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Permanent Forum on Indigenous Issues

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Implementation of the six mandated areas of the Permanent Forum with reference to the United Nations Declaration on the Rights of Indigenous Peoples

Indigenous peoples and climate change

Note by the Secretariat

Summary

At its nineteenth session, the Permanent Forum on Indigenous Issues appointed Hindou Oumarou Ibrahim, member of the Forum, to conduct a study on indigenous peoples and climate change and to submit it to the Forum at its twentieth session.

* E/C.19/2021/1.



I. Introduction

1. Indigenous peoples have a way of life that is based on a special relationship with their environment. They depend on the ecosystems in which they live, and all their economic activities and social, cultural and spiritual relations are directly linked to their environment.
2. Ecosystem protection is essential to the way of life of indigenous peoples, who represent approximately 5 per cent of the global population.¹ Indigenous peoples currently own, manage, use or occupy about a quarter of the world's land, and are present on all continents and in all land and marine ecosystems, including savannahs, tropical forests, deserts, glaciers, mountains and islands.
3. Proximity to nature is also a source of vulnerability. Climate change and biodiversity loss are serious threats to indigenous peoples and the ecosystems in which they live, adding to the difficulties faced by populations that are often marginalized.
4. By living in harmony with nature, indigenous peoples have developed traditional ancestral knowledge that has been a source of resilience, enabling them to devise climate change mitigation and adaptation strategies (see [E/2008/43-E/C.19/2008/13](#)).

II. Effects of climate change on indigenous peoples

5. Climate change affects all ecosystems on Earth. Because of their high dependence on the ecosystems in which they live, indigenous peoples are disproportionately affected by climate change. Tropical forest fires, sea ice melt, the desertification of arid and semi-arid regions, the intensification of extreme weather events, ocean acidification and coral bleaching are depriving indigenous communities of the resources from which they derive much of their food and which often form the basis of their economic activities.
6. In its special report entitled *Global warming of 1.5°C*, the Intergovernmental Panel on Climate Change concluded, with a high degree of confidence, that populations particularly vulnerable to the adverse effects of global warming of 1.5°C and above include disadvantaged and vulnerable populations, some indigenous peoples and local communities dependent on agricultural or coastal livelihoods, and that regions at disproportionately high risk include Arctic ecosystems, dryland regions, small island developing States and least developed countries (sect. B.5.1).

A. Impact on the way of life of indigenous peoples

7. Climate change has a direct and indirect impact on indigenous peoples around the world and affects each of the seven indigenous sociocultural regions.²
8. In coastal areas, indigenous peoples are threatened by sea level rise and coral bleaching, which can reduce the ability of ecosystems to provide communities with necessary food and non-food resources, and by increasingly frequent hurricanes and cyclones.

¹ United Nations, "Who are indigenous peoples?" factsheet (undated).

² Africa; Asia; Central and South America, and the Caribbean; the Arctic; Central and Eastern Europe, the Russian Federation, Central Asia and Transcaucasia; North America; and the Pacific (see Human Rights Council resolution 33/25).

9. In tropical forests, which are often referred to as the lungs of the Earth, fires endanger the ecosystems that provide indigenous peoples not only with food and drinking water, but with shelter and the medicinal plants that are central to their way of life. These forests are also exploited for industrial purposes.

10. In the Sahel, desertification, heat waves and floods are destroying the ecosystems on which the economies and cultures of nomadic pastoralist peoples are based.³ Pressure on natural resources, exacerbated by climate change, is contributing to intercommunal conflicts over access to, and the sharing of, remaining resources, such as fertile land and water.

11. In the Arctic, ice melt and heat waves are disrupting the fishing and livestock-farming activities of indigenous communities. For example, in its special report on oceans and the cryosphere, the Intergovernmental Panel on Climate Change concluded, with a high degree of confidence, that food and water security have been negatively affected by changes in snow cover, lake and river ice, and permafrost in many Arctic regions, and that these changes have undermined access to, and food availability in, herding, hunting, fishing and gathering areas, harming the livelihoods and cultural identity of Arctic residents, including indigenous populations (sect. A.7.1).⁴

12. In small island States, particularly in the Pacific, the entire territory in which certain indigenous peoples live is at risk of disappearance as a result of sea level rise.

13. Climate change threatens the very existence of many communities in both the immediate and long term. Global warming accelerates pre-existing threats to the survival of indigenous peoples, intensifying the effects on indigenous lands of other human activities, including deforestation, urbanization and industrial agriculture, which, for decades, have put pressure on the territories and ecosystems in which indigenous peoples live.

14. Industrial agriculture, chemical pollution and land take are significant drivers of biodiversity loss that also add to the threats faced by indigenous peoples, by weakening the natural resilience of ecosystems.

15. In addition, climate change and biodiversity loss lead to conflict over access to natural resources, land and drinking and agricultural water. Throughout the world, in particular in arid and semi-arid areas, this competition for natural resources has already begun and is contributing to conflict among rural communities. For example, the appropriation of indigenous peoples' ancestral lands for agricultural purposes is a common practice in many parts of the world.

16. In the Sahel region, more than 70 per cent of the population depends on agriculture, fishing and livestock farming, a traditional indigenous activity. The rise in the Earth's temperature by more than 1.5°C since 1900 has altered seasonal weather patterns. Consequently, rainy seasons are becoming increasingly short with irregular rainfall patterns, resulting in droughts or, as has been the case in most countries in 2020, floods.

17. The dry season is becoming longer, with temperatures reaching 48°C to 50°C in the shade. By reducing agricultural and livestock production, all these extreme events affect the food security of indigenous communities, which depend solely on nature for survival.

18. The nomadic and semi-nomadic indigenous peoples of Burkina Faso, Cameroon, the Central African Republic, Chad, Mali, the Niger, Nigeria and many

³ World Meteorological Organization, *State of the climate in Africa* (Geneva, 2020).

⁴ See <https://www.ipcc.ch/srocc/>.

other countries, who move from place to place on a seasonal basis in order to maintain their traditional way of life, enabling natural ecosystem regeneration, are particularly affected by these changes.

19. These peoples, who depend on rainfall instead of a monthly salary to be able to practice subsistence farming and enable their animals to graze and produce milk in order to ensure their food and economic security, are at risk of food insecurity, land grabbing and a shortage of resources such as edible plants, water and, as they do not have access to hospitals and health centres, medicinal plants.

III. Indigenous peoples in global governance of the fight against climate change

20. Indigenous peoples have lived in direct contact with nature for millennia and, according to various studies, remain the guardians of 80 per cent of the world's biodiversity. They have been actively involved in international negotiations on environmental protection for several decades.

A. At the international level

21. For many years, indigenous peoples have participated in the work of the United Nations on environmental protection and sustainable development. Although their first advocacy efforts date back to the 1920s, indigenous peoples were extensively involved in the United Nations Conference on Environment and Development, held in Rio de Janeiro, Brazil, in 1992, and have since been participating in international negotiations under the three conventions resulting from the Conference: 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.

22. Indigenous peoples are one of the main constituencies of observers under the three Rio conventions, including the United Nations Framework Convention on Climate Change. They are recognized under the name "indigenous peoples' organizations" and have been allowed to participate in all climate-related negotiations under the Convention since 1992. The International Indigenous Peoples Forum on Climate Change was established in 2008 as an assembly of indigenous peoples participating in processes under the Convention. It represents the indigenous peoples who participate in the sessions of the Conference of the Parties to the Convention and in the meetings of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation, which are held between the sessions of the Conference of the Parties. The aim of the Forum is to reach agreement on the issues to be negotiated in specific processes under the Convention. Participants in the Forum, who represent the seven indigenous sociocultural regions, are members of specific subnational, national and global organizations and may put forward objectives, priorities and proposals on behalf of those organizations during Forum meetings.

B. Paris Agreement

23. Indigenous peoples increased their engagement in the years leading up to the conclusion of the Paris Agreement (FCCC/CP/2015/10/Add.1, annex). That Agreement, for the first time in 20 years of international negotiations, recognized the

role of indigenous peoples in combating climate change. The Paris Agreement contains five references to indigenous peoples, as follows:

- (a) The rights of indigenous peoples, in the preamble to decision 1/CP.21 on the adoption of the Agreement and in the preamble to the Agreement itself;
- (b) Recognition of the importance of the participation of indigenous peoples in efforts to combat climate change;
- (c) Traditional knowledge and the knowledge of indigenous peoples, in article 7, paragraph 5, of the Agreement;
- (d) Establishment of a platform for the exchange of traditional, indigenous and local knowledge.

24. The rights of indigenous peoples are specifically recognized in the major international agreements on environmental protection. For example, in the preamble to the Paris Agreement, it is stated that climate change is a common concern of humankind and that parties should, when taking action to address climate change, respect, promote and consider their obligations relating to human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.

25. To support the implementation of the Paris Agreement and enhance its effectiveness in combating climate change, this recognition of the rights of indigenous peoples should be supplemented by recognition of and respect for their human rights, including the right to land and natural resources and the rights of environmental defenders. These rights, although not directly referred to in the international agreements, remain a priority. Indigenous peoples continue to participate in climate change negotiations, mainly through the International Indigenous Peoples Forum on Climate Change, but also through the recently implemented local communities and indigenous peoples platform, designed to promote the exchange of traditional knowledge.

C. Local communities and indigenous peoples platform for the exchange of traditional knowledge

26. In paragraph 135 of its decision 1/CP.21 on the Paris Agreement, the Conference of the Parties recognized the need to strengthen knowledge, technologies, practices and efforts of local communities and indigenous peoples related to addressing and responding to climate change, and established a platform for the exchange of experiences and sharing of best practices on mitigation and adaptation in a holistic and integrated manner. Decision 1/CP.21 sets forth the structure of the platform for the exchange of knowledge between indigenous peoples and local communities, which is based on three pillars:

- (a) **Knowledge.** The platform should provide a forum for documenting and sharing experiences and best practices;
- (b) **Capacity-building.** The platform should serve to build the capacities of indigenous peoples and local communities in order to enable their participation in the United Nations Framework Convention on Climate Change process and other relevant processes, including the implementation of the Paris Agreement;
- (c) **Policies and activities related to climate change.** The platform should facilitate the integration of diverse knowledge systems, practices and innovations, as

well as the participation of indigenous peoples and local communities in activities, programmes and policies related to climate change.

27. Following the establishment of the platform at the twenty-first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, negotiations on its implementation were held the following year, at the twenty-second session, between the States parties to the Convention and representatives of the International Indigenous Peoples Forum on Climate Change, leading to the adoption of a number of decisions at subsequent sessions. These advances were facilitated by the convening of dialogues relating to the platform, which were jointly chaired by representatives of indigenous peoples and the Chair of the Subsidiary Body for Scientific and Technological Advice. These negotiations were underpinned by a commitment to ensuring the equitable participation of representatives of indigenous peoples in discussions concerning their traditional knowledge, in accordance with intellectual property law.

28. To that end, a constituted body known as the Local Communities and Indigenous Peoples Platform Facilitative Working Group,⁵ in which representatives of indigenous peoples and of States parties to the Convention are equally represented, was established at the twenty-fourth session of the Conference of the Parties to the Convention, held in Katowice, Poland, in December 2018. This group comprises one representative of each of the seven indigenous sociocultural regions (Africa; Asia; Central and South America, and the Caribbean; the Arctic; Central and Eastern Europe, the Russian Federation, Central Asia and Transcaucasia; North America; and the Pacific) and seven representatives of the States parties, five of whom represent regional groups of States Members of the United Nations (the African States, the Asia-Pacific States, the Eastern European States, the Latin American and Caribbean States and the Western European and other States), one of whom represents the least developed countries and one of whom represents small island developing States. The 14 Working Group members are appointed for a non-renewable three-year term, in accordance with eligibility criteria that respect indigenous peoples' traditional practice of selecting their own representatives, and taking into account gender parity. A two-year work plan has been established.

29. The platform is not a negotiating body, a fact that may discourage States parties from participating in the Working Group. Indigenous peoples are concerned that the platform will not provide a forum for meaningful interaction with States parties, the private sector and other important stakeholders. A different approach might encourage indigenous peoples to take accelerated action to combat climate change and to contribute more effectively to the implementation of the Paris Agreement through their rich, diverse and ancient knowledge, which has already proven valuable in their communities.

IV. The role of traditional knowledge

A. Traditional indigenous knowledge – definition

30. Traditional indigenous knowledge is now recognized at the international level. For example, in article 7, paragraph 5, of the Paris Agreement, the parties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge

⁵ See <https://unfccc.int/LCIPP-FWG>.

of indigenous peoples and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate.

31. The term “knowledge of indigenous peoples” refers to the knowledge and know-how accumulated across generations, and tested and adopted through millennia, which guide indigenous societies in their interactions with their surrounding environment.⁶ This knowledge is transmitted, mostly orally, between generations, and is an extremely valuable source of information regarding the operation of ecosystems.

B. Traditional knowledge and climate change adaptation

32. Traditional indigenous knowledge is used to assess the impact of climate change. For example, in its recent special report on climate change and land, the Intergovernmental Panel on Climate Change indicated that, based on indigenous and local knowledge, climate change is affecting food security in drylands, particularly those in Africa, and in high mountain regions in Asia and South America (sect. A.2.8).

33. The following are examples of the kinds of traditional knowledge that may be used to promote climate change adaptation:

(a) By making daily, seasonal and annual weather forecasts based on observations of nature (for example, bird migrations, insects, wind and clouds), indigenous peoples can identify climate risks such as droughts and floods, predict extreme weather events and establish early warning systems. This information is valuable for farmers, particularly in rural areas, as it enables them to adapt their crops to changes in climatic conditions. These traditional forecasts serve as a supplement to conventional forecasts and are a useful source of information for people without regular access to weather services;

(b) Knowledge of plant varieties, resulting from years of living in proximity to the environment, enables indigenous peoples to identify plants that are resistant to droughts and floods, and to harness biodiversity in order to develop agricultural and livestock-farming practices that are adaptable to climate change;

(c) Traditional knowledge also enables indigenous peoples to help prevent natural hazards, including by identifying the areas most vulnerable to flooding as a result of sea level rise or by locating drought-resistant water sources, and to facilitate resilience and rebuilding following extreme weather events, for example, by identifying food sources following crop destruction;

(d) As animal health is a priority under traditional indigenous livestock-farming systems, indigenous peoples contribute to the prevention of zoonotic diseases by managing their herds in such a way as to reduce the risk of disease transmission between animals and humans;

(e) Traditional indigenous knowledge can be combined with scientific knowledge. Many experiments, including in relation to the use of traditional knowledge in seasonal weather forecasting, have demonstrated the potential synergies between traditional and scientific knowledge, particularly in the area of climate change adaptation.⁷

⁶ International Fund for Agricultural Development, *The traditional knowledge advantage: Indigenous peoples' knowledge in climate change adaptation and mitigation strategies* (Rome, 2016).

⁷ Douglas Nakashima and others, *Weathering Uncertainty: Traditional Knowledge for Climate Change Assessment and Adaptation* (Paris, United Nations Educational, Scientific and Cultural Organization and United Nations University, 2012).

34. All this knowledge can be incorporated into local, national, regional and international policies relating to climate change adaptation.

C. Traditional knowledge and climate change mitigation

35. As guardians of 80 per cent of the world's biodiversity, indigenous peoples can harness their traditional knowledge to contribute to global efforts under the Paris Agreement to reduce greenhouse gas emissions and promote ecosystem-based carbon capture. Accordingly, in its report entitled *Global warming of 1.5°C*, the Intergovernmental Panel on Climate Change stated that education, information, and community approaches, including those that are informed by indigenous knowledge and local knowledge, can accelerate the large-scale behavioural changes that are essential to limiting global warming to 1.5°C and adapting to its effects (sect. D.5.6).

36. Similarly, in its special report on climate change and land, the Intergovernmental Panel indicated that sustainable land management can contribute 30 per cent of the global effort needed to implement the Paris Agreement. Sustainable land management falls within the scope of nature-based solutions, which are aimed at harnessing ecosystems to address global challenges such as climate change, natural hazards, public health maintenance, access to water and food security.

37. The following are examples of the kinds of traditional knowledge that may be used to promote climate change mitigation:

(a) **Biodiversity protection, which contributes significantly to the resilience of ecosystems and their capacity to absorb carbon.** This is particularly essential in the case of tropical forests and coral ecosystems, which are important carbon sinks. Under indigenous peoples' sustainable ecosystem management systems (traditional agriculture, livestock farming and fishing), the carbon sequestration capacity of ecosystems is maintained at a high level.

(b) **Ecological restoration of ecosystems.** For example, traditional indigenous knowledge can be used to repair tropical forest ecosystems that have been destroyed by fires.

(c) **Optimization of agricultural production systems to limit anthropogenic greenhouse gas emissions and enhance the carbon sequestration capacity of ecosystems.** According to a number of studies, the traditional livestock-farming methods used by indigenous transhumant herders generate close to net zero, or even "negative", greenhouse gas emissions, well below those generated by contemporary methods.

38. Indigenous peoples are key drivers of nature-based solutions, which are essential to combating climate change and protecting biodiversity. Public and private stakeholders can draw on these sustainable practices to reduce greenhouse gas emissions by the agriculture, livestock farming and land management sectors. Accordingly, in its special report on climate change and land, the Intergovernmental Panel on Climate Change stated that agricultural practices that include indigenous and local knowledge can contribute to overcoming the combined challenges of climate change, food security, biodiversity conservation, desertification and land degradation (sect. C.4.3).

V. Recommendations

39. Indigenous peoples can contribute actively to combating climate change by assisting in the development of mitigation and adaptation initiatives. To that end, a

new partnership should be established between indigenous communities and all other stakeholders to enable the participation of indigenous peoples at all levels, from local to international, and to encourage joint decision-making.

40. All stakeholders involved in climate change mitigation and adaptation should consider how their activities may affect the rights of indigenous peoples and, accordingly, should provide such peoples with opportunities for participation. Dialogue with indigenous peoples must be based on the recognition that each indigenous people and sociocultural region is distinct and unique, possessing its own knowledge systems, customary institutions and participation protocols based on the right to self-determination.

41. All stakeholders involved in combating climate change should promote the integration of scientific and technical expertise and traditional indigenous knowledge, as well as the incorporation of traditional indigenous knowledge into expert assessments of the causes and consequences of, and public policies related to, climate change.

42. Initiatives to encourage indigenous peoples to share their knowledge should take into account the fact that the knowledge and ways of knowing of indigenous peoples are collective, experiential, time-tested and intergenerational, encompassing both tangible and intangible cultural heritage, and are therefore, in many ways, different from other knowledge systems.

43. Indigenous peoples have developed their own protocols and consent agreements for managing access to their traditional knowledge and sharing the benefits of its use. The activities of the United Nations and other bodies under and outside the United Nations Framework Convention on Climate Change should be carried out on the basis of free, prior and informed consent, and with respect for the protocols and agreements of indigenous peoples.

44. The following measures are recommended to enhance the participation of indigenous people in combating climate change:

(a) At the local level, States, local authorities, development finance institutions and other development stakeholders should encourage participatory two- and three-dimensional mapping and involve indigenous peoples in the governance of sustainable natural resource management. This would foster intercommunal dialogue aimed at mapping natural resources and establishing systems for the sustainable management and sharing of natural resources;

(b) At the national level, States should encourage the involvement of indigenous peoples in the development of policies and other initiatives related to climate change, desertification, biodiversity protection and the fulfilment of the Sustainable Development Goals. With regard to climate change mitigation and adaptation, States parties to the Paris Agreement should incorporate traditional indigenous knowledge into their nationally determined contributions and national adaptation plans. States should also establish land policies that ensure respect for the rights of indigenous people under the United Nations Declaration on the Rights of Indigenous Peoples;

(c) At the regional and international levels, development finance institutions and all bilateral and multilateral cooperation entities should incorporate indigenous peoples into their climate change mitigation and adaptation policies by establishing guidelines and safeguard policies aimed at protecting indigenous peoples and their rights, including the right to land. For example, the Green Climate Fund has established a policy designed to assist it in incorporating considerations relating to indigenous peoples into its decision-making regarding climate change mitigation and adaptation goals. Development finance stakeholders could also establish direct-access

funding mechanisms for indigenous peoples and their representative organizations in order to facilitate the implementation of small-scale projects that provide nature-based solutions and promote traditional indigenous knowledge relating to climate change adaptation and mitigation.

45. All stakeholders should systematically encourage the sharing of the benefits arising from the use of genetic resources, as well as the protection of traditional indigenous knowledge as intellectual property. In that regard, article 15 of the Convention on Biological Diversity sets forth rules regarding access to genetic resources and the sharing of the benefits arising from their use whereby States are required to: (a) create conditions to facilitate access to genetic resources for environmentally sound uses; and (b) ensure that the benefits arising from the use of such resources are fairly and equitably shared between users and providers.

46. Private sector stakeholders should also include indigenous peoples in sustainable ecosystem management initiatives, in order to contribute to international efforts to combat climate change. To that end, private sector stakeholders should involve indigenous peoples in the governance of projects related to the land, territories and natural resources on which they depend, and should adopt guidelines and safeguard policies aimed at protecting the rights of indigenous peoples, in particular under the United Nations Declaration on the Rights of Indigenous Peoples. Respect for free, prior and informed consent in the granting of land rights, and the upholding of intellectual property rights relating to traditional indigenous knowledge are essential to enabling indigenous peoples to participate in private sector activities, including forestry, agriculture, fishing and extractive industries.
