



Economic and Social Council

Distr.: General
28 January 2022
English
Original: French

Deutscher Bundestag

Ausschuss für wirtschaftliche
Zusammenarbeit und Entwicklung

Ausschussdrucksache

20(19)319

TOP 7 TO 12. Juni 2024

18. Juni 2024

Permanent Forum on Indigenous Issues

Twenty-first session

New York, 25 April–6 May 2022

Discussion on the six mandated areas of the Permanent Forum (economic and social development, culture, environment, education, health and human rights), with reference to the United Nations Declaration on the Rights of Indigenous Peoples, the outcome document of the World Conference on Indigenous Peoples and the 2030 Agenda for Sustainable Development

Indigenous peoples and resource conflicts in the Sahel and in the Congo Basin

Note by the Secretariat

Summary

At its twentieth session, the Permanent Forum on Indigenous Issues appointed Hindou Oumarou Ibrahim and Vital Bambanze, members of the Forum, to conduct a study on indigenous peoples and resource conflicts in the Sahel and in the Congo Basin, and to present that study to the Forum at its twenty-first session.



I. Introduction

1. Indigenous peoples live in close relationship with their environment. They nurture and care for the ecosystems that underpin not only their economy but also their cultural and social life, and that provide them with the vast majority of the essential goods and services necessary to maintain their way of life. Ecosystems directly provide indigenous communities with food and drinking water, as well as materials for building, clothing and the production of artefacts; essential elements for the practice of traditional medicine, which underpins health care in many communities; and sacred sites for religious practices.

2. Owing to this unique relationship with ecosystems, indigenous peoples are especially attuned to their proper functioning. The degradation of ecosystems therefore poses significant risks to the survival of communities. From time immemorial, indigenous peoples have been forced to endure, in particular, conflicts over the natural resources of their communities. In general, conflicts tend to be primarily related to the issue of land, because indigenous land is often coveted by other communities wishing to exploit its mining, forestry or agricultural potential for purposes other than those traditionally pursued by indigenous peoples. In a context of widespread degradation of ecosystems linked to climate change and biodiversity collapse, other conflicts are emerging, fuelled by the scarcity of natural resources, particularly in the regions most affected by the consequences of these global environmental crises.

3. Africa is one of the continents most affected by the consequences of climate change. As such, significant pressures are already being exerted and will, in the coming years, continue to be exerted on its ecosystems and their proper functioning. Numerous conflicts that can be wholly or partly attributed to environmental issues, such as access to water and fertile land and the destruction of ecosystems, have already broken out on the continent. This is especially the case in the Sahel, where conflicts exist between farming, herding and fishing communities, but also in the Congo Basin, where conflicts are mainly centred on the uses and functions of forest ecosystems.

4. While peace and security are an integral part of the 2030 Agenda for Sustainable Development (Sustainable Development Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels), and environmental degradation contributes significantly to increased pressure on ecosystems and natural resources, indigenous peoples may find themselves involved in conflicts that often exacerbate their already precarious, vulnerable and marginalized situation.

5. Indigenous peoples can also offer solutions for the prevention and resolution of natural resource conflicts. Indeed, their traditional knowledge can be mobilized to enable the establishment of systems for the sustainable management and sharing of natural resources, thereby contributing to climate change adaptation and mitigation, ecosystem protection and biodiversity restoration strategies. Such strategies can contribute significantly to the achievement of all the Sustainable Development Goals while also helping to mitigate conflicts.

II. Indigenous peoples of the Sahel and of the Congo Basin

6. The Sahel is made up of Burkina Faso, the Gambia, Guinea, Mali, Mauritania, Niger, Nigeria, Senegal, Chad and Cameroon, while the Congo Basin is shared by Burundi, Cameroon, the Congo, Chad, Gabon, the Central African Republic, the Democratic Republic of the Congo and Rwanda. Some countries, such as Chad and Cameroon, straddle the two areas. Chad encompasses part of the Congo Basin ecosystems, while Cameroon extends into an area of the Sahel.

7. The indigenous peoples of these countries are discontinuously distributed and can be classified into two broad categories, namely hunter-gatherers and herders. Their ways of life are different, and they speak different languages in different countries. The vast majority of the hunter-gatherers, also known as “forest peoples,” live in the Congo Basin region, while the majority of the herders live in the Sahel region.

8. The most widely known of the hunter-gatherer communities are the Batwa, commonly known as the Pygmies of the Great Lakes region (Burundi, Cameroon, Democratic Republic of the Congo, Uganda and Rwanda).

9. They are known as Yaka and Babendjelle in the northwestern Congo Basin and as Baka and Bagyeli in Cameroon. Although they speak different languages, all Central African Pygmies acknowledge that their common ancestors were the original hunter-gatherer inhabitants of the tropical forests.

10. Herder indigenous peoples are found in West and Central Africa. They include the Tuareg, who live in Mali, Burkina Faso and Niger, and the Fulani, including the Mbororo, who comprise the largest group of indigenous peoples living in Burkina Faso, Cameroon, Mali, Niger, Nigeria, the Central African Republic and Chad. The Toubou are also present in Niger and Chad.

11. The Ogoni people live in a region of southwestern Nigeria called Ogoniland, which is located in the northeastern plains of the Niger Delta in Rivers State. The Ogoni had inhabited that region for nearly 1,000 years when the British arrived in 1861. They are mainly farmers and fishermen.

12. Indigenous organizations in both regions of Africa are actively involved in advocating for the rights to their land, institutions and traditional practices, and in promoting an indigenous model of development and conservation, taking into account the social and environmental issues that allow indigenous peoples to preserve their identity and to have a greater say on their future. However, indigenous peoples in both regions face discrimination, marginalization and exclusion. The difference between “assimilation”, as a form of integration into society associated with a loss of identity, and “integration”, as participation as full members of society while retaining their identity, is the main concern of indigenous organizations.

13. Advocacy for the rights of indigenous peoples is a meaningful alternative to ethnic conflict, offering an opportunity for constructive negotiations and agreements between States and peoples. The goal of the indigenous rights movement is to enable people to protect their future without resorting to violence.

III. Conflicts and natural resources

A. Definitions

14. There are several kinds of environmental and natural resource conflicts. In general, in this report, environmental and natural resource conflicts are defined as tensions that can lead to violence between State and non-State actors in communities, one of the main causes of which is disagreement or competition over access to or management of natural resources and the distribution of the tangible or intangible benefits that can be derived from these resources. In that regard, the authors of the report rely on numerous scientific studies and analyses that help to establish links between conflict and the environment.¹

¹ For example, Marie K. Schellens and Arnaud Diemer, “Natural resource conflicts: definition and three frameworks to aid analysis”, in *Partnerships for the Goals*, Leal Filho W., Azul A.M., Brandli L., Lange Salvia A., Wall T., eds. (Springer, Cham., 2020).

15. These links are increasingly established and recognized by international institutions and Governments. For example, the Security Council has recognized the potential links between climate change and security since 2011. In a recent report,² the organization Security Council Report indicated that while Council members remain divided on the links between climate change and conflict, the subject is increasingly being considered by the Council. Several organizations,³ research centres and military institutions are also considering peace and security issues related to the environment.

16. In a 2009 report, the United Nations Environment Programme estimated that at least 40 per cent of internal conflicts over the past 60 years have been related to natural resources.⁴ Climate change and biodiversity collapse are likely to exacerbate these conflicts, especially in regions that are most affected by and most vulnerable to that change.

B. Climate change and natural resource conflicts in Africa

17. Africa is one of the regions of the world that is most affected by climate change, enduring significant impacts from and being highly vulnerable to the phenomenon.

18. According to the sixth assessment report of the Intergovernmental Panel on Climate Change, published in July 2021, the African continent is already experiencing a significant temperature increase.⁵ The Panel found that mean temperatures and hot extremes have emerged above natural variability, relative to 1850–1900, in all land regions in Africa (high confidence), and the rate of surface temperature increase has generally been more rapid in Africa than the global average, with human-induced climate change being the dominant driver (high confidence).⁶ Observed temperatures increased by 0.6°C to 0.8°C on average between 1970 and 2020, with some countries already experiencing warming of more than 1.5°C. In the long term, warming could reach between 3°C and 6°C in the region, depending on the different emission scenarios.

19. In terms of consequences, the Intergovernmental Panel points out that the observed increase in hot extremes (including heat waves) and decrease in cold extremes (including cold waves) are expected to continue throughout the twenty-first century with increased global warming (high confidence), and that relative sea level has risen around Africa at a higher rate than the global average over the past three decades. Relative sea-level rise is likely to continue around Africa, contributing to increases in the frequency and severity of coastal flooding in low-lying areas and to coastal erosion along most sandy coasts (high confidence). The frequency and

² Security Council Report, “The UN Security Council and Climate Change”, Research Report 2021, No. 2 (New York, 2021).

³ See, for example, United Nations, Department of Political Affairs and Peacebuilding, “Under-Secretary-General Rosemary A. DiCarlo’s remarks at the Arria formula meeting on ‘Climate and security risks: the latest data. What can the UN do to prevent climate-related conflicts and how can we climate-proof UN in-country activities?’”, remarks, 22 April 2020, available at <https://dppa.un.org/en/climate-change-multiplying-factors-lead-to-insecurity-millions-rosemary-dicarlo-tells-arria-formula>; or United States Department of Defense, “Climate Risk Analysis”, October 2021, available at <https://media.defense.gov/2021/Oct/21/2002877353/-1/-1/0/DOD-CLIMATE-RISK-ANALYSIS-FINAL.PDF>.

⁴ United Nations Environment Programme, *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*, (Nairobi, February 2009).

⁵ Intergovernmental Panel on Climate Change, “Climate Change 2021: The Physical Science Basis”, *Sixth Assessment Report* (2021).

⁶ Ibid., “Regional Fact Sheet Africa”, available at www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Africa.pdf.

intensity of heavy precipitation events are projected to increase almost everywhere in Africa with additional global warming (high confidence).

20. In addition to those continent-wide impacts, regional impacts include increased droughts and reduced precipitation, particularly in Central and West Africa. Those physical impacts have significant consequences on the populations living in these regions, given their considerable impact on agriculture, the chief economic activity, especially in rural areas. In most of the countries of the Sahel and the Congo Basin, the rural population accounts for more than 50 per cent of the total population, compared to about 43 per cent of the global population. In some countries, such as Burkina Faso, Niger and Chad, the rural population accounts for up to 70 per cent of the total population.⁷ Those populations, which include indigenous peoples, are therefore particularly vulnerable to the consequences of climate change. Several of those consequences are likely to place a strain on natural resources and spark conflicts over their use.

C. Situation in the Sahel

Conflicts over the use of natural resources

21. First, the availability of water resources, including drinking water for human consumption and water for agricultural use for irrigation or for livestock, is likely to cause conflicts, because it affects the population's main economic activities, including agriculture, fishing and animal husbandry. The well-known example of Lake Chad, whose surface area and water volume shrunk by 90 per cent between 1960 and 2020, illustrates the consequences of climate change, as the lake's waters contribute to agricultural systems upon which at least 40 million people spread across Cameroon, Niger, Nigeria and Chad directly rely for their food security.⁸ While climate change is unlikely to be the sole cause of the disappearance of Lake Chad, the phenomenon plays an important role in disrupting the water cycle.

22. Secondly, the availability of fertile land is also a source of potential conflicts, as climate change and increased periods of agricultural drought cause desertification, making arable land scarce. By causing temporary or permanent decreases in crop yields and the availability of livestock feed in grassland and savanna habitats, climate change creates competition for arable land and can also cause land-use change, which can lead to conflict. In the Sahel, for example, the search for fertile land may force farmers to convert new land originally used by herders in an effort to increase their agricultural production in a context of reduced yields. These conversions can lead to the closure of transhumance corridors traditionally used by nomadic herders, who live and move their herds following the seasons. Nomadic herders, who are also affected by climate change, which reduces the yield from their animal production (such as milk and meat), may be tempted to use irrigation wells and recently converted agricultural land to graze their herds, which are suffering because pasture is scarce, leading to conflicts with farmers.

23. Thirdly, the destruction of some ecosystems for agricultural use, including for the cultivation of cash crops for export, can in some regions lead to conflicts over land grabbing. Some forest regions in Africa, especially in the tropical and subtropical zone, can be converted into areas for the cultivation of certain export crops, such as oilseeds (palm and rapeseed), but also for the large-scale production of cereals and

⁷ World Bank, "Rural population (% of total population)," 2020, available at <https://donnees.banquemondiale.org/indicateur/SP.RUR.TOTL.ZS?view=map>.

⁸ Inès Evrain, "Lac Tchad : quand l'or bleu devient source de tension", International Security and Defense, 12 February 2021, available at <http://www.isd.sorbonneonu.fr/blog/lac-tchad-quand-lor-bleu-devient-source-de-tension/>.

vegetable proteins. These cultivation practices may lead to the grabbing of lands used for farming by local communities and indigenous peoples under traditional land tenure systems without their free, prior and informed consent, and without an equitable sharing of the benefits of this land-use change.

24. Fourthly, climate change is contributing to significant internal and external migrations in Africa, which, by destabilizing social structures, are also becoming a source of conflict. Indeed, the exodus of young men from indigenous and non-indigenous rural communities to cities is responsible for the breakdown of family units and communities. By helping to exacerbate food insecurity, against a backdrop of rapid population growth, climate change also helps to amplify the trends of rural exodus or of migration towards areas of concentration of natural resources, which have the most productive ecosystems, such as lakes (Lake Chad being an example), delta areas and forest regions, where agricultural activities are more likely to be sustained. By fostering the concentration of populations in those regions, such internal migrations exacerbate tensions over the lands of indigenous peoples and their ecosystems, which are being degraded by over-exploitation.

25. These conflicts are part of a broader phenomenon of growing regional tensions linked to other political and cultural factors, as well as to the presence of terrorist groups and violent factions which sometimes exploit these tensions to serve their interests.⁹

Natural resource conflicts and indigenous peoples

26. The indigenous peoples of the Sahel, in Burkina Faso, Mali, Niger, Nigeria, the Central African Republic and Chad, are mainly nomadic communities. The two main peoples, the Fulani and the Tuareg, are nomads and herders who practise transhumance, moving their livestock following the seasons for grazing purposes. They have a long tradition of cooperation and collaboration with sedentary farming communities, but conflicts have increased in the last decade, which has been marked by intensified environmental changes related to global warming.

27. The consequences of climate change described above are now resulting in an increase in conflicts affecting those communities of indigenous peoples. The most frequently observed conflicts include:¹⁰

- Conflicts over damaged crops;
- Conflicts over the use of watering points;
- Conflicts over cattle rustling;
- Land disputes;
- Conflicts over blocked transhumance corridors.

28. Such conflicts can spark tensions between communities faced with growing food insecurity. They can also be exploited by certain categories of actors to stoke tensions between communities, resulting in the increased marginalization of certain communities, including indigenous communities, and even degenerating into violent conflicts, as has often been the case in recent years.

⁹ See, for example, Norwegian Institute of International Affairs and Stockholm International Peace Research Institute, "Climate, Peace and Security Fact Sheet: Sahel", April 2021, available at https://reliefweb.int/sites/reliefweb.int/files/resources/Climate%2C%20Peace%20and%20Security%20Fact%20Sheet%20Sahel%20-%20News%20_%20NUPI.pdf.

¹⁰ Loïc Bisson and others, *Between hope and despair: Pastoralist adaptation in Burkina Faso*, CRU Report (The Hague, Clingendael, 2021).

29. In Burkina Faso, Mali, Niger, Nigeria, the Central African Republic and Chad, numerous stakeholders have noted an increase in the number of conflicts between herders and farmers, as well as an intensification of these conflicts, which regularly degenerate into violent clashes. According to the Africa Center for Strategic Studies,¹¹ there have been more than 15,000 deaths related to farmer-herder violence in West Africa since 2010. Half of these deaths have occurred since 2018.¹² In all of these countries, violence has risen sharply in the last three years, with deaths currently averaging 2,000 per year.

30. There have been several reports of villages of farmers and herders being completely destroyed as a result of violence between rival communities, often owing to tensions over natural resources. For example, in Mali in 2019, an attack on a herders' village caused more than 160 casualties,¹³ including women and children, while the following year, an attack on four farmers' villages caused more than 40 civilian and military casualties.¹⁴

31. Case studies by country show that farmer-herder conflicts sometimes cause more casualties than conflicts involving terrorist groups.¹⁵

32. All climatic and environmental factors directly or indirectly affect the region's indigenous peoples, who are frequently pulled into natural resource conflicts. As in many parts of the world, indigenous peoples also face difficulties in exercising their basic civil and political rights, making them particularly vulnerable during such conflicts.

33. This is especially true of conflicts over access to land, which are particularly numerous and create problems for indigenous peoples, especially given the difficulties both indigenous and non-indigenous rural populations continue to face in gaining access to justice. Owing to their marginalization, indigenous peoples in the Sahel often cannot achieve literacy in the national languages of the countries in which they live, making it difficult for them to gain access to justice. Moreover, these peoples are very often nomadic peoples practising transhumance within one country or across the region, complicating their access to the judicial system, as they lack a permanent place of residence. Access to the system will not replace the important role that they play, owing to their way of life, in maintaining the fragile ecosystems of the Sahel.

34. The legal framework for dealing with these conflicts is often inadequate and is also characterized by a lack of training for judicial officials, who do not necessarily know how to handle situations involving tensions and conflict over land use.¹⁶ In some cases, legislative developments do not favour indigenous peoples' traditional ways of life, as such developments may undermine fundamental elements of these

¹¹ Leif Brottem, "La complexité croissante des conflits entre agriculteurs et éleveurs en Afrique de l'Ouest et centrale", Bulletin de la sécurité africaine, n° 39, Centre d'études stratégiques de l'Afrique, July 2021, available at <https://africacenter.org/wp-content/uploads/2021/08/ASB-39-FR-aug-4-AB.pdf>.

¹² Ibid.

¹³ Radio Télévision Luxembourg, "Mali : massacre dans un village peul, au moins 160 morts", article, 26 March 2019, available at www.rtl.fr/actu/international/mali-massacre-dans-un-village-peul-au-moins-160-morts-7797294270.

¹⁴ Le Monde, "Nouveau massacre dans des villages dogon dans le centre du Mali", article, 4 July 2020, available at www.lemonde.fr/afrique/article/2020/07/04/nouvelles-tueries-au-mali-au-moins-40-villageois-et-soldats-tues_6045207_3212.html.

¹⁵ Al Chukwuma Okoli and Cornelius O. Ogayi, "Herdsman militancy and humanitarian crisis in Nigeria: a theoretical briefing", African Security Review, vol. 27, No. 2 (2018).

¹⁶ Fransje Molenaar and others, *The Status Quo Defied: The Legitimacy of Traditional Authorities in Areas of Limited Statehood in Mali, Niger and Libya*, CRU Report (The Hague, Clingendael, 2019).

ways of life, such as nomadism, by encouraging sedentarization through economic or legal mechanisms.¹⁷

35. In addition, traditional mechanisms for resolving natural resource conflicts that have been used effectively in the past now seem inadequate in the face of increasing pressures on natural resources and natural resource conflicts.

D. Situation in the Congo Basin

Conflicts

36. Wherever people live, friendships are formed, and conflicts arise. For the purposes of this study, the authors focused on conflicts between indigenous peoples and other local communities.

37. Drivers of conflict include the establishment of protected areas, which take up part of the natural environment of indigenous peoples and are regulated by laws that prevent indigenous peoples from undertaking their activities, such as hunting and gathering.

38. In fact, most of the protected areas in the Congo Basin have been established without taking into account the customary rights to these lands or the historical, cultural or socioeconomic realities that have shaped these spaces and ecosystems over the thousands of years that they have been inhabited and used by indigenous peoples.

39. Available reports indicate that the establishment of 26 of the 34 protected areas studied led to the total or partial relocation of the rural communities and indigenous peoples that had previously inhabited these areas. While it is probably impossible to set out all the repercussions of these displacements, it is safe to say that these populations, which depend mainly or entirely on natural resources and the environment for their livelihood, have had to cope with changes and adapt to new territories and the limitation of their means of subsistence.

40. While the Baka, the Bayaka and the Mbuti are accused of poaching, the Batwa are accused of destroying the environment when they extract clay, which serves as the raw material for making pots. They are also often in open conflict with environmental conservation organizations, the administration and, above all, the owners of land with a clay-rich subsoil. They blame the Batwa for the landslides caused by the digging of ditches during clay extraction. Such conflicts lead to real clashes between the Batwa natives and their farmer neighbours. This also applies to transboundary protected areas, such as those between Cameroon and Chad or between the Central African Republic and the Democratic Republic of the Congo. The laws of these countries are not harmonized with respect to the rights of indigenous peoples, and the protected areas limit the active participation of indigenous peoples in the use of the resources necessary for their survival, such as for livestock grazing during transhumance or hunting and gathering. This causes conflicts between water and forestry officials and indigenous communities, who are victimized, and between indigenous peoples and local communities.

Land conflicts

41. Land conflicts are the most frequent conflicts in Manono territory in the Democratic Republic of the Congo. As Jean Omasombo, a professor at the University of Kinshasa and a researcher at the Royal Museum for Central Africa in Tervueren, Belgium, points out, the root cause of these conflicts is the decline in the standard of

¹⁷ Leif Brottem, “La complexité croissante des conflits entre agriculteurs et éleveurs en Afrique de l’Ouest et centrale”.

living of the Bantu people, which has forced them to turn to the forest – which feeds the Pygmies – for their subsistence.

42. Conflict resolution mechanisms vary depending on the nature of the land conflict. There are three kinds of conflicts: conflicts over plot boundaries, conflicts over boundaries between groups, and conflicts between farmers and herders.

Conflicts over plot boundaries (farms, compounds and others)

43. These conflicts have increased with the return of people repatriated from neighbouring countries, including the United Republic of Tanzania and Zambia. Many returnees have found that their houses have been sold, and that even their plots, farms and compounds have been plundered. Such conflicts are also sparked by the illegal sale of plots to several people by the land registration authorities, the displacement of boundary pillars by neighbours, and the establishment of parallel property titles. Conflicts of this nature, which are often resolved by peace committees or by political, administrative and traditional authorities, have not yet resulted in violence. However, it would be essential to bolster these existing peaceful resolution mechanisms with peaceful land-conflict resolution and mediation techniques. Nevertheless, bloody clashes, family rifts and organized corruption make the situation sometimes impossible to control. The land registration and land title officials, certain political, administrative and traditional authorities, members of influential families and other influential persons in the territory are accused of being the main instigators of these conflicts.

Conflicts over the boundaries of certain groups for access to resources

44. Such conflicts often pit traditional leaders against one another and are linked to the presence of minerals in certain areas where boundaries are disputed by traditional leaders. The conflicts have led to the burning of houses in neighbouring communities, killings, targeted assassinations, clashes and other acts of violence. In addition to traditional leaders, certain members of the political class and elders of the territory, military authorities and militia leaders also have a hand in these conflicts, which are often resolved only through violence. Nevertheless, in order to address the hankering over the boundaries among various entities, it would be useful to organize a series of exchanges between the parties with a view to transforming these conflicts and setting out the prerequisites for the equitable distribution of resources as recognized by the law on decentralization. In order to restore already severed ties, it would be crucial to organize community forums to enable decision-makers to know each other's desires, discuss geographical constraints and find non-violent stop-gap solutions to the issues that divide them.

E. Impact of climate change on the lives of indigenous peoples in the Congo Basin

Environmental impacts

45. Indigenous peoples were well aware of the environmental changes that have occurred over the past 20 years, but were not able to associate them with global warming or local environmental pressures.

46. The changes observed, which include rising temperatures, drying up of watercourses and water pollution, can be linked to climate change. From discussions on the seasonal calendar exercise, communities clearly identified the following changes in the length of the seasons: the rainy season used to be longer and the dry season shorter, and the dry season has grown longer, to the point that it lasts as long as the rainy season. Lower precipitation leads to the drying up of watercourses and causes

water pollution (as surface water “flows” less during the year and becomes stagnant and polluted). Lower precipitation and rising temperatures are affecting the lives of indigenous peoples in the Congo Basin. Medicinal trees are progressively disappearing, to the detriment of the health of the indigenous inhabitants. The animals that these hunter-gatherers eat are dying of hunger or thirst, or are taking refuge where they are able to find pastures and sufficient water to quench their thirst. Such environmental changes would be attributed to climate change if it turns out that the medicinal plants, animal and plant forest resources used by communities and some tree species fail to adapt to the current rising temperatures and lower precipitation and become extinct.

47. These changes can also be explained in part by local environmental pressures.

48. The following changes are likely to be related to climate change: rising temperatures, change in the length of the seasons, drying up of watercourses, and water pollution. The scarcity of medicinal plants, the depletion of forest resources and deforestation are also probably partly linked to climate change.

49. The main social impact of climate change on indigenous communities is the deterioration of their overall health. With a prolonged dry season and reduced precipitation, forest watercourses flow for a shorter period of the year and, once their waters become stagnant, they become breeding grounds for bacteria and pollution, which cause diarrhoea, vomiting and, in some cases, death. Ponds are also the preferred breeding ground for malaria-carrying mosquitoes, indicating that a direct link may exist between “the health of the village” and climate change.

50. Owing to this phenomenon, some diseases can no longer be treated using traditional methods. The growing dependence of members of affected communities on modern medicine is costly and often leads to debt.

IV. Role of indigenous peoples in conflict prevention and resolution

51. Indigenous peoples live in harmony with their environment and have specific knowledge concerning said environment, as well as traditional knowledge which forms an essential part of their culture, way of life and economic activity. The harnessing of that traditional knowledge and the improved management of natural resources, as well as actions to ensure the full exercise of the rights of indigenous peoples and combat their marginalization are therefore among the solutions that may contribute to conflict prevention and resolution.

A. Nature-based solutions for a sustainable management of natural resources

52. At the international level, indigenous peoples make up about 5 per cent of the world’s population but help to protect about 80 per cent of the known terrestrial and marine biodiversity.¹⁸ Through their nature-based way of life, they protect and restore marine, forest, savannah and other types of ecosystems. Indigenous peoples are therefore key actors in the protection of biodiversity and in the fight against climate change, as defined by Sustainable Development Goals 13 (Take urgent action to combat climate change and its impacts), 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development) and 15 (Protect, restore and promote

¹⁸ World Bank, “Indigenous Peoples,” 19 March 2021, available at www.worldbank.org/en/topic/indigenouspeoples#1; and Stephen T. Garnett et al, “A spatial overview of the global importance of indigenous lands for conservation”, *Nature Sustainability*, vol. 1, No. 7 (2018), pp. 369 to 374.

sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss). In that sense, indigenous peoples are recognized as important actors in the implementation of the three Rio conventions, namely the United Nations Framework Convention on Climate Change, the Convention on Biological Diversity and the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa. At the twenty-sixth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, held in Glasgow, United Kingdom of Great Britain and Northern Ireland, their special role in the protection of ecosystems was recognized,¹⁹ and commitments were made to provide \$1.7 billion in funding for nature-based land and forest protection solutions implemented by indigenous peoples.²⁰

53. In the Sahel, indigenous peoples are herders, whose way of life helps to protect and restore ecosystems weakened by climate change and desertification. For example, they contribute to the natural restoration of soils over large areas through their transhumance activities. Recent studies have shown that nomadic herding in the Sahel, as practised by indigenous Fulani and Tuareg communities, has a favourable greenhouse gas emissions footprint.²¹

54. While livestock production accounts for more than 10 per cent of global greenhouse gas emissions from human activities, the traditional herding practices of indigenous peoples and other nomadic communities generate a negative or zero greenhouse gas emissions footprint. Soil fertilization by livestock contributes to soil carbon storage, which helps not only to mitigate climate change but also to enhance soil resilience and, in turn, food security.

55. With their traditional knowledge, indigenous peoples, particularly women, play an essential role in protecting biodiversity and strengthening the resilience of local communities, in particular by offering sustainable climate change adaptation solutions. Using their knowledge, women can, for example, help not only to strengthen traditional medicine but also to maintain local biodiversity as a food source and improve food security by identifying drought-resistant varieties.

56. Governments should therefore promote indigenous peoples' ecosystem management and herding practices as part of their national climate change adaptation and mitigation and biodiversity protection strategies. To that end, they should support development projects that are consistent with sustainable development goals and are led by indigenous peoples, by mobilizing resources deployed by the international community, in particular through the Group of Five for the Sahel (G5 Sahel) countries and the Great Green Wall for the Sahara and Sahel Initiative. These solutions can help to address the root causes of any emerging conflicts.

57. The solutions help to strengthen food security by increasing the productivity of ecosystems and to meet the demographic challenge of the Sahel. As mentioned above, competition for access to water and fertile land to ensure food security for communities is one of the main causes of conflict related to the use of natural resources.

¹⁹ Glasgow leaders' statement on forests and land use, available at <https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/>; and UN Climate Change Conference UK 2021, "COP26 IPLC forest tenure joint donor statement: advancing support for indigenous peoples' and local communities' tenure rights and their forest guardianship" (November 2021), available at <https://ukcop26.org/cop26-iplc-forest-tenure-joint-donor-statement/>.

²⁰ Ford Foundation, "Governments and private funders announce historic US\$1.7 billion pledge at COP26 in support of indigenous peoples and local communities", 1 November 2021, available at www.fordfoundation.org/the-latest/news/governments-and-private-funders-announce-historic-us-17-billion-pledge-at-cop26-in-support-of-indigenous-peoples-and-local-communities/.

²¹ Mohamed Habibou Assouma et al, "Territoires d'élevage pastoral au Sahel : un bilan carbone avec un potentiel inattendu d'atténuation du changement climatique", *Perspective*, vol. 52 (2019).

58. By enabling sustainable resource management, indigenous peoples, through their use of ecosystems, can also contribute to long-term action to promote a sharing of natural resources that facilitates conflict prevention. For example, dung discharged during transhumance helps to fertilize soils used by farmers, and thus to improve the long-term resilience of Sahelian agriculture to the consequences of climate change, while also contributing to its mitigation. Herder and farmer communities therefore have a common interest to manage natural resources sustainably, which allows them to collaborate in enhancing their environment.

B. Participatory two- or three-dimensional mapping as a solution for conflict prevention

59. At the local level, the establishment of sustainable management systems and the sharing of natural resources can be achieved through the implementation of innovative and unique tools based on science, technology and traditional knowledge, such as in two- or three-dimensional participatory mapping.

60. Participatory mapping can be defined as a map-making process that attempts to make visible the association between land and local communities by using the commonly understood and recognized language of cartography.²² The tool can be used to involve all the communities of a territory in the identification of the natural resources and traditional knowledge associated with ecosystems.

61. It can be used to take action upstream of conflicts and to participate in their prevention. In the Sahel, it is generally used to bring together the various rural communities, including indigenous and non-indigenous communities, herders, farmers and, in certain cases, fishing communities (as in the Lake Chad region). It is also used for dialogue with local authorities, including traditional authorities (community leaders) and administrative authorities (prefects, local governments).

62. The benefits of traditional mapping in conflict prevention and management include the following:

- Access to dialogue and information for all affected communities, allowing, for example, highly marginalized communities, such as indigenous communities, with low levels of education and literacy, to participate in the process;
- Active participation of women, particularly indigenous women, who have significant traditional knowledge about ecosystems and can play an active role in conflict prevention and management;
- Peaceful dialogue between communities that allows each community to share the issues it associates with the use of natural resources and to understand the issues of the other communities;
- Definition of geographical areas and ecosystems of a sacred, symbolic, cultural or religious nature for any of the communities present in the territory, allowing all participants to understand the importance of certain natural resources for their neighbouring communities.

63. There have been several examples of two- or three-dimensional participatory mapping in the Sahel that have proven to be effective in the establishment of sustainable natural resource management and sharing systems involving indigenous peoples. The maps developed can be used, for example, to identify water points and

²² International Fund for Agricultural Development, *Participatory Mapping and Good Practices*, (Rome, 2009), available at www.ifad.org/documents/38714170/39144386/pm_web_f.pdf/957bb635-d136-4c5f-b94e-002d67682f6f.

the main livestock crossing points of nomadic and semi-nomadic herders, and to initiate a dialogue with farming communities, thus helping to reduce tensions. Other examples show that two- or three-dimensional participatory mapping can be used to manage natural resources in forest areas.

64. Two- or three-dimensional participatory mapping can give rise to several types of conflict prevention or management mechanisms. In particular, it can not only lead to the elaboration of charters for the management of natural resources and ecosystems shared by traditional authorities, but also serve as a basis for public policies conducted by local, national and regional authorities. These authorities may use the maps to implement pastoral, agricultural and land policies to achieve the Sustainable Development Goals of which peace and security are an integral part (such as Goal 16).

65. This type of mapping is complementary to other tools for the management and prevention of conflicts related to the use of natural resources that can be established with indigenous peoples.

V. Recommendations

66. Indigenous peoples in the Sahel and in the Congo Basin are on the frontlines of conflicts related to the use of natural resources, at a time when climate change and biodiversity erosion are putting added pressure on the ecosystems underpinning their way of life. They can also offer solutions that can contribute to the identification, sustainable management and sharing of natural resources, notably through the mobilization of their traditional knowledge.

A. At the international and regional levels

67. International and regional institutions, including peace and security and environmental protection institutions, as well as donors, should establish frameworks that reflect the importance of indigenous peoples in the management of natural resources and in the prevention and management of conflicts related thereto. This can be done through resolutions of the Security Council or international bodies working on peace and security, but also through formal decisions taken under international treaties and agreements or under the general guidance provided to the bodies responsible for their implementation.

68. Thus, the mechanisms of the Paris Agreement that reflect the importance of indigenous peoples in climate change adaptation and mitigation should allow climate institutions and financial partners to set aside the resources necessary for the development of projects led by indigenous peoples for the sustainable management of natural resources, and enable them to participate in adaptation and mitigation measures, and thus in conflict prevention.

69. Regional institutions active in the promotion of peace and security in the Sahel, such as the G5 Sahel and major programmes such as the Green Wall for the Sahara Initiative, could also take measures to bolster the resources dedicated to the prevention and resolution of conflicts related to the use of natural resources in the region, alongside the military, humanitarian and ecosystem restoration measures already being taken.

70. Major financial groups, such as the African Development Bank, and private investors in the Sahel should incorporate free, prior and informed consent into their policies and projects that promote indigenous peoples as partners, not just beneficiaries, in order to limit their marginalization and benefit from their expertise.

B. At the national level

71. National authorities should incorporate sustainable natural resource management issues into their sustainable development policies in the implementation of the 2030 Agenda. This requires that they integrate tools and resources dedicated to the sustainable management of natural resources and the prevention and resolution of conflicts related to their use in their strategic planning for development, including in national strategies to combat climate change and preserve biodiversity under international treaties ratified by their Governments, such as nationally determined contributions. To that end, they should include in their laws the recognition of the rights of indigenous peoples as set out in the United Nations Declaration on the Rights of Indigenous Peoples.

72. Given the significant issues involved in land tenure, including the recognition of the collective rights of indigenous peoples, the recognition of customary rights, land grabbing and the closure of transhumance corridors, the States of the Sahel and the Congo Basin should establish a legal framework and consolidate their national and local judicial institutions in order to be able to clarify land tenure regimes and to peacefully and legally resolve certain conflicts related to the use of natural resources, in particular those involving access to land and the sharing of water resources. The States and financial and technical partners, as well as bilateral and multilateral development banks, should integrate into their respective strategic intervention frameworks the principle of free, prior and informed consent for any project involving land issues, and set up mechanisms to monitor its effectiveness as well as the involvement of indigenous peoples in its development. The States should also enhance access to justice and training for the entire judicial chain on these issues.

73. The States, regional institutions and key financial and technical partners should also promote agricultural and forestry policies that are consistent with sustainable development goals, including ensuring food security in a sustainable development context by protecting biodiversity and contributing to climate change adaptation and mitigation. To that end, they should hold consultations at the national and regional levels with all stakeholders, ensuring to involve indigenous peoples in the regions concerned, and facilitate their full participation in the development and implementation of these policies. By ensuring greater consistency between the various goals of the 2030 Agenda, they would help to ensure that agricultural and food sovereignty policies do not deepen conflicts between herders and farmers in the Sahel and with stakeholders in sustainable forest management in the Congo Basin.

74. The States should strengthen the policy of inclusion of indigenous peoples in national governance of natural resources, which could be crucial in addressing the inequalities endured by indigenous peoples, particularly in terms of access to health, education and all fundamental rights. This could help to address in detail the latent causes of natural resource conflicts that are partly rooted in the marginalization of these peoples.

75. It is also important for all actors to clearly distinguish between conflicts directly related to the use of natural resources and other causes of conflict, particularly ethnic conflicts and conflicts fuelled by extremist groups, which often use disputes over natural resources to promote their causes. In that regard, security forces should be trained on the issues associated with natural resource conflicts.

C. At the local level

76. At the local level, all development partners should encourage all local communities to participate in projects on sustainable management and the sharing of natural resources, such as two- or three-dimensional participatory mapping, which help to prevent conflicts related to the use of natural resources. They should encourage participatory conflict management and resolution mechanisms at the local level, relying on both administrative and customary authorities to that end.

77. Administrative and customary authorities as well as traditional leaders of indigenous peoples should receive training on peaceful dispute resolution techniques.²³ International institutions and non-governmental and philanthropic organizations could mobilize the financial and technical resources necessary for a widespread use of these tools, which have been tested on a number of occasions in the various countries of the Sahel and of the Congo Basin, often with success. International, regional and national actors should encourage a change of scale in the development of these strategies.

78. Combating misinformation and disseminating reliable information is also an essential part of the mediation and management of natural resource conflicts. Rural communities are particularly vulnerable to the spread of misinformation, especially through social networks, which can play an important role in intensifying certain conflicts. All actors should help to provide access to verified and quality information that can help to prevent the deterioration of certain conflict situations.

²³ Ernest Uwazie, “Alternative Dispute Resolution in Africa: Preventing Conflict and Enhancing Stability”, *Africa Security Brief No. 16* (Africa Center for Strategic Studies, November 2011).