agriculture—such as slash-and-burn practices—escapes scrutiny despite its cumulative impact on soil degradation. Small farmers lack incentives, resources, and oversight for sustainable soil management.[135] Extension services could bridge this gap by educating and monitoring local farmers.

Cameroon's tenure system, where the state owns all land,[136] exacerbates land degradation. Customary land rights are poorly recognised, creating tenure insecurity and encouraging short-term land exploitation, including deforestation to secure occupancy claims. Disjointed laws, weak institutional frameworks, and poor land-use policies further worsen soil degradation.

To address these challenges, land tenure clarification, spatial planning, and mainstreaming soil protection provisions are crucial. Secure land ownership will incentivise communities to view land not just as an economic asset but as a resource requiring sustainable management.

135 See Ginzky et al. (2019: 4).
136 See Sec 1(2) of the Land Ordinance No. 74/1.

4.7 Wildfires, hunting, and cattle rearing

Human-induced wildfires are a significant driver of soil degradation in Cameroon. Despite existing fire management policies, strengthening wildfire prevention can help protect the soil. The 1994 Forestry Law prohibits starting fires that harm vegetation in national forests without authorisation, and hunting with fire is also banned. Penalties range from fines to imprisonment for violating these provisions.

Decree No. 95/531/PM outlines fire control responsibilities for forestry staff and the Ministry of Territorial Administration, including fire permits. However, local fire prevention committees are ineffective due to a lack of environmental focus.

In cattle rearing, where fires are used to clear land for fresh grass, policies are needed to address this issue. Implementing intensive cattle ranching systems, such as those in Indonesia,[137] could reduce soil pressure but would require a financial investment.

4.8 Conclusion

Cameroon's sectoral legislations show both strengths and weaknesses in soil protection. While they make some incidental references to soil protection, many are incomplete and lack enabling instruments, leading to delays in implementation. This issue, seen with the mining law, hampers effective soil protection. Ideally, laws should be detailed and complete, as in common law countries, or crafted with enabling instruments to ensure immediate implementation.

Cameroon's land tenure system, with its mix of statutory and customary rights, also complicates sustainable soil management. Historical legacies of land ownership by the state and land-grabbing by elites, along with the non-legalisation of customary land titling, further undermine soil protection. Current land laws lack explicit soil protection provisions, leaving them incoherent and incomplete.

These gaps call for legal reform, including a comprehensive land management framework and a national soil protection agency. Secured land rights would also support sustainable soil management practices, alongside policies that incentivise land conservation and improve access to education and poverty reduction.

137 Epule et al. (2014: 412).

5 Lessons learnt and recommendations

5.1 Positive lessons learnt and opportunities for soil protection

Soil protection in Cameroon is addressed through various scattered provisions in laws such as the Constitution, the Framework Law on Environmental Management, and sectoral laws for agriculture, mining, and forestry. While Decree No. 2011/2584/PM specifically addresses soil and subsoil protection, it lacks comprehensiveness. Key areas such as public participation, education, policy advocacy, and monitoring are essential for soil protection but are weakly addressed in existing laws.

Interventions to combat soil degradation should focus on sustainability, involving small-scale farmers and local communities, whose knowledge is vital for effective soil management. While the 1996 Framework Law recognises this, community empowerment and capacity-building have not been fully realised. Regulations such as the Common Provisions on Pesticides aim to protect human health and the environment, but the industrial sector remains governed by fragmented regulations.

Given the cross-cutting nature of soil issues, strong institutional frameworks are needed to coordinate and implement policies. While several government ministries and institutions support soil protection, their effectiveness is hampered by weak powers and poor coordination. Sustainable soil management requires an integrated approach, but current initiatives, such as the Inter-Ministerial Committee for the Environment, remain weak in practice.

5.2 Negative lessons learnt

In Cameroon, while the 1996 Framework Law on Environmental Management guarantees access to environmental information and public participation, its implementation is weak. Soil-related information is often outdated, inadequate, and not georeferenced, and public awareness of soil degradation is low. Key sectoral activities such as agriculture, mining, and industrial development contribute significantly to soil degradation, but existing legislation offers limited protection. The 2023 Mining Code indirectly addresses soil protection but lacks effective implementation due to a lack of enabling instruments.

Foreign investors in the mining sector often disregard environmental concerns, contributing to soil degradation through harmful practices including mercury use. The industrial sector also lacks specific legislation, leading to harmful effluent discharges that affect soil health, especially in cities such as Douala. Moreover, Cameroon's climate change policies overlook soil's critical role in climate mitigation, reflecting insufficient political will.

Agricultural practices, such as overuse of chemicals and unsustainable methods including slash-and-burn, further degrade soils. Legislative frameworks on pesticides, fertilisers, and environmental impact assessments are poorly implemented. Land tenure issues, such as the persistence of colonial-era laws and difficulties in obtaining land titles, complicate sustainable soil management.

5.3 Recommendations

To support the goal of doubling agricultural production and natural resource exploitation, soil protection legislation is crucial. Soil is the foundation of all environmental resources, so recommendations for strengthening soil protection are necessary. While the Constitution references natural resources, a specific provision addressing soil protection should be enacted. Parliament should then pass comprehensive legislation integrating soil management into existing laws. This would involve: creating detailed soil protection laws for clear, effective implementation; including soil management in education from elementary to university levels; educating farmers through capacity-building programs and outreach; ensuring soil management is included in contracts, governance, and transparency efforts; engaging stakeholders, including NGOs, in crafting soil legislation; strengthening decentralisation, empowering local entities with resources and authority to enforce laws; and consolidating applicable laws and creating an inter-ministerial committee for land-use decisions to ensure better coordination.

Regarding soil protection in forestry, strategies should include afforestation, restoration of degraded landscapes, engaging development partners, and updating the NEMP to set restoration standards. For enforcement, improving collaboration among entities, enhancing access to environmental information, and public participation are essential. An access-to-information law should allow the public to access soil-related information, promoting transparency. Strengthening monitoring structures and enforcing existing ESIA measures is also crucial.

For land rights, harmonising land tenure laws and recognising customary rights within modern legislation is key. A single land act should be passed, offering protection to customary land rights as private property. On foreign investment, laws should impose an environmental tax, certify commodities that may degrade soil, limit land acquisition, and hold investors accountable for social and environmental responsibility. Incentives should encourage farmers to invest in degraded lands, and governance and institutional capacity must be improved.

The CEMAC Sub Regional Community Secretariat should urge governments to enforce community regulations on soil protection and integrate soil protection into climate change legislation. Addressing harmful agricultural practices, such as unsustainable farming and pesticide use, requires policies to raise awareness and prevent soil

degradation. A moratorium on degrading practices and greater public access to soil data is vital.

Politicians' buy-in is critical for successful soil protection, requiring strong political will, supported by public advocacy, lobbying, and alliances with stakeholders. Clear, focused messaging is key to gaining support from government officials, legislators, and the public.

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