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REVIEW OF PROGRAMME PLANNING AND IMPLEMENTATION

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Desertification and Land Degradation

Note by the Secretariat

CONTENTS

I. BACKGROUND.....	2
II. INTERLINKAGE OF DLD WITH CLIMATE CHANGE.....	4
III. LAND USE ACTIVITIES IN NATIONALLY DETERMINED CONTRIBUTIONS	6
IV. NEASPEC'S WORK ON THE LINKAGE OF LAND DEGRADATION AND CLIMATE CHANGE	9
V. ISSUES FOR CONSIDERATION.....	10

I. BACKGROUND

1. Desertification and land degradation (DLD) and drought are a significant problem affecting soil, air and water quality, threatening forest and woodlands, pasture and rangelands as well as irrigated and rain-fed croplands. In recognition of the serious threat and impact of DLD on the economy, human wellbeing and the environment, NEASPEC member States have developed various policies and programmes to combat DLD and established networks and partnerships to take joint actions in affected countries and areas¹.

2. Over the past decades, NEASPEC has developed and implemented various projects to provide capacity building, knowledge sharing and trainings for member countries to combat DLD. Under the “*Regional Master Plan for the Prevention and Control of Dust and Sandstorms in North-East Asia*” jointly developed by the Asia Development Bank (ADB), United Nations Environment Programme (UNEP), United Nations Convention to Combat Desertification (UNCCD) and United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) in 2005, NEASPEC carried out a field project on tree planting and awareness raising of local community in Zamin-Uud, Mongolia, during 2011-2012, developed a GIS-based information system for activities on combating desertification in Mongolia, and supported capacity building workshops for Mongolian experts, held in China respectively in 2011 and 2013.

3. Subsequently, NEASPEC reviewed the subregional DLD activities and conceptualized the North-East Asia Multi-Stakeholder Plan on Combating DLD (NEAMSP) as a practical tool to support the public sector, private sector and civil society to scale up their existing work through better information sharing and coordination. NEAMSP aims to establish a platform for information exchange and sharing of expertise; create linkages among governments, civil society organizations, and research institutions to forge public-private partnerships; support regional ecological restoration and sustainable utilization of resources; and contribute to efforts to achieve the the land degradation neutrality (LDN) targets in North-East Asia.

4. The plan of implementing the NEAMSP was elaborated at an international multi-stakeholder workshop organized jointly with the former State Forestry Administration (now the National Forestry and Grassland Administration) of China in 2015. SOM-20 adopted the NEAMSP in 2016 and agreed to change the title of the NEASPEC programmatic area from Dust and Sandstorms to Desertification and Land Degradation.

¹ Global Land Outlook Northeast Asia Thematic Report, 1 August 2019, UNCCD, <https://knowledge.unccd.int/publication/northeast-asia>

5. Following to the adoption of the UNCCD LDN targets and the Sustainable Development Goals (SDG) of the 2030 Agenda for Sustainable Development in 2015², NEASPEC provided inputs for the *Northeast Asia Thematic Report on Partnerships to Achieve Land Degradation Neutrality as part of the UNCCD Global Land Outlook*.

6. As part of an enhanced subregional and multilateral cooperation on DLD, the Northeast Asia Forest Network was expanded and transformed into the *Northeast Asia Network for Desertification, Land Degradation and Drought (DLDD-NEAN)* in 2011 through an agreement initially between China, Mongolia and the Republic of Korea (ROK). The Russian Federation officially confirmed to join the DLDD-NEAN as a member state in 2019. The Democratic People's Republic of Korea (DPRK), and Japan could participate as observers. Established as an official reporting entity to and a subregional platform for the implementation of the UNCCD, the DLDD-NEAN was given the mandate to address issues related to the DLD and contribute to the implementation of sustainable forest management and sustainable land management.

7. The 8th DLDD-NEAN Steering Committee Meeting, held in Ulaanbaatar, Mongolia, in December 2019, joined by delegates from China, Mongolia, the ROK, the Russian Federation, the DPRK and the UNCCD secretariat, *inter alia*, reviewed the preparation of a project in Zamin-Uud, Mongolia; considered the idea of developing a North-East Asia sand and dust storms source base mapping; and discussed enhancing the subregional implementation of the LDN targets. The Meeting also briefly reviewed the outcomes of NEASPEC SOM-23.³

8. Given the overlap of key stakeholders and activities between DLDD-NEAN and NEASPEC's work on DLD, member States reviewed the existing work of NEASPEC on DLD and that of the relevant intergovernmental process in the subregion at SOM-22 and SOM-23. Among the following options considered by the member States, SOM-23 suggested NEASPEC to focus on new areas of work, i.e. the interlinkage of DLD with other sectors including climate change.

- i. Discontinuing the programmatic work area on DLD under NEASPEC to avoid duplication with the DLDD-NEAN;
- ii. Focusing on operating the NEAMSP to help stakeholders share and disseminate information and coordinate activities on DLD, through organizing annual multi-stakeholder forum in collaboration with the DLDD-NEAN and other partners;

² LDN targets and synergies with the SDG target 15.3, "By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world."

³ Minutes of the 8th DLDD-NEAN Steering Committee Meeting shared by the Korea Forest Service.

- iii. Integrating NEASPEC’s work on DLD with interlinked issues or projects, focusing on the co-benefits and interplay between DLD and other sectors, such as climate change, agroforestry, renewable energy and biodiversity.

II. INTERLINKAGE OF DLD WITH CLIMATE CHANGE

9. As the world’s soils store more carbon than the planet’s biomass and atmosphere combined, appropriate land management is urgently in need to increase soil carbon stocks that can offset the anthropogenic greenhouse gas (GHG) emissions and generate multiple benefits for both the environment and society. Changes in land conditions, either from land-use or climate change, affect global and regional climate.

Table 1. GHG Emissions with/ without forest and land use



The evolution of global aggregate greenhouse gas emissions from 2000 to 2017 against the 1990 emission level. Source: UN Climate Change

10. There is increasing knowledge on the interlinkage between DLD, climate change and biodiversity conservation. The 2019 *Intergovernmental Panel on Climate Change (IPCC) Special Report on Climate Change and Land* identifies agriculture, forestry and other land use (AFOLU) sector as a significant net source of GHG emissions, contributing to about 23% of anthropogenic emissions of carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) combined as CO₂ equivalents in 2007–2016, or about 10 – 12 GtCO₂e.⁴ IPCC also identifies various land-related climate change mitigation options with co-benefits for climate change adaptation. The report

⁴ <https://www.ipcc.ch/srccl/>

offers further analysis on the interactions, co-benefits and trade-offs between DLD and climate change.⁵ The 2018 *Assessment Report on Land Degradation and Restoration by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)* recognizes that combating land degradation is an urgent priority to protect the biodiversity and ecosystem services and to ensure human well-being.⁶ The UNCCD Global Land Outlook Northeast Asia Thematic Report concludes that forest and landscape restoration has emerged as a key element in strategies to address land management, biodiversity conservation and climate change.⁷

11. Forests present a significant global carbon stock accumulated through growth of trees and an increase in soil carbon. Sustainable forest management, including in areas of degraded forests, plays an essential role in increasing carbon stocks and biodiversity. In the long term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fibre or energy from the forest, will generate the largest sustained mitigation benefit.

12. The UN General Assembly adopted the *UN Strategic Plan for Forests 2017 – 2030* by the GA Resolution 71/285 that provides a global framework for action at all levels to sustainably manage all types of forests and trees outside forests, and to halt deforestation and forest degradation. The Strategic Plan serves as a reference framework for the forest-based work of the UN system and for fostering enhanced coherence, collaboration and synergies among UN bodies and partners at all levels towards delivering SDGs, the global biodiversity targets and the Paris Agreement. Amongst six Global Forest Goals, the first goal is to “reverse the loss of forest cover worldwide [...] and increase efforts to prevent forest degradation and contribute to the global effort of addressing climate change.” The indicative thematic areas for action are: (a) Reduction in/halting of deforestation; (b) Reduction in/halting of forest degradation; (c) Maintenance and improvement of forest health; (d) Reforestation and afforestation; (e) Forest landscape restoration and rehabilitation; (f) Natural forest regeneration; (g) Contribution of forests to climate change mitigation and adaptation; (h) Reduction in/halting of loss of forest biodiversity; (i) Mitigating the impact of invasive alien species; (j) Mitigating the impact of air pollution; (k) Fire control and

⁵ “Land degradation” is defined in IPCC SRCCL as a negative trend in land condition, caused by direct or indirect human-induced processes including anthropogenic climate change, expressed as long-term reduction or loss of at least one of the following: biological productivity, ecological integrity or value to humans. The difference between land degradation and desertification is geographic. “Desertification” is land degradation when it occurs in arid, semi-arid, and dry sub-humid areas, collectively known as drylands. Desertification is not the same as the expansion of deserts, also note limited to irreversible forms of land degradation.

⁶ https://www.ipbes.net/system/tdf/spm_3bi_idr_digital.pdf?file=1&type=node&id=28335

⁷ https://catalogue.unccd.int/1218_GLO_Northeast_Asia_Report.pdf

management; (l) The role of forests in preventing land degradation and desertification; (m) Combating sandstorms and dust storms; (n) Wildlife protection and management; and (o) Innovative approaches to the sustainable management of natural and planted forests.

13. The COP25 of the United Nations Framework Convention on Climate Change (UNFCCC) launched the *Santiago Call for Action on Forests* to address the urgency of the current climate crisis by collaborating and coordinating actions aimed at increasing the ambition of the nationally determined contributions (NDCs) through sustainable and inclusive mitigation actions in the AFOLU sector, including through reducing emissions from deforestation and forest degradation and enhancing carbon sinks (Action 1), and increasing the NDC ambition through Nature-Based Solutions (NBS) based on forest activities (including reducing emissions from deforestation and forest degradation in developing countries, so called “REDD+” under the Convention).⁸

14. The role of land use, land-use change and forestry (LULUCF) activities in the mitigation of climate change has long been recognized under the international climate regime⁹, and the land-sector transformation is clearly part of the pathways to deliver on the 1.5 °C target as set in the Paris Agreement¹⁰. As such, countries have also included many land use activities in their NDCs as well as the “long-term low greenhouse gas emission development strategies (LEDS)”, which have been submitted in according to the Paris Agreement. The LEDS indicate that land use will be critical for achieving a balance between anthropogenic emissions by sources and removals by sinks of GHGs in the second half of this century.¹¹

III. LAND USE ACTIVITIES IN NATIONALLY DETERMINED CONTRIBUTIONS

15. China announced a series of measures to increase carbon sinks in its first NDC. That is to vigorously enhance afforestation, promoting voluntary tree planting, continuing the implementation of key ecological programs including protecting natural forests, restoring forest and grassland from farmland, conducting sandification control, planting shelter belt, controlling rocky desertification, conserving water and soil, strengthening forest tending and management

⁸ <https://unfccc.int/sites/default/files/resource/Santiago%20Call%20for%20Action%20on%20Forests.pdf>

⁹ Article 4 of the [United Nations Framework Convention on Climate Change](#) identifies commitment to promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems. Article 5 of the [Paris Agreement](#) reemphasizes the importance of the existing efforts to mitigate climate change through land use activities, including those related to forests and REDD+.

¹⁰ Roe, S., Streck, C., Obersteiner, M. *et al.* Contribution of the land sector to a 1.5 °C world. *Nature Climate Change* 9, 817–828 (2019), <https://www.nature.com/articles/s41558-019-0591-9>

¹¹ <https://unfccc.int/topics/land-use/the-big-picture/introduction-to-land-use>

and increasing the forest carbon sink; to strengthen forest disaster prevention and forest resource protection and to reduce deforestation-related emissions; to strengthen the protection and restoration of wetlands and to increase carbon storage capacity of wetlands; and to continue to restore grassland from grazing land, to promote mechanism of maintaining the balance between grass stock and livestock, to prevent grassland degradation, to restore vegetation of grassland, to enhance grassland disaster prevention and farmland protection and to improve carbon storage of soil.¹²

16. The DPRK plans to reduce 35.8 million tons GHG emission per year by 2030 unconditionally, through implementing its *National Disaster Risk Reduction Strategy 2019 – 2030*, *the National Environment Protection Strategy 2019 – 2030*, and the *National Agroforestry Strategy and Action Plan (NASAP) 2015 – 2024*. The first phase of the NASAP implementation during 2015 and 2017 has reforested 603,000 hectares mountain areas in the DPRK, and more than 1 million hectares is planned by 2024. The DPRK also intends to reduce additional 78.8 million tons of GHGs by 2030 through effective international cooperation.¹³

17. Japan announced target for removals by LULUCF in its NDC as approximately 37 million tons CO₂ (tCO₂) by forest carbon sinks measures and about 9.1 million tCO₂ by cropland management, grazing land management and revegetation.¹⁴ Japan also submitted its LEDES with a vision to establish a “decarbonized society” by reducing 80 percent GHG emissions by 2050 with sufficient carbon sinks put into place. Japan will promote the conservation of natural environment and activities in sustainable agriculture, forestry and fisheries industries to increase the carbon sinks. This includes measures to facilitate appropriate forest management and urban revegetation; promote carbon storage in cropland soil with the application of organic matter; enhance the functions of ecosystems to remove CO₂ through conservation and restoration of forests, grasslands, wetlands as well as the coastal and marine ecosystems; and carbon storage and substitution of fossil fuels using biomass products.¹⁵

¹² China First NDC, September 2016,

<https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/China%20First/China's%20First%20NDC%20Submission.pdf>

¹³ DPRK First NDC (updated submission), September 2019,

https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Democratic%20People%27s%20Republic%20of%20Korea%20First/2019.09.19_DPRK%20letter%20to%20SG%20special%20envoy%20for%20NDC.pdf

¹⁴ Submission of Japan’s NDC, March 2020,

[https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Japan%20First/SUBMISSION%20OF%20JAPAN%27S%20NATIONALLY%20DETERMINED%20CONTRIBUTION%20\(NDC\).PDF](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Japan%20First/SUBMISSION%20OF%20JAPAN%27S%20NATIONALLY%20DETERMINED%20CONTRIBUTION%20(NDC).PDF)

¹⁵ Japan Long-term Strategy under the Paris Agreement, June 2019,

<https://unfccc.int/sites/default/files/resource/The%20Long-term%20Strategy%20under%20the%20Paris%20Agreement.pdf>

18. Given the high degree of vulnerability to climate change, Mongolia has emphasized the importance of adaptation in its NDC that aims at 14 percent reduction in total GHG emissions (excluding LULUCF) by 2030. The emissions from LULUCF was excluded due to the ongoing preparation of the Mongolian national GHG inventory. Over the last decades, non-irrigated crop production has been affected with an estimated 15 percent reduction of wheat production by 2030 due to climate change, 70 percent of the pastoral land has been degraded with changing plant composition, and the frequency of forest and steppe fires has been increased by the intensified dry climatic conditions. As part of the vision for adaptation, Mongolia aims to reduce forest degradation, implement reforestation and sustainable forest management strategies, and build effective disaster management to prevent environmental and socio-economic losses. These measures will have mitigation co-benefits, such as improving pasture management to increase the carbon sink of CO₂ equivalent to 29 million tons per year (about a third of emissions reduction in the energy sector), increase forest areas up to 9 percent, reduce forest fire affected area by 30 percent by 2030, and increase protected areas to 25-30 percent of the total territory to maintain natural ecosystems and preserve water resources.¹⁶ Mongolia's first Forest Reference Level report identifies mining and land use change are the direct drivers of deforestation and forest fire, unsustainable logging, pest outbreaks, and grazing as the direct drivers of forest degradation, and suggests including saxaul forest data and capacity building for peatland management.¹⁷

19. The ROK has set a mitigation target of reducing GHG emissions by 37 percent from the BAU level by 2030 across all economic sectors in its NDC. As for emissions from the land sector, the inclusion of GHG emissions and sinks of the land sector in the NDC will be decided at a later stage. The ROK aims to strengthen its capacity for climate change adaption through developing a climate-resilient ecosystem, a management system for disaster prevention and stable water supply, and transitioning to a climate-resilient social and economic structure.¹⁸

20. The Russian Federation has pledged its NDC to limiting anthropogenic GHGs to 70-75 percent of 1990 levels by 2030, subject to the maximum possible account of absorbing capacity of forests. Account for 70 percent of the world boreal forests and 25 percent of the world's forest resources, forests resources of the Russian Federation have global significance for mitigating climate change, protecting water resources, preventing soil erosion and conserving biodiversity

¹⁶ Mongolia NDC, September 2016,

https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Mongolia%20First/150924_INDCs%20of%20Mongolia.pdf

¹⁷ Mongolia's Forest Reference Level submission to the UNFCCC, 2018,

https://redd.unfccc.int/files/mongolia_2018_frl_submission_modified.pdf

¹⁸ ROK First NDC, November 2016,

<https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Republic%20of%20Korea%20First/INDC%20Submission%20by%20the%20Republic%20of%20Korea%20on%20June%202030.pdf>

on the planet. Rational use, protection, maintenance and forest reproduction, i.e. forest management, is one of the most important elements of the policy measures to reduce GHG emissions in the Russian Federation.¹⁹

IV. NEASPEC'S WORK ON THE LINKAGE OF LAND DEGRADATION AND CLIMATE CHANGE

21. Many land-related responses to climate change adaptation and mitigation produce co-benefits to combat DLD, and vice versa. Such responses also contribute to halting biodiversity loss with sustainable development co-benefits to society. Sustainable land management, in particular, can prevent and reduce land degradation, maintain land productivity, whilst contributing to mitigation and adaptation of climate change. Reducing and reversing desertification and land degradation, at scales from individual farms to entire watersheds and ecosystem level, can provide cost effective, immediate, and long-term benefits to communities and support SDGs with co-benefits for adaptation and mitigation.

22. As reflected in the NDCs of the NEASPEC member States, restoring degraded lands (including degraded forests) is among the most cost-effective options for climate change mitigation with multiple co-benefits. In addition to the NDCs, international processes towards achieving the LDN targets under the UNCCD, the Post-2020 Global Biodiversity Framework under the Convention on Biological Diversity (CBD)²⁰, and the SDGs (particularly SDG 15.3) provide an opportunity for greater synergies and accelerated actions centered on restoring the land sector and the boarder ecosystems, the so called "nature-based solutions"²¹. This will also help close the projected emissions gap between the current NDCs and the Paris Agreement objectives. The IPCC Special Report on Climate Change and Land identified programmes to build individual and institutional capacity, accelerate knowledge transfer, enhance technology transfer and deployment, enable financial mechanisms, implement early warning systems, undertake risk management, and address gaps in implementation and upscaling on the restoration of the land sector.

¹⁹ Russian Federation INDC, April 2015, https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/Russia/1/Russian%20Submission%201_NDC_eng_rev1.doc

²⁰ Zero draft of the post-2020 global biodiversity framework, February 2020, <https://www.cbd.int/doc/c/efb0/1f84/a892b98d2982a829962b6371/wg2020-02-03-en.pdf>

²¹ The Nature-based solutions for climate manifesto, August 2019, <https://wedocs.unep.org/bitstream/handle/20.500.11822/29705/190825NBSManifesto.pdf?sequence=1&isAllowed=y>

23. Furthermore, *the UN Decade on Ecosystem Restoration 2021-2030* (UN General Assembly resolution 73/284) calls for concerted actions to prevent, halt and reverse the degradation of ecosystems worldwide in the next decade. The North-East Asian subregion could therefore benefit from working on the DLD nexus with climate change as well as biodiversity conservation to catalyze holistic and scalable progress under multiple international frameworks.

V. ISSUES FOR CONSIDERATION

24. The Meeting may wish to invite member States to provide guidance on directions and activities on NEASPEC's work addressing the interlinkage between DLD and climate change.

25. The Meeting may wish to invite member States to express their interest in hosting an expert group meeting to further elaborate the proposed activities.

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