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Item 5 of the provisional agenda
Special segment

Note on the special segment of the Conference of the Parties at its fourteenth session

Note by the secretariat

Summary

At the high-level segment of the fourteenth session of the Conference of the Parties, ministers and other heads of delegation will hold discussions in the form of three parallel ministerial round tables and three consecutive interactive dialogue sessions, as follows:

(a) Round table 1: Land, climate and renewable energy

(b) Round table 2: Rural and urban communities - failing or flourishing together

(c) Round table 3: Fostering a global movement for ecosystem restoration

(d) Interactive dialogue 1: A values-based approach to land stewardship

(e) Interactive dialogue 2: Healthy land – healthy people

(f) Interactive dialogue 3: Boosting sustainable value chains for land-based business

The high-level segment round tables and dialogue sessions will draw attention to the human face of desertification/land degradation and drought. By emphasizing issues of improved human well-being and economic opportunity, the special segment is anticipated to bring political momentum to the deliberations of Parties and boost the engagement of diverse stakeholders in the implementation of the Convention. In addition to the above-mentioned ministerial round tables and interactive dialogue sessions, ministers will have the option to deliver formal statements in a separate room designated for that purpose.

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I. Background

1. Building on the programme of work for the fourteenth session of the Conference of the Parties (COP 14), round-table discussions and interactive dialogue sessions will be organized with relevant stakeholders during the high-level segment of COP 14. Stakeholders include, but are not limited to, ministers and heads of delegation, international organizations, civil society and faith-based organizations (FBOs), the business community and private sector, and elected and local government representatives. The high-level segment of COP 14 will be held on 9–10 September 2019 in New Delhi, India.

2. The high-level segment will be organized by the host country and the secretariat of the United Nations Convention to Combat Desertification (UNCCD). Ministers and heads of delegation from the 197 Parties to the UNCCD, along with the above-mentioned stakeholders, are expected to bring political momentum to the deliberations and guide negotiators accordingly.

3. To assist delegations in preparing for the high-level segment, the secretariat has prepared this information note outlining some of the questions that ministers and other heads of delegation will be invited to consider during their deliberations.

II. Organization of the high-level segment

4. The opening ceremony of the high-level segment will begin on Monday 9 September with a welcoming statement by the President of COP 14, followed by a statement from a high-level representative of the Government of India, a message on behalf of the United Nations Secretary-General and a statement by the Executive Secretary of the UNCCD.

5. Following the opening ceremony, statements at ministerial level will be made on behalf of each of the regional and interest groups. The names of speakers must be communicated to the UNCCD secretariat before or during the first week of COP 14.

6. The remainder of the special segment of COP 14 will focus on enhancing stakeholder engagement in the UNCCD implementation processes. During the high-level segment, there will be three parallel ministerial round-table discussions. Ministerial round-table discussions will last three hours. Ministers and heads of delegation may wish to inform the secretariat in advance if they plan to participate and take the floor in a specific round table. Interactive dialogue sessions will be held, in plenary, on the following day, during the special segment with emerging civil society leaders and representatives from both the health and private sectors.

7. Each round-table discussion and interactive dialogue will be moderated by a Chair at either ministerial level or drawn from among high-level participants. The Chair will guide the deliberations and ensure the efficient use of time. Substantive deliberations will be opened by the Chair and complemented with inspiring inputs from keynote speakers or panellists. During the discussions, ministers are encouraged to engage directly and respond to the inputs. In addition to the ministerial round-tables and interactive dialogue sessions, there will be the option to deliver formal statements in a separate room designated for that purpose. Registration for a slot to deliver a formal statement will be opened in-session and further information will be provided through the daily journal.

8. The topics for consideration at the round-table discussions and the interactive dialogue sessions will include the following:

(a) Round table 1: Land, climate and renewable energy

(b) Round table 2: Rural and urban communities – failing or flourishing together

(c) Round table 3: Fostering a global movement for ecosystem restoration

(d) Interactive dialogue 1: A values-based approach to land stewardship

(e) Interactive dialogue 2: Healthy land – healthy people

(f) Interactive dialogue 3: Boosting sustainable value chains for land-based business

III. Round table 1: Land, climate and renewable energy

A. Background

9. Land-based solutions have not been given the attention they deserve in discussions about climate. Our lands and land use provide an untapped opportunity to store carbon and reduce carbon emissions. Soils are the second largest store of carbon after the oceans. Estimates suggest that around one third of the greenhouse gas mitigation required between now and 2030 can be provided by land-based solutions. Restoration and techniques that reduce emissions from agriculture are especially useful technologies in this area. The same land management approaches would improve the resilience of ecosystems and help communities adapt to the increase in flooding and drought associated with climate change. During the round table, the Intergovernmental Panel on Climate Change (IPCC) will discuss with ministers the results of the special report on *"climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems"*.

10. Land-based solutions are also cost-effective for both adaptation and mitigation. Initiatives in soil and water conservation, implemented in flood- and drought-prone regions, have demonstrated potential benefits of USD 2.3 to USD 13.2 for every dollar invested. Furthermore, the reduction in greenhouse gas emissions through peatland restoration can be up to 15 times cheaper than the same reductions through technical carbon capture and storage. Yet, so far, land-based approaches have attracted only 2.5 per cent of mitigation funding. Financing for renewable energy and energy efficiency receives more financing than land restoration by a factor of ten to one.

11. A radically scaled-up land-based approach to climate change adaptation and mitigation would complement the global transition towards renewable energy. Underpinning the Sustainable Development Goals (SDGs) and the Paris Agreement on Climate Change is the promise that we will "leave no one behind" in the global energy transition. Energy is central to social and economic well-being. And yet just under one billion people have no access to electricity at all. Currently, approximately 80 per cent of global energy demand is still met by non-renewable energy sources, mainly fossil fuels, which leaves a footprint on land through resource extraction (e.g., coal mining), conversion and related infrastructure. By 2050, global demand for energy is expected to grow by at least 50 per cent. Meeting that demand with a supply of renewable energy that is accessible to rural communities, such as biomass, geothermal, hydro, solar and wind, will contribute to sustainable development and climate strategies. This could reduce the land footprint of non-renewable sources and reduce the climate change pressures exacerbating desertification and drought.

12. Access to renewable energy would also kick-start sustainable land-based economic opportunities and job creation in rural areas if embedded in the local economic development strategy. To do so, it should reflect local potentials and needs and be integrated into larger supply chains within rural economies, such as agriculture, forestry, traditional manufacturing and green tourism.

13. However, renewable energy production for climate change mitigation also impacts land demand, land use and rates of land degradation if poorly executed. Any deployment of bio-energy with carbon capture and storage on a scale large enough to help the climate may pose a threat to terrestrial ecosystems. Plantations would be required on either 1.1 billion ha of the world's most productive agricultural land (three times the total area of India) or on 50 per cent of the land currently occupied by natural forests. If forests are converted into biomass plantations, for example, any carbon saved is likely to be offset by carbon losses from the soil, incurred during conversion.

14. Alternative sources of renewable energy, such as solar or wind power, may be more land-friendly. Africa, for example, has huge solar potential. The continent gets 117 per cent more sunshine than Germany which today has the highest installed solar power capacity. There are numerous strategies for avoiding or minimizing land impacts from solar systems, such co-locating solar systems with agriculture and other renewable energy systems and utilizing degraded land. Solar power can co-exist with agricultural production. The potential of so-called agri-voltaic systems is increasingly recognized and such systems are being installed in a range of locations. Conflicts with water use and biodiversity, especially in arid landscapes, can be minimized with appropriate land use planning and siting.

15. A special Climate Summit, convened by the UN Secretary-General in New York, will be held on 23 September 2019.

B. Key question: Can land-based solutions be strategically deployed to fight climate change and deliver access to renewable energy for all?

16. Possible questions to consider:

(a) Is land-based climate change adaptation and mitigation complementary to the global transition towards renewable energy?

(b) What should the United Nations Climate Summit (and other climate discussions) conclude about the role of land- or natural-based solutions in fighting climate change?

(c) How do we deliver for land, climate and biodiversity at the same time?

(d) How do we balance the potential competing demands on land for food and energy and other environmental services?

(e) How can we maximize the benefits of access to renewable energy for rural communities, land and climate? What is our business case for more investment in land in this scenario?

IV. Round table 2: Rural and urban communities – failing or flourishing together

A. Background

17. The global population is growing by around 83 million people annually. The proportion of the world's population living in cities is projected to increase from just over half of the population today to over 66 per cent by 2050. In addition, the outward expansion of towns with over 100,000 inhabitants is expected to increase by 170 per cent by 2030.

18. This dramatic shift towards urban life has profound implications, including for land degradation and food security. More than 60 per cent of the world's irrigated croplands are located near urban areas. Every year, 19.5 million hectares of agricultural land are converted to expand urban centres and industrial developments. With the most rapid rates of urban expansion, Africa and Asia are projected to lose 80 per cent of global cropland due to urban expansion. The impact of these losses is more acute as expansion takes place on prime agricultural lands, which are often twice as productive as national averages. A three per cent loss of the most valuable croplands translates into a six per cent production loss in Asia and a nine per cent drop in Africa.[1]

19. In addition, half of all cities with populations greater than 100,000 are currently located in water-scarce basins with freshwater sources running dry as more water is extracted than recharged. As a result, an estimated 150 million people currently live in cities with acute water shortages. Driven by population growth and a growing consumer class, by 2030, water

[1] Global Land Outlook (p. 233): <https://knowledge.unccd.int/glo>.

demand will increase by 40 per cent and by 2050, global demand for food and energy will increase by 50 per cent.

20. Rural out-migration, climate and environmental change, rising inequality and insecurity in rural areas have led to unplanned urban growth and a growing number of people living in slums and informal settlements. Some 58 per cent of those forcibly displaced live in cities[2] while labour migration from rural to urban areas often sees a large proportion of new migrants living in informal settlements.[3] It will be a major challenge to integrate the displaced – from conflicts but also from both fast- and slow-onset induced migrations[4] – while creating healthy and equitable living space (land) for all.

21. The question of employment and livelihood opportunities is becoming critical. Currently, 88 per cent of the extreme poor live in rural areas where poverty rates are four times higher than in urban areas and decent work deficits are typically severe. Among African countries, urban employment grew by an average 6.8 per cent over the last decade – twice the average national rate of 3.3 per cent. Simultaneously, rural areas offer perceived opportunities in some countries, especially where the population is ageing, and it is cities that are often associated with a high concentration of unemployed people: about 60 per cent of unemployment in the UK, Japan, Korea, Netherlands and the USA is concentrated in urban areas.

22. The tenth session of the World Urban Forum will be held in 2020 in Abu Dhabi and showcase how sustainable urbanization strategies will be critical to addressing social and environmental challenges. For rural and urban communities to flourish together, a joined-up approach to land degradation neutrality (LDN) and the Habitat III New Urban Agenda would make strategic sense.

23. This joint approach may include the following elements:

(a) The sustainable management of land and water together as part and parcel of resilient urban land-use planning. This could be translated into long-term urban and territorial planning processes and spatial development practices that incorporate eco-system adaptation, integrated land and water resources planning and management and promote the conservation and sustainable use of water within the urban, peri-urban and rural areas. Focus could be put on opportunities for limiting natural resource consumption leading to land degradation, particularly in cities, such as circular economy systems. Holistic and inclusive planning can help decrease competition over land, water and other natural resources.

(b) Nurturing synergies between agricultural production and urban-based enterprises to help develop more vibrant local economies and create local food production chains. This could guarantee food security and develop primary, secondary and tertiary sectors in rural areas. A land-based green growth and jobs strategy, for example, could form part of a labour migration strategy that benefits young men and women by protecting them from the harmful effects of environmental degradation on future employment while reducing the environmental impact of key economic sectors. This approach could also offer opportunities for technology development and transfer and the adaptation of indigenous and traditional knowledge systems and local resource management. Information and communication technology can provide a powerful tool for the development of smart,

[2] United Nations High Commissioner for Refugees, Global Trends. Forced Displacement In 2017 (p. 60): <https://www.unhcr.org/globaltrends2017>.

[3] World Resources Institute Report, Working Paper, Towards a more equal city. Upward and Outward Growth: Managing Urban Expansion for More Equitable Cities in the Global South, 2019 (p. 24): <https://www.wri.org/our-work/project/world-resources-report/world-resources-report-towards-more-equal-city>.

[4] Both fast- and slow-onset environmental factors can induce migration: for example, desertification affecting Mexico's dryland regions leads 600,000 to 700,000 people to migrate from these areas annually. Cyclone Nargis that struck the Irrawaddy Delta region in Myanmar in May 2008 severely affected 2.4 million people and led to the displacement of 800,000 people. (Leighton, M. "Summary of Desertification and Drought-Related Migration": paper prepared for the International Organization for Migration (IOM)/United Nations University Research Workshop on Migration, 17–18 April 2008. Cited in IOM Policy Brief, Migration Climate change and the environment. May 2009.).

sustainable cities, and for enhancing the quality of life of people, especially those living in remote locations.

(c) Enhancing governance arrangements and boosting the capacity to deliver common objectives for the entire urban-rural area and a common sustainability strategy that will help integrate specific socio-economic issues such as gender and land tenure.

24. These efforts would also contribute to the 2030 Agenda for Sustainable Development, the achievement of the Paris Climate Agreement, the United Nations Decade of "Water for Sustainable Development" (2018–2028) and the United Nations Decade on Ecosystem Restoration (2021–2030).

B. Key question: How can urban and rural areas work together to manage the land sustainably?

25. Possible questions to consider:

(a) How will urban areas be able to manage future pressures on land, especially in peri-urban areas? Would integrated planning help?

(b) Would a circular economy system be useful?

(c) Could green jobs in rural areas help reduce unplanned urbanization?

(d) What changes in governance would be needed to boost the capacity of local government authorities to take a proactive role?

(e) Where will the low-hanging fruit deliver mutually beneficial (win-win) situations? How can we help create successful 'rurban' (Rural-Urban) communities?

V. Round table 3: Fostering a global movement for ecosystem restoration

A. Background

26. In March 2019, the United Nations General Assembly adopted a proposal declaring 2021 to 2030 to be the United Nations Decade on Ecosystem Restoration (UNDER)[5] which aims to encourage and mobilize policymakers, private finance, land managers, civil society and non-governmental organizations (NGOs) to scale up their efforts to prevent, halt and reverse ecosystem degradation worldwide. The UNDER, to be coordinated by the Food and Agriculture Organization and the United Nations Environment Programme with the support of the Rio Conventions, is designed to accelerate progress towards the 2030 Agenda for Sustainable Development whereby conservation, sustainable management and restoration jointly contribute to ending extreme poverty, ensuring food and water security and improving human well-being and resilience.

27. Healthy and functioning ecosystems provide us with oxygen, water and food. Yet we continue to destroy the web of life that sustains us and are failing to achieve a balance between natural and working, including forests and grasslands, agricultural and grazing lands, marine ecosystems, and urban/peri-urban areas and landscapes.

28. It is estimated that approximately 20 to 30 per cent of the earth's terrestrial cover has the potential to be restored. This is similar in magnitude to the extent of land degradation contained in the 2018 UNCCD national reports and reported globally as SDG indicator 15.3.1.[6] In addition, aquatic (freshwater and marine) ecosystems offer similar potential for recovering ecosystem goods and services that are essential for livelihoods and human well-being.

[5] <https://undocs.org/A/RES/73/284>.

[6] Sustainable Development Goal Progress Report 2019 in press.

29. The World Resources Institute in *A world of opportunity for forest and landscape restoration*[7] estimates that:

(a) One and a half billion hectares would be best suited to mosaic restoration where forests and trees are combined with other land uses, such as agriculture;

(b) Up to half a billion hectares would be suitable for wide-scale restoration of closed forests;

(c) There are 200 million hectares of unpopulated lands, mainly in the far northern boreal forests, that have been degraded by fire;

(d) Croplands and settled areas on former forest lands amount to a further one billion hectares.

30. The UNDER encourages Member States to "mainstream ecosystem restoration" by creating policies to boost restoration and decrease degradation; continue working towards existing goals, initiatives and commitments; look holistically at how ecosystem restoration can help achieve other global priorities and challenges; share experiences with one another; and build capacity, scientific research, resource availability and momentum for restoration at all levels – from local villages to international dialogues.

31. Several global challenges can be highlighted. Global food production is expected to decrease by 12 per cent by 2040 and available cropland is expected to decrease by 8 to 20 per cent by 2050. Developing countries are likely to account for approximately 97 per cent of global population growth by 2050.[8] For example, 375 million young Africans will enter the job market over the next 15 years.[9] Landscape restoration is about employing people, improving their quality of life, increasing social stability, and reducing conflict and migration.

32. Ambitious ecosystem restoration would also help deliver climate action at a new level: sinks and reservoirs of greenhouse gases (such as forests, oceans, wetlands and soil) are essential for mitigating climate change and enhancing the resilience of ecosystems and societies. There is a sense of urgency among governments and citizens given the dire prognosis made by the IPCC if we breach the 1.5-degree Celsius threshold.[10] The IPCC has delivered a report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems and is presenting the outcomes in round table one.

33. A Global Movement for Ecosystem Restoration would build on voluntary initiatives, targets and commitments at all levels, such as the Bonn Challenge for which nearly 60 countries have committed to bringing more than 170 million hectares of landscapes under restoration. Land rehabilitation and restoration targets and measures have been identified by most of the 121 countries participating in the Land Degradation Neutrality Target Setting Programme (LDN TSP) of the UNCCD. It is also important to note that the UNDER calls for the "*full involvement of all relevant stakeholders, including women, children according to their evolving capacities, young people, older persons, persons with disabilities, indigenous peoples and local communities*".

34. A Global Movement for Ecosystem Restoration could leverage nature-based solutions as a viable pathway towards regenerating our communities, societies and regional economies where the whole that is (re)created is ultimately greater than the sum of its parts. Nature-based solutions, such as natural regeneration, conservation agriculture and habitat rehabilitation, can be cheap, effective and provide a wide range of goods and services.

35. Globally, research shows that every one dollar invested in restoring degraded land generates an estimated seven to thirty dollars in economic benefits, including increased food production, carbon sequestration and water quality.[11] Yet each year, deforestation and land

[7] <https://www.wri.org/resources/maps/atlas-forest-and-landscape-restoration-opportunities>.
[8] Food and Agriculture Organization.
[9] International Labour Organization.
[10] <https://www.ipcc.ch/sr15/>.
[11] <https://www.wri.org/blog/2017/12/restoration-one-most-overlooked-opportunities-economic-growth>.

degradation costs the world USD 6.3 trillion in lost ecosystem services, such as agricultural products, recreational opportunities and clean air – equivalent to 8.3 per cent of global gross domestic product (GDP) in 2016.[12] Based on the case studies in the USA, for every USD 1 million invested in ecosystem restoration, between 13 and 32 job-years and between USD 2.2 and USD 3.4 million in total economic output are contributed to the economy.[13]

36. The use of scenario modelling to improve restoration planning, implementation and monitoring is not yet fully explored but is critical to guiding cost-effective restoration interventions, particularly at the unprecedented scales promoted by emerging global restoration commitments.[14] The second edition of the Global Land Outlook of the UNCCD, set to be released in 2021, will examine the costs and benefits of future restoration scenarios in the context of achieving LDN and the SDGs.

B. Key question: How can we create and sustain a global movement for ecosystem restoration?

37. Possible questions to consider:

(a) How ambitious should we be? How do we ensure that restoration delivers multiple benefits?

(b) What are the best ways to ensure stakeholder engagement so that ecosystem restoration becomes a way of life?

(c) Should we explore a local, national or regional approach? Are there particular regions or initiatives that we should rally behind?

(d) How can we ensure ecosystem restoration is mainstreamed into land use planning, government budgets and private sector investment strategies?

(e) Can a global movement for ecosystem restoration deliver gender equity, tenure security and equitable benefits?

(f) How can a global movement for ecosystem restoration be harnessed to support job creation or provide sustainable socio-economic development?

(g) Are opportunities under LDN adequately mapped and understood at national and sub-national levels? Over 120 countries are setting LDN targets, many of which include restoration and rehabilitation measures. Can these be synchronized with SDGs, Nationally Determined Contributions and the Decade for Ecosystem Restoration to leverage resource mobilization?

(h) What are the critical social, economic and environmental safeguards when designing large-scale restoration projects and programmes, i.e. in public-private partnerships? How do we deliver them?

VI. Interactive dialogue 1: A values-based approach to land stewardship

A. Background

38. Globally, we are witnessing the over-exploitation of natural resources and the collapse of ecosystem services that support us and all other species on earth. Food insecurity, competition and conflict over natural resources and forced abandonment of the land are gathering pace. According to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, land degradation has direct negative impacts on the well-being of at least 3.2 billion people worldwide.

[12] <http://www.eld-initiative.org/fileadmin/pdf/ELD-main-report_05_web_72dpi.pdf>.
[13] <https://pubs.er.usgs.gov/publication/ofr20161016>.
[14] <http://www.iis-rio.org/media/publications/Metzger_et_al_2017.pdf>.

39. However, there is a global shift in favour of environmental stewardship, which refers to the responsible use and protection of the natural environment through conservation, restoration and sustainable practices. Aldo Leopold (1887–1949) championed environmental stewardship based on an ethical approach to land management defining stewardship as, *"dealing with man's relation to land and to the animals and plants which grow upon it"*. From an ethical and moral perspective, each one of us has our own unique interpretation of the environment and how we, as human beings, are responsible for it. However, leaders are emerging among a cross-section of UNCCD stakeholders who are placing a value-based, ethical and moral approach to land stewardship at the centre of their decision-making. The shift is manifesting itself in terms of individual and collective advocacy and action and changing consumption and production patterns. In this sense, we are experiencing a values revolution where people want to make the world a better place through their lifestyle, their careers and the products they buy.

40. In this dialogue, emerging leaders and stakeholders from faith based civil society organizations (FBOs), indigenous communities, the private sector engaged in socially responsible investment and youth groups exploring the moral imperative of intergenerational solidarity will work with ministers and heads of delegation to explore the values-based approach they have adopted in their decision-making on land issues and the implications for land management and the UNCCD process.

41. There has been a steady increase in the level of engagement and number of FBOs at the local, national and international levels making a practical contribution to environmental challenges. Environment and development work are often seen as both a moral issue and action as well as an expression of faith. Faith-based groups place a specific focus on showing solidarity with the most vulnerable and they are often doing essential work, at a corporate level, leading the fight against extreme poverty, delivering essential services and alleviating suffering. Faith-inspired NGOs can draw on a plethora of faith ‘assets’ such as schools, clinics and hospitals; faith networks with global and local reach; and deeply rooted local, national and international advocacy efforts.

42. According to a 2010 study entitled 'The Global Religious Landscape', issued by the Pew Forum on Religion and Public Life, 84 per cent of the world's inhabitants, then estimated at 6.9 billion, identify with a religion. Beyond ‘corporate’ expressions of faith, faith operates at an individual and personal level, conferring identity, influencing mindsets and behaviours, shaping social norms, defining the narratives we inhabit and grounding our social networks and relationships. This process is mediated in numerous ways, through sacred texts, faith leaders and congregational relationships. Individual consumption patterns that drive land degradation or rehabilitation can be impacted if people of faith choose to consume differently. Faith-inspired processes could also help define a narrative that reduces conflict over access to productive assets such as land and water and boosts environmental stewardship. One example of this is the environmental and development encyclical of Pope Francis, *Laudato Si’*.

43. In the same vein, there is a spiritual component unique to indigenous environmentalism as many ancestral and traditional practices are tied in with the natural world. Since nature is a cornerstone of most indigenous peoples’ identity, religion, culture, and community, indigenous peoples feel compelled to protect it. Indigenous peoples represent just five per cent of the world’s population but they own, occupy or use a quarter of the world’s surface area and safeguard 80 per cent of the world’s remaining biodiversity on their ancestral lands according to the World Bank. Indigenous peoples have created complex systems to thrive off the land while, in turn, caring for and maintaining it. Landscapes have been managed over thousands of years with frequent, low-intensity controlled burns to maintain a productive ecosystem and prevent wildfires. Regenerative harvesting (such as coppicing) has been employed along with selective domestication. Countries around the world are increasingly turning to their indigenous peoples and seeking their knowledge on natural resource management.

44. Today, the private sector is under intense pressure to both build public trust and be competitive in a global economy. To do so, it must act with greater accountability, transparency and integrity, while remaining profitable and innovative. It must engage with activists as well as analysts, cooperate as well as compete, manage social and

environmental risks as well as market risks, and leverage its intangible assets as well as its financial and physical assets. Some companies are making sincere, concerted efforts to fundamentally reshape markets and governance structures. Innovative companies are committed to creating value and upholding certain values through socially responsible investments. In the process, they are changing the rules of the game. However, mastering these new rules and constantly changing expectations of society requires the public articulation and adoption of clear values and business principles, and the design and successful use of new tools and management competencies.

45. Much of the values revolution is being attributed to the effects of climate change and environmental degradation. Young people are driving this revolution. Across the OECD, 84 per cent of young people consider it their duty to improve the world. It is increasingly clear why. Carbon dioxide, the most common greenhouse gas responsible for climate change, via the greenhouse effect, stays in the atmosphere for a hundred years or more. The negative change happens slightly beyond the time frame of a human life, giving rise to the concept of intergenerational justice. This concept suggests that, just as there are issues of justice between classes, genders, races and countries, justice also exists between generations. In a world of finite resources, if the environment is being degraded so that over time it produces and supports less, this impoverishes future generations, meaning that the current generation is essentially stealing from the next.

46. As a result, the values-based approach of the current generation of young people differs from the optimism of previous generations. Firstly, it is necessarily pragmatic and increasingly urgent. Young people believe business and government must work hand in hand to solve problems such as unemployment and challenges such as land degradation and climate change. Secondly, young people feel empowered. In a digitally connected and open world, young people can find the tools they need to drive change. They can access, share and distribute information around the world for free, providing ample opportunities to promote causes. Finally, there is a feeling among young people that doing good, especially protecting the environment, should be integrated into their daily lives.

B. Suggestions from emerging leaders and stakeholders

47. A values-based approach to land stewardship would help engage stakeholders, change mindsets about the true value of land and support the implementation of the UNCCD.

48. Questions for consideration during the dialogue:

(a) What are the implications of a value-based approach to land stewardship for future consumption and production patterns and ultimately for land management strategies?

(b) Would faith-based development initiatives, especially around the critical issue of land degradation and the declining availability of natural resources, help promote social peace and interfaith harmony?

(c) How can we better recognize and learn from indigenous and traditional knowledge and how can leadership be better recognized?

(d) What would be needed to encourage more socially responsible investment from the private sector?

(e) How does the concept of intergenerational justice apply to UNCCD stakeholders?

VII. Interactive dialogue 2: Healthy land – healthy people

A. Background

49. Healthy land is an essential part of our life support system. Degradation and desertification processes rob the land of its ability to provide valuable services to humanity while driving biodiversity loss and climate change. Over the past two centuries, an

estimated eight per cent of soil organic carbon, an indicator of soil health, has been lost globally from land conversion and unsustainable land management practices (176 gigatons of carbon (Gt C)). Projections to 2050 predict further losses of 36 gigatons of carbon from soils, particularly in sub-Saharan Africa.

50. Healthy land provides all terrestrial species with the means to survive and thrive. It has been a resilient provider of vital goods and services such as food production, where humans obtain more than 99 per cent of their food calories from land, and water purification. If the health and productivity of land decreases, human health will suffer. Although anywhere in the world can be affected by desertification/land degradation and drought (DLDD), the negative impacts on health are disproportionately experienced by certain groups, especially those living in vulnerable conditions.[15] These include women, indigenous communities, children, elderly persons, people living in rural, marginal or fragile environments with land vulnerable to degradation, those with a lower-income status, those living in poor areas and those without easy access to healthcare facilities.

51. Environmental risk factors, such as lack of food and water security, air and soil pollution, lack of sanitation and hygiene, exposure to hazardous chemicals, change in vector distribution and climate-related disasters, result in communicable and noncommunicable diseases, malnutrition, disability and mortality. Environmental determinants of health are responsible for more than 23 per cent of the burden of diseases globally.[16] Sixty-one main diseases and injuries, in terms of deaths and disability adjusted life years (DALYs), at least 29 (48 per cent) can be associated with DLDD.

52. The specific impacts of DLDD on health may include, but are not limited to, a higher risk of malnutrition from an overall reduction in food supply or a reduction in the nutritional value of food because of micronutrient depletion in the soil or lack of diversity in food production and consumption. Monocropping rarely provides the balanced, nutritious diets associated with traditional farming, for example. A lack of iron can cause anaemia; vitamin A deficiency can cause night blindness and vitamin C deficiency can cause scurvy. Around the world, 820 million people are undernourished and two billion are affected by micronutrient deficiency. In Africa, most of the health costs associated with malnutrition occur before a child turns one. The cumulative economic impact of child malnutrition can vary between two to sixteen per cent of GDP. Food security only exists when people have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Food security should also always imply nutrition as health is not only about eating enough but also about eating well.

53. Fresh water is essential for life and human health. Nearly half the global population is already living in water-scarce areas where they experience water scarcity at least one month a year. The number of people affected could increase to some 4.8–5.7 billion in 2050 with 73 per cent of the affected people living in Asia. In addition to the impact of drought on food production, droughts also stress water supply systems, further exacerbating water scarcity. In the decade 2006 to 2015, there were 164 drought events globally, which resulted in more than 20,000 actual deaths and impacted 726 million people. In drought conditions, there is an increase in the concentration of contaminants in ground and surface water; often rapid growth of pathogens from the associated increased temperatures; and a high level of salinity and water stagnation due to reduced water level and stream flows. Diseases linked to water scarcity include infectious and parasitic diseases, noncommunicable diseases and pollution-related diseases. There may also be more water- and food-borne diseases because of poor hygiene linked to a lack of access to clean water. There is a demonstrated link between land management and the water cycle that partially determines water quantity and quality.

[15] WHO (2012) – Our Planet, Our Health, Our Future: human health and the Rio Conventions: biological diversity, climate change and desertification.

[16] World Health Organization.

54. Airborne pollutants can rapidly disperse globally, travelling long distances across national borders, continents and even oceans. Problems associated with airborne pollutants, especially resulting from sand and dust storms or DLDD-induced wildfires, are intensified by degradation in drylands. The general effects of air pollution on human health (morbidity and mortality) are: (a) premature deaths due cardiovascular and respiratory diseases, lung cancer, and acute lower respiratory infectious (e.g. pneumonia); (b) irritation in the respiratory tract, causing respiratory disorders (e.g. asthma, tracheitis, pneumonia, allergic rhinitis, desert lung syndrome); (c) causing or aggravating bronchitis, emphysema, cardiovascular diseases (e.g. hypertension, stroke, increased risk of acute myocardial infarction, inducing atherosclerosis), eye infection, skin irritations, and meningococcal meningitis; (d) other diseases, such as valley fever, and diseases associated with toxic algal blooms. Dust can also cause death and injury due to reduced visibility and road accidents.

55. The most vulnerable populations exposed to sand and dust live in arid areas and adjacent zones, such as the Middle East, North Africa, the Sahel and Australia, China and East Asia, and the US Southwest and Mexico, although exposure can affect populations far from these regions. The greatest impacts are suffered by children, the elderly and those with underlying chronic health conditions in high-exposure situations (e.g. agricultural or outdoor labourers and those near desert areas or industries). Dust storm frequency is evolving due to land use change and a shifting climate. Dust from the Chihuahua Desert has increased children's (aged 1–17) hospital admissions for asthma and bronchitis in El Paso, Texas, with girls more sensitive to acute bronchitis hospitalizations after dust events than boys. Respiratory mortality among the elderly (aged 75 or older) in Italy and Spain increases during Saharan dust events. Premature deaths from air pollution because of forest fires are estimated at 260,000 to 600,000 a year worldwide, with the most affected regions being sub-Saharan Africa and Southeast Asia. Some studies indicate that dry seasons, coupled with low humidity and high airborne dust concentrations, may result in Meningococcal meningitis outbreaks with high fatality rates, specifically in Africa in a semi-arid region known as "the meningitis belt".

56. Ecosystem degradation can cause soil erosion and contamination. In turn, soil contaminants can move into the surface water leading to water contamination. Soil and water pollution from excessive use of pesticides or industrial processes is linked to rising rates of poisonous and cancer-causing toxins being found in the human population. There is an increased risk of cancer and kidney, skeletal and bone diseases as well as neurological damage and low IQ.

57. Finally, land degradation in tandem with climate change may force between 150 to 700 million people to migrate by 2050. This may result in the spread of infectious diseases as human populations, including pastoralists and their animals, migrate from degraded areas; psychosocial disorders from uncertainty and concerns for the family and future; and increased morbidity and mortality from the interruption of health care services. In parallel to human migration, there could be an increase and spread in zoonoses (such as hantaviruses or leptospirosis) and changes in the spread of vector-borne diseases.

58. Assessing vulnerability to the risk factors is complex and requires an understanding of existing health status. Populations are not equally vulnerable and gender inequality is an important factor. And risks are not equally distributed on a time or spatial scale. Vulnerability and risk assessment have already formed part of the technical guidance to Parties on drought preparedness and sand and dust storms. Reducing vulnerability by managing the mediating factors can reduce the magnitude of DLDD impacts on public health.

59. Ill health and sickness caused by land degradation and drought are the human face of the implementation of the Convention. Strategic objective 2 of the UNCCD Strategic Framework 2018–2030 aims *to improve the living conditions of affected populations*. With this objective in mind and in terms of impact, Parties to the Convention agreed to focus their efforts on enhancing food security and adequate access to water for people in affected areas, improving and diversifying livelihoods, encouraging the empowerment and

participation of women and youth and reducing forced migration caused by desertification and land degradation.

60. Action to protect health is needed at every stage of the causal pathways from drivers, through exposures, through to health effects. Actions are most effective at the highest possible level (drivers) of the causal pathway to treat the cause of the disease and not simply the symptom of the disease. The provision of essential ecosystem services should be assured and sustained. Strategies that reduce rates of DLDD would provide for better overall human health. At the same time, public health systems will need to adapt to a changing world and to the reality of shifting disease burdens caused by climate change and DLDD if they are to support human health and well-being.

B. Suggestions from representatives from the health sector

61. The effective implementation of the Convention could have a positive impact on human health if the DLDD-related drivers of ill health were addressed in a multi-sectoral way.

62. Possible questions to consider:

(a) How can we promote increased knowledge and awareness in government and local populations regarding the risk factors of DLDD on human health?

(b) What can we learn from behavioural change communications approaches successfully used in the health sector?

(c) How can the health and land management sectors operate together to improve land health and people's health? What administrative and regulatory actions are needed? What about the collection of data disaggregated by gender?

(d) Would this boost people's health and overall resilience? Would it be a cost-effective investment?

(e) Should data sharing, monitoring and surveillance improve?

(f) Should we refine our guidance on mapping and assessment of DLDD risks, vulnerabilities, hazards and exposures?

(g) Should we target drought hotspots or anthropogenic source areas for sand and dust storms for land restoration?

(h) How should health services evolve to factor in environmental reality?

VIII. Interactive dialogue 3: Boosting sustainable value chains for land-based business

A. Background

63. The global drylands are a vital part of the earth's human and physical environments, encompassing grasslands, agricultural lands, dry forests and shrublands. Covering approximately 40 per cent of the world's land area, they support more than two billion people, 90 per cent of whom live in developing countries. It is estimated that 25–35 per cent of drylands are already degraded.

64. The degradation of global drylands cannot be effectively addressed without unleashing the inherent economic potential of rural landscapes. This requires that local communities enjoy clear economic benefits from the preservation and restoration of their natural environment. With hundreds of millions of young people coming onto the job market in the coming decades, job creation and the development of livelihood options, especially in rural areas, is an urgent priority.

65. While traditional crops will continue to play a crucial role in food security for local markets, empowering communities to diversify their production and economic activities

through the generation of new and sustainable income streams requires that innovative, inclusive and entirely new value chains be created to unlock the potential of natural capital, while ensuring the restoration of severely degraded lands. Many profitable commodities can be produced without damaging the ecosystems in which they grow. Offering this type of production is based on the sustainable management, protection and restoration of dryland landscapes.

66. The drylands are home to some of the world's most lucrative botanical species with a considerable capacity to stimulate economic opportunities for the world's poorest communities. Despite their considerable market potential, many of the most powerful natural ingredients in the drylands – e.g. moringa, baobab, fonio, balanites – remain relatively unknown to the rest of the world.

67. In this context, global and local business leaders can play a transformational role in linking smallholder producers in dryland areas to lucrative local and international markets, while creating revenues through dryland commodities.[17] Sourcing ingredients from and empowering small-scale producers has the potential to help transform degraded lands into productive landscapes, delivering on LDN and restoration targets, while creating green jobs and providing livelihood opportunities. There is scope for major corporate players, especially in the food and cosmetics sectors, to boost their triple bottom line and achieve change at scale via a market-driven, climate-smart and ethical supply chain model.

68. Governments also have a major role to play in delivering economic opportunities and food security, which could involve offering price incentives for environmentally friendly goods and services, cooperative marketing and export subsidies, among other forms of support.

B. Suggestions from the private sector

69. There is huge potential to build sustainable value chains from products sourced in the drylands or from restored land.

70. Questions for consideration:

(a) What opportunities do you see in sourcing products from dryland or restored areas?

(b) What steps are needed to ensure that environmental sustainability and social safeguards are built into global supply chain models?

(c) To what extent is demand-creation amongst global consumers key to developing new value chains for little-known but lucrative dryland products?

(d) What are the bottlenecks and risks that may hinder private sector investments in the drylands? How can these be addressed?

(e) How can smallholder producers and entrepreneurs access markets, finance and the other means of production necessary to develop new value chains that supply local or international markets?

(f) In a world of local ingredients with global flavors, what is the potential for local products to go global and help develop new food habits and culture?

IX. Expected result

71. A summary of the outcomes of the ministerial round-table discussions and the interactive dialogue sessions will be presented by the President of the COP. The summary from the President will be transmitted to a plenary session of COP 14 for

[17] Sustainable Drylands Factsheet, General Assembly of the Global Environment Facility, Vietnam 2018: <https://www.thegef.org/sites/default/files/publications/GEF%20Assembly_SustainableDrylands%20Factsheet_9.4.18.pdf>.

further consideration. In addition, a New Delhi Declaration will be prepared, based on the outcomes of the discussions, for the consideration of ministers.