
RESEARCH ARTICLE

Desertification, Food Insecurity and Right to Food in Cameroon: A Legal Reflection

KASPA, K. NYONGKAA (Ph.D.)

Lecturer of Laws, Department of English Law, Faculty of Laws and Political Sciences, University of Yaoundé II, Soa, Cameroon

Corresponding Author: KASPA, K. NYONGKAA (Ph.D.), **E-mail:** Kingsley.kaspa@yahoo.com

ABSTRACT

Land is a vital resource that enables food production, and conservation of biodiversity facilitates natural management of water systems and, above all, acts as a carbon sink. The land, therefore, is fundamental to the ability humans possess to adequately feed, manage their water supply and adapt to extreme weather events. If not adequately managed, the land would degrade, erode and eventually result in the phenomenon of desertification – a monster capable of rendering millions malnourished, poor and unable to feed themselves and their families around the world. Desertification can result in forced migration, social instability and human inability to feed themselves. With these, desertification can lead to human rights abuse, especially the right to food, considered ideal for the enjoyment of the right to life. With the adoption of international, regional and national laws for the combat against desertification, there is a need to investigate the extent to which the right to food and human rights as a whole can be guaranteed. Thus, it is the dire need to feed humans that the ecosystems are degraded. Through the degradation of ecosystems by way of desertification, human rights,, especially the right to food,, are being compromised. To effectively harness this, stakeholders, including the State, farmers, local communities, and non-governmental organizations, must appropriate and effectively implement the decentralization package Cameroon has opted for, especially as it devolves effective participation in decision-making at all levels.

KEYWORDS

Desertification, land degradation, human rights, the right to food, food security, human well-being

ARTICLE DOI: 10.32996/bjes.2022.2.1.8

1. Introduction

1.1 Background

The world's population stands at some 7.7 billion¹ With estimated future increases of 8.5 billion by 2030, 9.7 billion by 2050 and 10.9 billion by 2100, respectively.² This increase in population needs to be matched with steady food, constant water availability and the enhancement of the natural environment - *the principal source of human life on earth*.³ While population boom might be positively interpreted to indicate human's ability to cope with and sustainably manage scarce natural resources to satisfy needs, it is equally true that the same has turned to heavily depend upon nature for subsistence, sometimes beyond the carrying capacity of their environment.⁴ This explains why arid, semi-arid and dry-sub humid areas, often considered to host human food production basins, have turned to be 'mint', even 'plundered' and 'rid-off' of their natural nutrients just to obtain marginal yields for human subsistence, an indication that population growth coupled with myriad human activities are growing too large to be sustained by

¹ United Nations, (2019), World Population Prospects. United Nations Department of Economic and Social Affairs, Population Department. Highlights, 2019, New York.

² Ibid.

³ Nyongkaa, K. (2018), The Role of Multilateral Environmental Agreements in the Protection of Human Rights in Cameroon: An Example of Biodiversity Related Conventions. A Thesis Submitted to the Faculty of Laws and Political Science of the University of Yaoundé II in Partial Fulfilment of the Requirement for the Award of Ph.D. in Law. Faculty of Laws and Political Science. Pp. 13-15.

⁴ McNeely, J. et al., (1990), Conserving the World's Biological Diversity. International Union for Conservation of Nature and Natural Resources, World Resources Institute, Conservation International, World Wildlife Fund-US and the World Bank. IUCN Glands, Switzerland. Pp. 22-34.

the earth's environment. Yet, land degradation and desertification have impacts on development in general, including; food security, human health, water availability and the ability to adapt to climate change.⁵

While food production and availability through agriculture remain vital for humans to lead a life of dignity on earth, the over-dependence on yet marginal lands for this purpose seemingly is underlined by the exhaustion of the natural yet supportive capacities of such lands to extremes, thereby resulting to land degradation and eventually to the phenomenon of desertification in most parts of the world.⁶ As such, agriculture, especially in developing countries, Cameroon inclusive, remains an important driver of land use, land-use changes and land degradation. This observation had long been formulated in 1949 when the French forester, Aubreville, in "*Climats, Forêts, et Désertification de l'Afrique Tropical*", expressed concerns about the alarming degradation and disappearance of tropical forests in many parts of Africa. While attributing such land degradation to agricultural activities, blames were equally trickled-down to the phenomenon of *slash and burnt*, mostly practised by the local peoples.⁷

1.2 Paving the Desertification Phenomenon

Desertification, a phenomenon that often impoverishes the arid, semi-arid and sub-humid ecosystems through the impacts of human activities besides the natural, remains a dreaded '*monster*' capable of sapping-off natural resources underpinning human livelihood thereby undermining human wellbeing and dignity, including the basic right to food.⁸ Having seen food production potential dwindling⁹ In a drastic manner throughout the years, with an estimated 1.5 billion persons dependent on degraded lands for food production and survival, of which more than 74% are poor, humans are coming to terms with the fact that the time for culminated actions can no longer be any further postponed.¹⁰ This is even more urgent given that an estimated 1 billion people are considered to be undernourished the world over, with a large part found in Africa, South America and Asia.¹¹

Globally, an increase in food production by up to 70% is required to feed the world's population by 2050, barely three decades from now. While this need appears to be urgent, more than 80% of agricultural lands are affected by desertification, with over 60 million hectares of land degraded.¹² Basically, when the human right to food is undermined and often neglected, it is human dignity as a whole that is in ruin.¹³ After all, has it not been strongly affirmed within the very first paragraph of the preamble of the Universal Declaration of Human Rights that all humans are recognized to possess inherent dignity, equal and inalienable rights as the very foundation of freedom, justice and peace in the world?¹⁴ Reducing and combating desertification, therefore, can just be

⁵ Bowyer, C. et al. (2009), Land Degradation and Desertification. Policy Department, Economics and Scientific Policies. European Parliament Study Committee on the Environment, Public Health and Food Safety. Pp. 23-28. These impacts are either direct/on-site impacts, including changes in soil functions experienced locally, and indirect/off-site impacts which affect other media, ecosystems, and human populations more or less remote from the degraded soil, including, for example; changes in forest health, food productivity, climate change and water stress.

⁶ According to article 1 of the United Nations Convention to Combat Desertification (UNCCD) (1994), desertification means "land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities."

⁷ Aubreville, A. (1949), *Climats, Forêts, et Désertification de l'Afrique Tropical*. Société d'Éditions Géographiques, Maritimes et Tropicales. Paris, pp. 351.

⁸ See articles 14, 16, 21, 22 and 24, African Charter on Human and Peoples Rights, (1981); article 1, Universal Declaration on Human Rights, (UDHR), (1948) is to the effect that "All human beings are born free and equal in dignity and rights...", while article 3 of the same is to the effect that, "everyone has the right to life..."; and article 25 echoes the right to a standard of living for all adequate for health and well-being including food. Within the Cameroonian Constitution, the right to food has been considered sacrosanct by affirming the attachment to the UDHR, the UN Charter and the African Charter to Human and Peoples rights, and all other duly ratified Convention in related issues, especially as the State engages in the duty to provide to all citizens conditions necessary for development. See generally the Preamble of Law No. 2008-1 of 14 April 2008 to amend and supplement some provisions of Law No. 96/6 of 18th January 1996 to amend the Constitution of 2nd June 1972.

⁹ Food insecurity is the situation in which people lack basic food intake to provide them with the energy and nutrients for fully productive lives.

¹⁰ Sanctioning the end of WWII was the adoption of the United Nations Charter in 1945, in which Chapter 1 underscores the need to achieve international cooperation in solving international problems of economic, social, cultural, or humanitarian while encouraging human rights protection without distinction. This Principle was matched with action as early as 1972 with the United Nations Conference on the Human Environment. By 1994, an international legal framework for tackling desertification, land degradation and drought was adopted under the Convention to Combat Desertification (UNCCD) by some 194 countries, amongst which 169 declared being affected by desertification. Article 1(a) is to the effect that 'desertification entails land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors including climatic variations and human activities.'

¹¹ See the World Atlas on Desertification: Mapping Land Degradation and Sustainable Land management Opportunities, (2015), European Commission and UNEP.

¹² Madeley, J, (1993), For Millions Life, is a Battle Against the Sand. Montreal Gazette of June 26, at 16.

¹³ It was agreed during the 1996 World Food Summit in Rome that food security can only be achieved "... if all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."

¹⁴ On December 10, 1948, the General Assembly of the United Nations adopted and proclaimed the Universal Declaration of Human Rights as a document most sacrosanct to the guarantee of human rights and dignity throughout the world without any distinction as to the political status countries or territories. Besides this, other global instruments which enshrined in a profound manner the varied rights inalienable to humans include; the United Nations International Covenant on Civil and Political Rights (UNCCPR) and the United Nations International Covenant on

a booster to food production and availability, the cornerstone for human rights guarantee, especially the right to food. The reason why it has been articulated in Goal 15, Sustainable Development Goals, as a priority to,

*"Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss."*¹⁵

While the above claims abound, some authors still question to know the veracity of the phenomenon. They see desertification as an imaginary event, yet a "no event, which has become a political tool of global importance which scientific basis grows weaker, distorting human understanding of social-environmental systems."¹⁶ How would this not be so when it has been proven that desertification mainly affects the marginalized and the poor, often largely constituting ethnic minorities around the world? Yet, the longer it is ignored, the worse it gets, thus, putting the human future at risk. It is an ugly word, though, for an ugly process, stripping away the abundance of the earth to articulating human well-being.¹⁷

Africa, especially in its Sub-Saharan region, particularly Cameroon, has turned to be the most affected by the phenomenon of desertification due to the high dependence of the population on agriculture, which practice is not generally the best.¹⁸ Practices including overgrazing, for instance, have led to the phenomenon of a "cattle corridor" in Uganda, while zero fallow periods in Gambian arable lands; 11-fold increase in forage needs in Nigeria, among others, have been directly or indirectly responsible for desertification with which food sufficiency can hardly be met and the human right to food short of being guaranteed. While this is so, food security has been considered as the access of all people at all times to sufficient, safe, and nutritious food to meet dietary needs and food preferences for an active and healthy life.¹⁹ To this, food security is fundamentally about soil health,²⁰ Water availability and food production of which can be severely jeopardized by desertification, land degradation and drought. Besides, desertification is currently threatening the livelihood of many in China, costing the country a staggering \$6.5 billion a year, with some 100 million hectares of Europe's farmland being degraded, with Spain among the most affected countries, the situation is not better in Australia and in the North American prairies, which export food to over 100 countries in the world. In short, most nations on earth are affected by desertification to some degree.²¹

From the above, it seems efforts to attain or guarantee the right to food, especially in arid, dry and sub-humid areas, would amount to desertification, and desertification would amount to food shortages with ramifications in depriving humans of food, the cornerstone for the right to life. Thus, investigating how desertification legal instruments trump the human right to food is a necessity. Ensuring the right to food, therefore, can be a veritable prism through which the fight against desertification could be channelled. In other words, if the fight against hunger by way of increasing yields in agricultural fields is to be attained, then desertification should be controlled. This is so given that desertification can be synonymous with depriving humans of quantitative and qualitative harvests affecting food sufficiency and the right to food. To effectively enhance this right, land degradation and drought must be effectively tackled at every level.²² To this effect, Principle 5, Rio Declaration has clearly articulated that,

Economic, Social and Cultural Rights (UNCESCR), 1966 respectively not leaving out other regional legal instruments to the same effect including the African Charter on Human and Peoples' Rights, 1981; the American Convention on Human Rights, 1969 with its San Salvador Protocol of 1988 and the European Convention on Human Rights just to mention but these few.

¹⁵ United Nations, (2015), Transforming Our World: The 2030 Agenda for Sustainable Development. A/RES/70/1. United Nations. Available at: <http://www.sustainabledevelopment.un.org> (viewed on the 6th of December, 2021).

¹⁶ Behnke, R. and Mortimore, M., (2016), The End of Desertification? Springer Earth System Sciences. DOI 10.1007/978-3-642-16014-1_1. Pp. 1-10.

¹⁷ Over 135 million people – equivalent to the populations of France, Italy, Switzerland and the Netherlands combined – face being driven from their homes and becoming environmental refugees. Desertification plays a part in political instability, social breakdown and the eruption of armed conflicts.

¹⁸ Lester, B. (2006), The Earth is Shrinking: Advancing Deserts and Rising Seas Squeezing Civilization. Earth Policy Institute. Available at: <http://www.earth-policy.org/updates/2006/update61.htm> (consulted on the 23rd October 2021); also see the United Nations Convention to Combat Desertification (UNCCD), (2004), A Carrying Pillar in the Global Combat Against Land Degradation and Food Insecurity. Background Paper for the San Rossore Meeting captioned: Climate Change: A New Global Vision; Pisa, Italy.

¹⁹ Food and Agricultural Organization (FAO), (1996), World Food Summit. Rome, Italy, 13-17 November 1996.

²⁰ Here, a distinction can be drawn between land and soil in that "Land" is the part of the Earth's surface that encompasses all-natural components that are normally stable or have predictable cyclical dynamics and are located above and below this surface. These components include the soil, atmosphere and climate, surface patterns, the original soil material, water, fauna, vegetation, and the results of present and past human activities, as they have significant impacts on the current and future use of land by humans. On the other hand, "soil" is the "product of the alteration, reshaping and organization of the top layers of the Earth's crust under the effects of living organisms, the atmosphere, and energy exchanges that occur there.

²¹ UNCCD White Paper 1, (2013), Economic and Social Impacts of Desertification, Land Degradation and Drought. 2nd UNCCD Scientific Conference.

²² See Millennium Ecosystem Assessment, (2005), Ecosystems and Human Well-being: Synthesis. Island Press, Washington, DC. World Resources Institute.

*"All states and all people cooperate in the essential task of eradicating poverty as an indispensable requirement...to decrease the disparities in standard of living and better meet the needs of the majority of the people of the world."*²³

2. Desertification Combat, Articulating the Right to Food

It is considered in article 25, Universal Declaration on Human Rights (UDHR) that;

"Everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including food...necessary for livelihood..."

And in that manner, article 11, International Covenant on Economic and Social Rights (ICESR), 1966, considers the right of citizens to food integrally as a state's duty. As such,

"(1). The State Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and family, including adequate food...to continuous improvement of living conditions..."

(2). The State Parties to the present Covenant, recognizing the fundamental right of everyone to be free from hunger...through specific programmes needed:

To improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge, disseminating knowledge of the principles of nutrition and developing or reforming agrarian systems in such a way as to achieve the most efficient development and utilization of natural resources..."

The above can only be achieved if the environment is sound, safe, and healthy,²⁴ though liaised under Cameroonian Constitution with some obligations,

*"Every person shall have the right to a healthy environment. The protection of the environment shall be the duty of every citizen. The State shall ensure the protection and improvement of the environment."*²⁵

Desertification is both a major cause and consequence of uncontrolled land use and degradation. Thus, unless the desertification phenomenon is stemmed, more arable lands would become arid with crop yields greatly reduced, thereby affecting in a negative manner food security leading to a general situation of the human right to food abuse. The fight against desertification, therefore, can be considered a veritable entry point through which the gamut of human rights could be effectively guaranteed, especially the right to food.

Within the Stockholm Declaration²⁶ Humans have been reawakened to realize the effects of 'man-made harm' to the environment, especially in developing countries where such harm, including desertification, is exacerbated by under-development. In this light, paragraph 4 of the Declaration's Preamble is to the effect that 'millions continue to live far below the minimum levels required for a decent human existence, and deprived of adequate food among other basic needs.' Should humans continue to wallow in deprivation when, with just '*fuller knowledge*' and '*wiser actions*,' humans could achieve a better life in an environment in keeping with human needs and hopes? The response to this question, of course, should be the negative, for there still exist 'broad vistas' for the enhancement of environmental quality and the creation of what is considered a 'good life' for humans.²⁷ Thus, the productivity of soils should be maintained or enhanced through measures that safeguard their long term fertility.

From the above, the World Charter for Nature²⁸ Considers the need to control activities that might impact nature in a negative manner with the use of the best available technologies that minimize significant risks to nature. In this light, agriculture, grazing,

²³ Also, see Goal 15 of the Sustainable Development Goals (2015).

²⁴ Article 24, African Charter on Human and Peoples Rights, (1981).

²⁵ See preamble, Law No. 2008-1 of 14 April 2008 to amend and supplement some provisions of Law No. 96-6 of 18 January 1996 to amend the Constitution of 2 June 1972.

²⁶ From the 5th to the 6th of June 1972, world leaders met in Stockholm, the capital of Sweden, under the United Nations Conference on the Human Environment to consider the need to adopt a common outlook and principles to guide the world in the preservation of the environment. Among the achievements of this Conference was the Stockholm Declaration. In paragraph 6 of the Preamble of this Declaration, humans are considered to have reached a point in history where their actions must be shaped with more prudent care for their environmental consequences, for if humans continue to be indifferent or ignorant, massive and irreversible harm would be done to the earth's environment on which human life and well-being are articulated.

²⁷ Ibid.

²⁸ World Charter for Nature, (1982), United Nations General Assembly. A/RES/37/7. Also available at: <http://www.un.org/documents/ga/res/37/a37r007.htm> (consulted on the 6th, December 2021).

forestry and fisheries practices need to be adapted to the natural characteristics and constraints of given areas, while areas already undergoing degradation through human activities should be rehabilitated in accord with their natural potential and compatibility with the well-being of affected populations. While acknowledging that 'humans are at the centre of concern for sustainable development, entitled to a healthy and productive life in harmony with nature,' the Rio Declaration,²⁹ on its part, stipulates in its Principle 4 that,

"In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it."

Ensuring human well-being, therefore, constitutes a fundamental basis upon which African countries committed to combating desertification in all their arid, semi-arid and dry sub-humid areas should rely.³⁰ In 2008, the Cameroon Academy of Sciences (CAS) brought together stakeholders involved in food security issues to explore opportunities to reduce food insecurity in the Sudano-Sahelian zone of Cameroon. The stakeholders are drawn from the academia, government, non-governmental organizations; development organizations, and the private sector were to provide a holistic and objective analysis that could enable decision-makers to make changes in policy orientations, research and capacity needs that are important in addressing the causes of food insecurity in the fragile agro-ecological zones of Cameroon.³¹ But then, could this have been successful without due regard for desertification? While this question lingers on, others have turned to question the extent of the phenomenon of desertification. Thus, if the phenomenon is not accepted, will it be effectively addressed?³²

3. Desertification and some Related Causes of Insufficient Food Production

The food humans need for survival on earth comes largely from the soil, and human food-needs can best be satisfied when soil fertility is maintained. Without the soil, therefore, there will be no crops, no animals, no plants, no forests and consequently no humans. The soil, therefore, hosts the various components of the ecosystems, which provide a variety of services essential to the maintenance of the integrity of life-support systems and the productive capacity of the environment.³³ While a centimetre of soil can take centuries to be formed, it can take just a few seasons to be destroyed or eroded away, especially when misused or exposed. It is further regrettable to know that once soil fertility is gone, it is truly gone for good.³⁴ Even so, 12 million hectares of land are rendered useless for cultivation annually, costing on a global scale some 42 billion Dollars for loss in production.³⁵ The phenomenon has been compared to a *skin disease* that appears in patches of severely degraded lands, capable of spreading to cover the entire body if not checked.³⁶ While the causes of desertification are myriad ranging from the natural to human land use and land-use-changes, it has been considered the world's most widespread environmental crisis.³⁷

3.1 Some Related Natural Causes of Desertification

Many authors have argued that desertification cannot be blamed on humans alone but also on natural factors too.³⁸ To this effect, the authors posit that the phenomenon of long-term dryness or drought should not be confused with desertification due to the fact that such dryness is reversible. Thus, from the demonstration of climatological research, the immediate cause of the great Sahel droughts, for instance, had not been human per se, but variation in sea-surface temperatures, though identified with

²⁹ Rio Declaration on Environment and Development, (1992), Report of the United Nations Conference on Environment and Development. United Nations General Assembly, A/CONF.1.

³⁰ See article 7, United Nations Convention to Combat Desertification, (1994), Annex 1: Regional Implementation Annex for Africa. In this Annex, Article 4(a) is to the effect that: "...African country Parties undertake to adopt the combating of desertification and/or mitigating the effects of drought as a central strategy in their efforts to eradicate poverty."

³¹ Tanya, V. and Mbah, D., (2009), Exploring Opportunities to Reduce Food Insecurity in the Sudano-Sahelian Zone of Cameroon: Forum Summary. Cameroon Academy of Sciences, Yaoundé, Cameroon.

³² Swift, J., (1996), Desertification: Narratives, Winners and Losers. In Leach, M. & Mearns, R., (Eds.), *The Lie of the Land: Challenging Received Wisdom on the African Environment*. Oxford: James Currey.

³³ See Programme 10, Agenda 21 Programme of Action for Sustainable Development, (1992), Integrated Approach to the Planning and Management of Land Resources. P. 84.

³⁴ UNEP, (2006), Deserts and Drylands. The UNEP Magazine for Youths-TUNZA. Vol. 4, no. 1, pp. 1-24. Available at: www.ourplanet.com (consulted, 25th, October 2021).

³⁵ Ibid.

³⁶ Ibid.

³⁷ United Nations Environment Programme, (UNEP), (2006), Deserts and Drylands. UNEP Magazine for Youths, TUNZA. Pp. 1-22.

³⁸ Bastin, G. et al., (2009), The Australian Collaborative Rangelands Information System: Preparing for a Climate of Change. *The Rangeland Journal*, 31, 111-125; Olsson, L., (1984), Monitoring the Impact of Rain Fed Agriculture and Grazing on Desertification in Central Sudan. In: *Rangeland Second International Congress*, Adelaide. CSIRO Wildlife and Rangelands Research.

terrestrial causes, could be traced to the changing composition of the air pollutants emitted on the northern hemisphere.³⁹ In this regard, refuting the fact that residents of the Sahel had been agents of their own misery or misfortune. In Cameroon, food insecurity has equally been attributed to natural factors, which include, among other things, irregular rains, floods, droughts, elephants, pests, migratory birds, and even birds.⁴⁰

3.2 Land-Use-Changes, Major Cause of Desertification and Food Insufficiency

Humans generally cause irreversible degradation of soil by disturbing the inherent stability of their natural environment. This is, even so, when Principle 4 of the Stockholm Declaration is to the effect that,

"The natural resources of the earth, including the air, water, land flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management as appropriate."

Further, global attention has been drawn to the fact that,

"The degradation of natural systems owing to excessive consumption and misuse of natural resources, as well as the failure to establish appropriate economic order among people and among states, leads to the breakdown of the economic, social and political framework of human civilization."⁴¹

Over cultivation can drain the soil of nutrients, starving crops. In the 1930s, farmers in the Great Plains of the United States, for instance, plough up native grasses to plant wheat. They were out to ensure food provision for the Americans, but then the prolonged drought killed the crops and exposed the topsoil.⁴² Windstorms swept the soil away in massive dust clouds, destroying approximately 40.5 million hectares of land, displacing millions of farmers, plunging the country into deeper economic hardship and, above all, rendering many unable to meet daily food needs. On a global scale, land degradation and desertification (LDD) through human activities are negatively impacting the well-being of at least 3.2 billion people, pushing the planet towards a sixth mass species extinction and costing more than 10% of the annual global gross domestic product in loss of biodiversity and ecosystem services.⁴³ While some States may consider that their arable land resources are nondepletable and that their preservation is not a priority, the Cameroonian government, among other things, has adopted a Framework Law No. 96/12 of 5 August 1996 relating to environmental management, which deals with the protection of soils, subsoil and lands against erosion, the prevention of pollution and environmental protection. This is because land uses for food production are generally not only considered a necessity but also inevitable. To be more precise, section 36 of this law provides,

"(1). The soil and sub-soil, as well as the limited renewable or non-renewable resources, shall be protected against any forms of degradation and jointly managed rationally by the competent Administrations.

(2). An enabling decree of this law, prepared in collaboration with the Administration units concerned, shall lay down the specific conditions for the protection and fight against desertification, erosion, loss of arable land and pollution of the soil and its resources...."

Overgrazing by some 3 billion cattle, sheep and goats strips the soil of its vegetation; and leaves it exposed to the winds and rain that erode it.⁴⁴ The more the vegetation becomes degraded due to human endeavours to satisfy food needs, the more they tend to overuse the natural resources upon which they depend for their income and food and the more many are rendered hungry. Thus, the more these resources become degraded, the more food security becomes jeopardized. This is the reason why the call to farmers all over the world to feed the growing world population must be matched with farmer's capacities to better manage and rehabilitate the lands, for as Kalbermatten, G., former Executive Secretary of the UNCCD, acknowledges, 'food security is fundamentally about soil fertility, water availability and food production, all of which are severely jeopardized by desertification,

³⁹ Toulmin, C. and Karen, B. (2016), Desertification in the Sahel: Local Practice Meets Global Narrative, In; Roy, H. and Mortimore, M. (2016), The End of Desertification? Disputing Environmental Change in the Drylands. Springer Earth System Science, ISSN 2197 9596.

⁴⁰ Abeh, L., (2003), Combating Food Insecurity in Northern Cameroon: Challenges and Opportunities. M.Sc. thesis, Department of Economics, Lund University.

⁴¹ See World Charter for Nature, (1982), op cit.

⁴² Such a process of degradation can be considered to occur when the agricultural, forestry and livestock potentials of land are diminishing and being destroyed by human-induced factors acting upon the already natural existing ones.

⁴³ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), (2018), Summary for Policymakers of the IPBES Assessment Report on Land Degradation and Restoration. Bonn, Germany: IPBES Secretariat. Available at: [https://doi.org/10.1016/0025-326x\(95\)90325-6](https://doi.org/10.1016/0025-326x(95)90325-6) (consulted on the 4th of December, 2021).

⁴⁴ Brabant, P., (1991), Le Sol des Forêts Claires du Cameroun. Exemple d'Etude d'un Site Représentatif en Vue de la Cartographie et de l'Evaluation des Terres. IRD Paris; Tome 1, pp. 544. Tome 2, pp. 278.

land degradation and drought. To him, many countries in sub-Saharan Africa have now lost the capacity to feed themselves, and a continent that once was more than self-sufficient in food at independence over 50 years ago is now turning into a massive food importer. Yet, he warns the new dependencies are not the way forward.⁴⁵

Deforestation robs the land of the trees whose roots hold the soil together and which channel rainwater down to the soil, exposing it to erosion.⁴⁶ Protecting forests, therefore, means fighting for the very survival of humanity. In Cameroon, myriad initiatives have been engaged in combating deforestation in 1994; for instance, a Forestry Law was adopted for the country, among others.⁴⁷

Forests might at times be cleared for agricultural purposes.⁴⁸ While such arguments remain sustained for the sake of ensuring the right to food of local populations, the Forestry Law has condemned acts that could lead to wanton destruction of forests, including burning, which could cause destruction to vegetation within national forest estate.⁴⁹ Also, the initiation of development projects likely to cause grave harm to forests must be subjected to prior studies.⁵⁰ While these abound, one observes that they are not being followed. In 2008, for instance, the Center for International Forestry Research (CIFOR) reported the extent of forest plundering in Cameroon.⁵¹ In like manner, Greenpeace reported in 2010 the illegal clearing of a huge forest expanse – some 73.086 hectares, home to an estimated 14.000 people by the Herakles, an American Company for the purpose of agriculture.⁵² Locals fiercely opposed the plantation project, fearing it would deprive them of their farmland and access to forest products, constituting their food basins, besides other opportunities. However, the priority to combat desertification should be the implementation of preventive measures for lands that are not yet degraded or which are only slightly degraded.⁵³

4. Right to Food and Food Insufficiency, Desertification is fast Becoming an Environmental Offence.⁵⁴

The world is being dredged of its natural resources, with much of what humans rely on for livelihoods at risk from new threats leading to environmental offences. However, it is regrettable that desertification which is robbing the world of its fertile lands for agriculture, capable of depriving humans of basic food needs and violating the right to food, has not been considered yet to fall under key environmental crimes.⁵⁵ Even so, one can rely on the fact that desertification can render human food sources less sustainable to clamour for the need to criminalize acts leading to desertification, especially in countries hard hit by the phenomenon with limited coping capacities. This is further amplified by the fact that,

4.1 Desertification Robs Humans of Basic Right to Food

After the Amazon basin, Congo is the world's largest in terms of tropical forests; it is a hotspot registering a new brew of ecological disasters, notably man-made, from ecosystems degradation gravely affecting human food sources. This area registers environmental crimes under wildlife while forgetting that agriculture, deforestation, and unsustainable cattle rearing might just be fundamental reasons why humans might tend to plunder wildlife in general. While wildlife resources might be resorted to for fast-cash, acts leading to desertification of the ecosystem are generally carried out through well organized criminal networks in contravention of existing legislation. As such, criminal sanctions should not only be limited to species devastation but equally to acts that could lead to the desertification and degradation of ecosystems inhabiting these protected species. One wonders if

⁴⁵ Kalbermatten, G. (2006), Deputy Executive Secretary of UNCCD in an International Symposium. Geneva.

⁴⁶ Glémarec, Y., (2002), Environmental Indicators for Tropical Areas. A Methodology Applied to Forest, Water and Soil Degradation in Thai Nguyen Province, Viet-Nam. In: Brabant, P., (Tech. Ed.), IRD, Paris.

⁴⁷ See Law No. 94/01 of 20th January 1994, to Lay Down Forestry, Wildlife and Fisheries Regulations.

⁴⁸ According to section 15 of the Forestry Law, forest clearing means the act of removing the trees or natural vegetational cover of forest land in order to use such land for purposes other than forestry, irrespective of the means used in the removal.

⁴⁹ See Section 14 of the Forestry Law.

⁵⁰ See section 16, Forestry Law.

⁵¹ CIFOR Annual Report, (2008), Thinking Beyond the Canopy. Bogor, Indonesia.

⁵² Greenpeace, (2013), Herakles Farms in Cameroon: Showcase in Bad Oil palm Plantation. Heracles' Crime File.

⁵³ See Programme Area 12, Agenda 21 Programme of Action for Sustainable Development, (1992), Earth Summit Agenda 21: The United Nations Programme of Action from Rio.

⁵⁴ Although the definition of the environmental offence is not universally agreed upon, it is most commonly understood as a collective term to describe illegal activities harming the environment and aimed at benefiting individuals or groups or companies from the exploitation of, damage to, trade or theft of natural resources including but not limited to serious offences and transnational offences.

⁵⁵ From the Environmental Investigation Agency Report, (2008), the G8, Interpol, EU, UN Environment Programme and the UN Interregional Crime and Justice Research Institute consider environmental crimes to include only: Illegal trade in wildlife found to be in contravention of the 1973 Washington Convention on International Trade in Endangered Species of Fauna and Flora, (CITES); Illegal trade in ozone-depleting substances (ODS) in contravention to the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer; dumping and illegal transport of various kinds of hazardous waste in contravention of the 1989 Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Other Wastes and their Disposal; illegal, unregulated and unreported (IUU) fishing in contravention to controls imposed by various regional fisheries management organizations (RMFOs); and lastly illegal logging and trade in timber when timber is harvested, transported, bought or sold in violation of national laws as regulated by the CITES.

protected species would effectively flourish within degraded ecosystems. Objectively, is it not by protecting such ecosystems, especially those considered to be found in the arid, semi-arid and dry sub-humid zones, that protected wildlife species could also gain their survival?⁵⁶

Today, environmental degradation represents a great threat not only to endangered species but also to humans whose livelihood is in peril, negative to guaranteeing the right to food. While this is so, it is worth emphasizing that the Cameroonian Constitution of January 18, 1996, clearly states in its preamble that *"Every person has the right to a healthy environment and the duty to protect it. The State ensures the protection and the improvement of the environment."*

This can also be fostered through the Harmonized Criminal Procedure Code of Cameroon (HCPC), as various stages of criminal procedure could be engaged from investigation to the execution of judgement.⁵⁷ Thus, section 59(1) of this law is to the effect that *"the commission of any offence may lead to the institution of criminal proceedings as the case may be..."*⁵⁸ However, this has been illustrated in *The People v. Bertrand Brink and Groupement Coop Buns*, as the Bamenda Court of First instance through the North West Provincial Chief of Brigade Control for the then Ministry of Environment and Forestry (MINEF) forwarded to the State Counsel a complaint against Groupement Coop Buns for among other things 'failure to rehabilitate degraded sites caused by the exploitation of laterite contrary to the 1994 forestry laws and the 1996 environmental code.'⁵⁹

4.2 Desertification Deprives Future Generations of Wellbeing

Desertification is a complex phenomenon due to the different forms it takes. Due to its impacts on human food needs, it further compromises opportunities for future generations whose interests are tailored within the concept of sustainable development – a concept considered as *"...development that meets the needs of the present without compromising the ability of the future generations to meet their own needs."*⁶⁰

From a general perspective, the needs of developing countries, especially those affected by desertification, evolve around how to satisfactorily obtain food, shelter, clothing and jobs beside others. When such needs are unable to be satisfied, already poor communities become vulnerable and overburdened with the challenges of overcoming poverty besides other developmental challenges. This partly explains why at the United Nations Summit on Climate Change held in New York, the then French President Nicolas Sarkozy expressed the fears of 'desertification becoming a major challenge to security and human survival.'⁶¹ But then, what facets lie for the present generation not to compromise future generations' opportunities of enjoying natural resources when they too are faced with the inability to have enough at present dispensation? In a bid to address this worry, one may be poised to consider *Gabcikovo-Nagymaros Project, between Hungary v. Slovakia*,⁶² Judge Weeramantry, then Vice President of the ICJ, in a separate opinion, elaborates on the role of sustainable development in international law as an efficient avenue through which the fight against desertification and its impacts on future generations could be channelled.⁶³ Nevertheless, this concept has become sacrosanct within many international environmental legal dispositions.⁶⁴

In Cameroon, it has become mandatory to protect the land against erosion and to prevent and fight desertification. Actions to this end would be undertaken through planning of land uses, zoning, reforestation, as well as the dissemination of ecologically efficient methods of land uses.⁶⁵ As such, acts carried out against this disposition become illegal.⁶⁶

⁵⁶ See Tamasang, C. & Kaspas, K. (2018), Conservation of Buffer Zones, Human Rights and the Environment under Cameroonian law in; Ruppel, C. & Kam Yogo, D. (Ed.), *Environmental Law and Policy in Cameroon: Towards Making Africa the Tree of Life*. Konrad-Adenauer-Stiftung, Yaoundé. Pp. 635-667.

⁵⁷ See Law No. 2005-007 of July 27; 2005, Establishing the Criminal Procedure Code of Cameroon.

⁵⁸ Ibid.

⁵⁹ *The People v. Bertrand Brink and Groupement Coop Buns, BS/78c/03-04*. This was so given that article 67(1) of the 1996 Environmental Management Code provides that *"Mining resources and quarries shall be explored and exploited in an ecologically rational manner, making allowance for environmental considerations."*

⁶⁰ See Brundtland Report, (1987), *Our Common Future*. World Commission on Environment and Development. Pp. 43-46.

⁶¹ France's Foreign and European Ministry, (2011), *France's External Action Against Land Degradation and Desertification: Desertification and Land Degradation, A Challenge for Us All*. Directorate-General of Global Affairs, Development and Partnership. Republic of France. Pp. 1-12.

⁶² *Case Concerning the Gabcikovo-Nagymaros Project (Hungary v. Slovakia)*, I.C.J., Sept. 25, 1997. Also available at: <http://www.icj-cij.org> (consulted, 15th December 2021).

⁶³ See Tamasang, C. & Tchhoffo, A. (2018), Principles of Environmental Management in Cameroon. In: Ruppel, O. & Kam, Y. (Ed.), *Environmental Law and Policy in Cameroon: Towards Making Africa the Tree of Life*. Konrad Adenauer Stiftung, Yaoundé, Cameroon. Pp. 55-176

⁶⁴ See Preamble of UNCCD in those countries experiencing serious droughts and/or desertification, particularly in Africa; also see article 9(1) of the same; articles 2 and 3, UNFCCC, (1992); also see Preamble, articles 1 and 10, CBD, (1992).

⁶⁵ See article 68(1), Environmental management Code, 1996 supra.

⁶⁶ Also see Section 65(1), Law No. 94/01 of 20th January 1994, to Lay Down Forestry, Wildlife and Fisheries Regulations op cit. which is to the effect that 'breach of provisions of law or regulations passed in the prescription of a management plan for permanent or community forest or

4.3 Desertification Undermines Peace

Besides human development and environmental protection, there is equally an urgent need to enhance peace and larger freedom.⁶⁷ Peace can be undermined by hunger, food insecurity and unsustainable agricultural practices, generally exacerbated by desertification. This is so given that the world's drylands are home to more than 2 billion people yet subject to desertification as a result of extended droughts, climate change and above all, human activities. Desertification and land degradation as security risks have lately been given increasing attention. In 2017, the Security Council went as far as adopting *Resolution 2349*, which identifies desertification as contributing factor to instability.⁶⁸ In 2008, for instance, Cameroon witnessed the growing challenge of food insecurity which in the early quarters of that year plunged the country into a food crisis, resulting in general instability. However, among the identified causes of the crisis inter alia, the difficulty of accessing inputs like fertilizers and pesticides, lack of or insufficient improved seeds, weak organization of producers, high post-harvest losses, dilapidated or low output husking or transformation equipment, poor funding of agricultural activities, and the isolation of major production areas, desertification was not identified as a major cause.⁶⁹

Generally, when people over depend on marginal land for survival with the threats of desertification and land degradation, including water scarcity looming, they will tend to migrate into other areas where their food and water sources are deemed guaranteed. When such a movement takes place, those moving are generally referred to as *environmental refugees*. Is this not similar to the threats against human security that cause people to flee during armed conflict or because of ethnic, political or religious persecution? *Environmental refugees* are sometimes considered a threat to the security of the host environment. Thus, they are sometimes considered to be moving along with desertification to their new host communities.⁷⁰

5. Major Challenges, Conclusion and Way Forward

Desertification and land degradation are mainly considered to be caused by land use and land-use changes, most importantly, agricultural activities for the enhancement of human well-being.⁷¹ Arguably, including secured and adequate livelihoods, enough food at all times with adequate access guaranteed. It is this quest that turns to affect other ecosystem services; for instance; actions to increase food production typically involve increased use of water and fertilizers or expansion of the area of cultivated land, the same actions often degrading other services such as quality water supply for other uses, reduction in biodiversity, and most importantly decrease in forest cover. This explains an urgent need to consider farmers and stockbreeders as principal actors in the fight against desertification. Even so, most farmers and breeders are considered to lack sufficient resources for this purpose. They urgently need support from their village communities, professional organizations, civil society, scientists and even the government, typical of a decentralized system. While this is so, most African countries, especially those affected by desertification, have a decentralized system of administration. What, therefore, might be responsible for such a lack of support?

The Cameroonian decentralization system, for instance, was introduced and concretized following the adoption of the 1996 Constitution, in which Article 1(2) affirms, "...the Republic of Cameroon... a decentralized unitary State..." incarnated through regional and local authorities, namely the regions and local councils,⁷² It is further consolidated only through Law No. 2019/024 of 24 December 2019, establishing a Bill to institute the General Code of Regional and Local Authorities. Even so, the positive impacts of decentralization on the livelihoods of Cameroonians still remain far-fetch, especially when it comes to land use and management.⁷³

Besides, there is a dichotomy between land ownership and use in Cameroon. In the Cameroonian Land Ordinance No. 74-1 of July 1974, article 2 is to the effect that "*the State shall be the guardian of all lands. It may in this capacity ensure rational use of land...*" this can be considered that all land in the country belongs to the State. While this is so, article 2 of the same law recognizes the right to use as private property by the population the following categories of lands: "...registered lands, freehold lands, lands

breach of obligations relating to industrial installations or implementation of clauses of the specification can entail suspension, withdrawal of exploitation document or approval of case as laid down by law.'

⁶⁷ Paragraph 1, Preamble to the SDGs, 2015, with further articulation on the need to build a peaceful, just, and inclusive society as a condition *sine qua non* to sustainable development and the need to build peace for the enhancement of sustainable development.

⁶⁸ See Security Council Resolution 2349 on the Conflict in the Lake Chad Basin Region, March 2017. Also see SIDA, (2017), The relationship between Climate Change and Violent Conflict. Green Tool Box/Peace and Security Tool Box Working Paper. Pp. 1-28.

⁶⁹ UN Special Rapporteur's Report on the Right to Food in Cameroon, (2008). Available at: <http://www.ohchr.org/en/issues/ffod/pages/foodindex.aspx> (consulted on the 25th of February, 2022).

⁷⁰ See *France24.com News Report*, 10 December 2021 on Cameroonian refugees flooding the Tchadian Region bordering the Farcha Forest outside N'Djamena, escaping from the Kousseri after the deadly conflict between the Musgum Community and the ethnic Choa herders.

⁷¹ Millennium Ecosystem Assessment, (MEA), (2005), Ecosystems and Human Well-being: Synthesis. Island Press, Washington, DC. World Research Institute.

⁷² See articles 54, 55, 56, and 57 of the Constitution of Cameroon.

⁷³ Nyongkaa, K. (2020), Decentralization of Biodiversity Management under Cameroonian Law: Searching for a Conservation Paradigm. American Research Journal of Humanities and Social Science, (ARJHSS), vol. 3, Iss. 12, pp. 66-83. Also available at: www.arjhss.com (consulted, 20th January 2022).

acquired under the transcription system, lands acquired by final concession, and lands entered in the Grundbuch.” The issue here is that one might not be able to carter for property upon which he or she maintains just *usufruct* rather than ownership rights. In this light, the State might face difficulties in coercively exercising the Constitutional disposition upon which environmental protection, including the fight against desertification, is considered to be the duty of every citizen.

Moreover, given that the State is obliged to ensure the protection and improvement of the environment by virtue of the Principles of international law, every step taken in this direction needs to be effectively implemented to enhance human rights and the right to food in particular.⁷⁴ It is now on the government, through the President of the Republic, to define such national environmental policies which implementation should be devolved to the government. This is so even as the devolution process has been so slow in Cameroon with the yet to be implemented and effective practice of decentralization.⁷⁵ This system of governance can just be the concrete avenue through which rural poverty can be overturned, yet, giving the opportunity for effective participation in decision-making for all, even at the grass-root level.⁷⁶

An effective policy should be taken at the level of the judiciary as it has been considered that independent judiciary and judicial process are vital for the implementation, development and enforcement of environmental law, especially in line with the fight against desertification. Here, an annual action programme needs to be prepared especially for the judiciary while enhancing training through free seminars, conferences and workshops. This is so given that members of the judiciary, as well as those contributing to the judicial process not only at the national level but also at regional and international levels, remain crucial partners for the promotion and compliance with and enforcement of international and national environmental laws.⁷⁷

Funding: This research received no external funding.

Conflicts of Interest: The author declares no conflict of interest.

References

- [1] Abeh, L. (2003), Combating Food Insecurity in Northern Cameroon: Challenges and Opportunities. M.Sc. thesis, Department of Economics, Lund University.
- [2] Barron, J. (2003), Dry Spell Analysis and Maize Yields for Two Semi-arid Locations in East Africa. *Agricultural and Forest Meteorology*. 23-37.
- [3] Barron, J. (2004), Dry Spell Mitigation to Upgrade Semi-Arid Rain-fed Agriculture: Water Harvesting and Soil Nutrient Management for Smallholder Maize Cultivation in *Machakos*, Kenya. Doctoral thesis Stockholm University, Sweden.
- [4] Bowyer, C. (2009), Land Degradation and Desertification. Policy Department, Economics and Scientific Policies. European Parliament Study Committee on the Environment, *Public Health and Food Safety*. 23-28.
- [5] European Community Report, (2002), Activities in Support of Preparation and Implementation of Action Programmes under the Convention to Combat Desertification, (UNCCD). European Commission.
- [6] Franz, P. (2004), *Key Questions Concerning the Human Rights and Environment Debate: An Introduction*. In: UNEP, (ed.), Human Rights and the Environment Proceedings of a Geneva Environment Network Roundtable. Switzerland. 1-6.
- [7] Gabriels, D. (2008), *Combating Desertification: Monitoring, Adaptation and Restoration Strategies*. Ghent University, UNESCO.
- [8] Gichuki, L. (2019), Reviving Land and Restoring Landscapes: Policy Convergence between Forest Landscape Restoration and Land Degradation Neutrality. *Gland, Switzerland, IUCN*. viii-34.
- [9] McNeely, J. (1990), Conserving the World's Biological Diversity. International Union for Conservation of Nature and Natural Resources, World Resources Institute, Conservation International, *World Wildlife Fund-US and the World Bank. IUCN Glands, Switzerland*. 22-34.
- [10] Millennium Ecosystem Assessment, (MEA), (2005), Ecosystems and Human Well-being: Synthesis. Island Press, Washington, DC. World Research Institute.
- [11] Nyongkaa, K. (2018), The Role of Multilateral Environmental Agreements in the Protection of Human Rights in Cameroon: An Example of Biodiversity Related Conventions. A Thesis Submitted to the Faculty of Laws and Political Science of the University of Yaoundé II in Partial Fulfilment of the Requirement for the Award of Ph.D. in Law. Faculty of Laws and Political Science. 13-15.
- [12] Pimentel, D. (2006), Soil Erosion: A Food and Environmental Threat. *Environment, Development and Sustainability*. 119-137.
- [13] Stroosnijder, L. (2008), Linking Drought to Desertification in African Drylands. In: Gabriels, D. (ed.), *Combating Desertification: Monitoring, Adaptation and Restoration Strategies*. UNESCO. 5-15.
- [14] Tamasang, C. & Tchoffo, A. (2018), Principles of Environmental Management in Cameroon. In: Ruppel, O. & Kam, Y. (Ed.), *Environmental Law and Policy in Cameroon: Towards Making Africa the Tree of Life*. Konrad Adenauer Stiftung, Yaoundé, Cameroon. 55-176.
- [15] Toulmin, C. and Karen, B. (2016), Desertification in the Sahel: Local Practice Meets Global Narrative, In; Roy, H. and Mortimore, M. (2016), *The End of Desertification? Disputing Environmental Change in the Drylands*. Springer Earth System Science, ISSN 2197 9596.
- [16] UNEP, (2012), Advancing Justice, Governance and Law for Environmental Sustainability. Rio+20 and the World Congress of Chief Justices, Attorneys General and Auditors General. UNEP Division of Environmental Law and Conventions

⁷⁴ See Principles 21 Stockholm Declaration (1972); and 2 of Rio Declaration, (1992).

⁷⁵ See Cameroonian Decentralization Law, 2019; section 3, Law No. 96/12 of 5th August 1996 relating to Environmental Management.

⁷⁶ Ibid.

⁷⁷ UNEP, (2012), Advancing Justice, Governance and Law for Environmental Sustainability. Rio+20 and the World Congress of Chief Justices, Attorneys General and Auditors General. UNEP Division of Environmental Law and Conventions.