



United Nations

ICCD/COP(14)/INF.3



Convention to Combat Desertification

Distr.: General
20 August 2019

English only

Conference of the Parties

Fourteenth session

New Delhi, India, 2–13 September 2019

Item 3 (c) (i) of the provisional agenda

Effective implementation of the Convention at national, subregional and regional level

Follow-up on policy frameworks and thematic issues

Drought

Options for additional arrangements for drought under the United Nations Convention to Combat Desertification

Note by the secretariat

Summary

This document supplements the official document ICCD/COP(14)/16 by presenting possible additional measures to be taken by the United Nations Convention to Combat Desertification (UNCCD) on drought risk reduction.

It is intended to enable Parties to the UNCCD to make a well-founded decision on the appropriate drought risk mitigation measures and instruments available. It outlines a menu of potential technical/policy, financial and legal instruments that countries and regions may consider, depending on their drought context and severity. It focuses on the intended global-level outcomes, actions and procedures that could be taken by the Convention Parties at the international level, alongside the provision of continued support for national drought adaptation and management planning.

This should be of interest to UNCCD national focal points, scientific experts and other key stakeholders in the UNCCD process.

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I. Introduction

1. Human development patterns are increasing the global extent of water stress and thereby deepening the exposure of vulnerable communities to drought (Intergovernmental Panel on Climate Change (IPCC) 2018). The United Nations Convention to Combat Desertification (UNCCD) was established to enable countries to seize the opportunities they have to manage land and water so that periodic droughts need not lead to land degradation and desertification (Kassas 1987). The UNCCD drought policy advocacy framework calls on Parties to take a proactive approach to reduce the exposure and vulnerability of populations and ecosystems to drought hazards (ICCD/COP(13)/19).¹ Sustainable land management that limits water stress is key to reducing exposure to drought. The contribution of water stress to shaping exposure to drought has recently been mapped on a global scale (Carrão et al. 2016).
2. The long-term impacts of drought cover all sectors of the economy and society, including agriculture and all other social and cultural practices and systems. In many cases, the residual effects of past droughts and water stress can and do increase exposure and vulnerability because they affect the capacities of ecosystems and societies to cope with future droughts. In such cases, reducing vulnerability and exposure to future drought risks involves simultaneously redressing the impacts of past and ongoing droughts and degradation.
3. Through its current Strategic Framework (2018–2030), the UNCCD is progressively sharpening its focus on drought risks and resilience. One of the five strategic objectives of the Framework is to “mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems”. The UNCCD’s focus on proactive drought risk management emphasizes ‘prevention’ and ‘preparedness’, rather than simply ‘recovery’ measures. This prioritization was confirmed in the decisions of the thirteenth session of the Conference of the Parties (COP 13) in 2017. This, for example, promoted the adoption of the UNCCD Drought Resilience, Adaptation and Management Policy (DRAMP) framework (Crossman 2018). Most importantly, the COP requested the secretariat and the Global Mechanism (GM) to implement a Drought Initiative (decision 29/COP.13). ICCD/COP (14)/16² provides an update on progress made by the Drought Initiative.
4. This document supplements the official document ICCD/COP(14)/16 by presenting an assessment of the need, if any, for additional measures to be taken by the UNCCD on drought risk reduction. It is intended to enable Parties to the UNCCD to make a well-founded decision on the appropriate drought risk mitigation measures and instruments available. It outlines a menu of potential technical/policy, financial and legal instruments that countries and regions may consider, depending on their drought context and severity. It focuses on the intended global-level outcomes, actions and procedures that could be taken by the Convention Parties at the international level, alongside the provision of continued support for national drought adaptation and management planning. This should be of interest to UNCCD national focal points, scientific experts and other key stakeholders in the UNCCD process.

II. Options for technical/policy approaches

5. The options presented and discussed in this section focus on the essential role that the UNCCD can play to support country Parties in mitigating meteorological, hydrological and socioeconomic drought impacts on ecosystems, agriculture and other productive sectors that support vulnerable livelihoods. These options consider the findings of previous relevant work by the UNCCD with a focus that could achieve the goals of the DRAMP framework adopted by decision 29/COP.13 at COP 13 in China (Figure). These goals include the following intended outcomes: (a) reduction of exposure; (b) reduction of vulnerability; (c) increased resilience; (d) transformation; (e) preparation, response and recovery; and (f) transfer and

¹ See <https://www.unccd.int/sites/default/files/sessions/documents/2017-08/ICCD_COP%2813%29_19-1711042E.pdf>, accessed 10.08.2019.

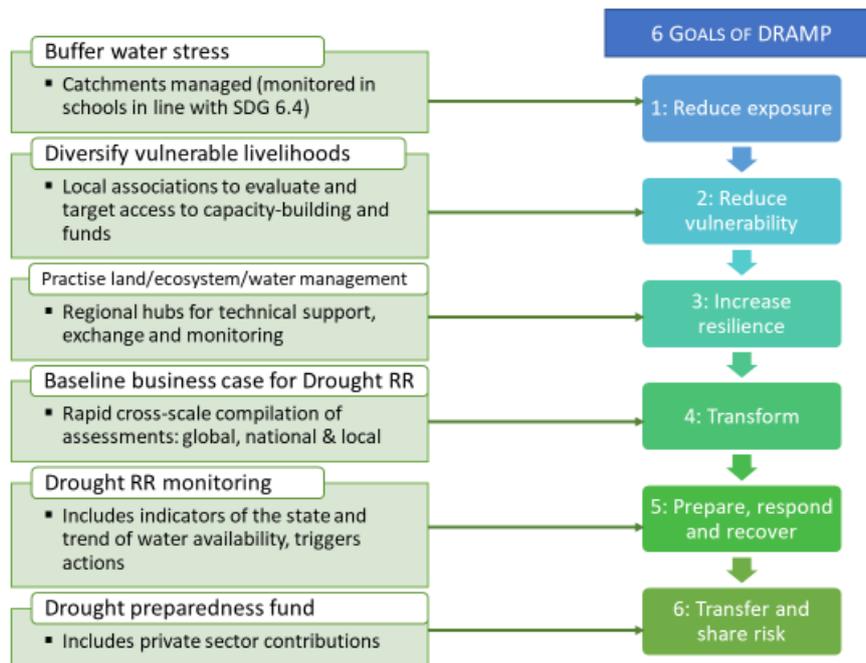
² See <https://www.unccd.int/sites/default/files/sessions/documents/2019-07/ICCD_COP%2814%29_16-1910485E.pdf>, accessed 01.08.2019.

sharing of risk. The presentation of options also draws on experiences gained through the UNCCD Drought Initiative over the period 2017–2019.

6. The following sections of this document describe six possible activities for international action on drought risk management, via the UNCCD secretariat and the GM. These should complement, feed into and boost national actions. The six options are aligned with the achievement of the DRAMP outcomes (as shown in the Figure). It is important to note that many of the options presented in this report will contribute to the achievement of more than one of the six DRAMP goals. For example, the international financing options described in Section 3 could transfer and share risk so that the most vulnerable communities need not continue to bear the greatest drought burden. These financing options could be directed also to support the achievement of the five other identified goals and activities.

Figure

Options to achieve drought resilience, adaptation and management policy outcomes



Abbreviations: Drought, Resilience, Adaptation and Management Policy (DRAMP), Risk Reduction (RR), Sustainable Development Goal (SDG).

A. Buffer water stress (basin/catchment level)

7. Slowing increases in water stress will directly tackle a critical aspect of growing global exposure to drought risk. All countries have signed up to Sustainable Development Goal (SDG) 6.4 to ensure the sustainable withdrawals and supply of freshwater to address water scarcity.³ However, in many cases, additional provisions are needed at the basin- and catchment levels to monitor the depletion of reserves during droughts and to ensure that they are replenished during rainy periods (using relevant regulatory measures to limit further extractions and/or economic incentives for water harvesting, such as payments for ecosystem services, etc.).

8. Where basin and catchment level governance systems face challenges due to transboundary administrative arrangements and weak institutional precedents for regulation, additional investments in institution-building and cooperation are often needed. Ensuring sufficient support to address these monitoring and governance issues in the most drought-

³ See <<https://www.unwater.org/publications/step-step-methodology-monitoring-water-stress-6-4-2/>>, accessed 01.08.2019.

affected regions is essential. Without them, it is difficult to apply regulatory measures and economic incentives to replenish the drought buffers effectively.

9. According to the baseline monitoring information on SDG 6.4 (Food and Agriculture Organization of the United Nations (FAO) 2018 p. 21), Sub-Saharan Africa, as a whole, appeared to have a low level of water stress (three per cent). Only South Africa had sufficient data and monitoring systems to shed light on water stress, which was reported at 43 per cent. Some countries may also have underestimated the water requirements and extraction rates both for ecosystem and economic uses, especially in dry and drought-prone regions. Pilot assessments were carried out in Uganda and Senegal. Following this assessment, Senegal reported a higher level of water stress at 10 per cent.

10. More effective hydrological monitoring systems in the drought-affected areas would likely reveal much higher levels of water stress. It is very important that the responsible authorities and agencies understand this reality and formulate the necessary plans and systems to address it effectively. The baseline assessment observed that water stress values at the national level can conceal differences between wet and dry areas within a country, as illustrated by the case of Peru, which has a national average water stress of around 3 per cent in contrast to 52 per cent water stress in the Pacific Basin.

11. Regular review of basin- and catchment-level water balances to complement the SDG 6.4 process, with a specific focus on the inclusion of basins and catchments in the most drought-affected areas, is essential. This should include a systematic review of the available basin- and catchment-level management strategies, particularly action taken to recharge deficits, reduce over-extraction and monitor progress. National policies should guide and encourage basin- and catchment-level institutions to take part in the review and encourage actors at all levels to strengthen and support them, as needed. This review of basin- and catchment-level management strategies and challenges should play a leading role in guiding and informing the priorities of national and international financing institutions concerned with reducing exposure and vulnerability to drought over both short- and longer-term planning horizons.

12. Since effective hydrological systems are critical to the survival, health and well-being of all adults and children in drought-affected regions, every primary and secondary school could be aware of their status and be willing to get involved in monitoring activities. This should enable every child, parent and future decision-maker in every drought-affected region to be fully hydro-literate. Every school-leaver in the dry areas should understand the main processes by which point source or diffuse pollutants in their environments can affect the safety of their families' and their communities' drinking water supplies. They should be alert to their responsibility as citizens to prevent this from happening. They should also have gained enough skills and interest to observe, report or mend a leaking tap or broken pipe and be able to access further vocational training to make further use of these skills, as needed.

B. Diversify vulnerable livelihoods (local level)

13. A recent report on drought in Africa (Cervigni and Morris 2016) underlined the necessity of livelihood diversification as a means by which vulnerable people can succeed in building their resilience to drought. Effective strategies such as asset-building, off-farm employment, migration, mobility and household remittances are context-dependent and should be determined by the vulnerable people themselves (with or without external support and assistance). Where external support includes financial support, this may be accessed by vulnerable people through locally administered funds, such as revolving funds, savings cooperatives or local adaptation funds, as well as access to credit.

14. Over the years, many such schemes have been established – some have succeeded in making a difference, while others have failed. Learning from both is important. Where some groups of the population are particularly vulnerable, e.g. women, the elderly, youths, refugees, unemployed people and those employed in informal sectors, it is important that funding mechanisms and capacity-building be tailored to their needs and focus on enabling them to reduce their vulnerability. Effective evaluation systems and disaggregated data collection are needed in order to evaluate progress and learn lessons.

15. Ongoing activities on vulnerability assessment via the continuation of the UNCCD Drought Initiative and the formulation of national drought management plans could include:

- (a) A target-setting process for reducing vulnerability to drought (as a subset of activities already included in SDG 1.5⁴ and UNCCD strategic processes);
- (b) A global compendium of approaches to drought vulnerability assessment to be incorporated into the UNCCD Drought Toolbox;
- (c) Continuous iterative national and local vulnerability assessment processes (feeding into actions to build resilience) using scenarios, statistics, etc.; and
- (d) The provision of guidelines for national and local drought vulnerability assessments.

16. In addition, countries could lead a regular survey of local governments in drought-affected regions. This would enable the local authorities to list which local programmes, associations and funds are operational at the community level in their constituencies to support livelihood diversification and asset-building.

17. This review of livelihood diversification capacity support should be cross-checked with national and local drought vulnerability assessment processes to ensure that resources are effectively targeting the needs of the most vulnerable groups. It should be of practical interest to donors, chambers of commerce and philanthropic groups, as well as for general public information. It could also provide a key resource for strategies to increase security and stimulate growth in the local and national economies.

C. Practice land/ecosystem and water management (regional-level practise hubs)

18. Sustainable land and ecosystem management practices such as urban ecosystem management, integrated water resources management (IWRM), rangeland management, agroforestry, conservation agriculture, water harvesting, catchment and basin management and others can increase the resilience of ecosystems and communities to drought⁵. The UNCCD Drought Toolbox already offers information about these drought risk mitigation solutions through an online platform.⁶ To increase support for these types of actions and for the resource user associations that can implement them, there is a need to evaluate their effects in reducing exposure and vulnerability to drought (by reducing water stress, conserving or restoring ecosystem health and maintaining or enhancing productivity).

19. Regional technical support hubs could further guide resource user associations and national extension agencies to define these effects, identify baselines, status and trends, and use them to evaluate and promote best practices and technologies through hands-on training and knowledge-sharing. This type of practical identification, testing and targeted improvement of the best practices is necessary for tangible resilience-building by resource users, awareness-raising and more effective targeting of subsidies and other types of support via national programmes.

20. The UNCCD is considering tailoring its Drought Toolbox to regional needs and effectiveness through testing, knowledge exchange and capacity-building engagement at the regional level. The design of regional activities should include consideration of the need to strengthen both women and men's participation in any regional knowledge management networks and activities.

21. In some regions and countries, there are already dedicated regional field training and demonstration facilities in place to contribute to regional capacity-building initiatives, whereas in others, best practices are simply observed on an *ad hoc* basis in the field. In

⁴ Sustainable Development Goal Target 1.5: by 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters. See <<https://sustainabledevelopment.un.org/sdg1>>.

⁵ IPCC 2019 Unpublished; Reichhuber et al. 2019 Unpublished.

⁶ See <<https://knowledge.unccd.int/drought-toolbox>, accessed 01.08.2019>.

countries such as India, Egypt, Ethiopia, Kenya and many others, there are a multitude of different centres variously affiliated to the Consultative Group on International Agricultural Research system, national governments, universities, international development programmes and others. In these cases, there is an opportunity for increased coordination and pooling of technical resources to roll out effective criteria and evaluation systems to identify best practices for land and ecosystem-based mitigation of drought risks.

22. It is very important to consider that even in the countries and regions that do have many well-established technical institutions, there may still be major gaps in the technical support available for land- and ecosystem-based practices in the driest and most drought-prone areas. There is an opportunity to take stock of, complement and supplement the regional technical hubs for the establishment of baseline information, testing and promotion of ecosystem and land-based practices.

23. Ideally, where projects are created to provide support for regional initiatives, these should include a sustainability plan to enable them to continue to function independently if/when the programme of funded support is achieved and concluded.

D. Baseline business case for drought risk reduction and resilience

24. Just as the IPCC transformed the way in which the international community thinks of collective international action on climate change, an effectively argued business case for drought risk reduction on the ground or at local level could galvanise the necessary global support for drought risk uprooting and resilience rebooting. The economics of vulnerability to drought and the dividends rewarding investments in resilience-building have attracted global attention.⁷

25. Economic assessment of droughts helps public decision-makers to understand the costs associated with alternative policy options (including the course of inaction) and the various trade-offs among them (WMO/GWP 2017). The cost of inaction – that is bearing all the drought costs while taking no action (Gerber and Mirzabaev 2017) – should be assessed against crisis management (ex-post measures aiming to relieve the impacts of drought) as well as the cost of action in terms of drought prevention and mitigation (ex-ante measures).

26. There is a need and an opportunity for a transformative approach to overturn the negative dynamic of this situation. Rather than assessing only the full cost of the deepening negative scenario, a positive global appraisal of the economics of drought and disaster risk reduction is needed. This would enable the UNCCD to provide a more positive complementary arrangement alongside the ongoing work of the UNFCCCs Warsaw International Mechanism (WIM).⁸

27. The economic and ecological evidence for the global drought risk reduction business case is overwhelming, but not yet sufficiently coherent and synthesized. As a result of this confusion, the level of investment in drought preparedness is still insufficient to prevent and prepare for drought crises. The evidence could be marshalled, classified and synthesized to allow the key points to resound louder and more clearly.

E. Enhance the available monitoring systems for drought preparedness, recovery and resilience across scales, from local to global

28. Drought preparedness, recovery and resilience should be monitored to allow communities, authorities and development partners to identify and take the necessary action to reduce exposure and vulnerability to drought. Since the availability and management of water resources can reduce exposure to drought, replenishment of depleted stocks of water after droughts have occurred is a particularly essential part of recovery and resilience-

⁷ FAO 2019; Venton 2018a; Venton 2018b; Venton 2018c; World Meteorological Organization (WMO)/Global Water Partnership (GWP) (2017).

⁸ <<https://unfccc.int/topics/adaptation-and-resilience/workstreams/loss-and-damage-ld/warsaw-international-mechanism-for-loss-and-damage>>.

building (see Option A above: Buffer water stress). Where this is not currently happening, vulnerability and exposure to hydrological drought is increasing. Monitoring systems for drought preparedness, response and resilience must therefore routinely include hydrological indicators.

29. Many countries and regions have already established some form of early warning system to observe the onset and severity of some aspects of droughts. These systems play a critical role in enabling governments and the international community to prepare and respond to drought. Although they could also be used to guide and evaluate recovery from drought and resilience-building efforts, overall, such applications have thus far been very limited.

30. In the Lake Chad Basin, the Africa Flood and Drought Monitor uses historical data, near real-time remote sensing data, precipitation forecasts (short term and seasonal) and a land-surface model to produce predictions at different time horizons relevant for a range of water resources planning and management tasks at increasingly high resolution.⁹ This tool provides a basic understanding of rainfall and hydrologic partitioning across the basin: the spatial distribution of rainfall in near real time and how much is expected in the near and mid-range future. This information is the basis for drought preparedness, agriculture production, protection of people and livestock, risk management, and adapting to water resource variability in a number of different sectors. Jamaica's Meteorological Service also developed a Climate Predictability Tool and made its first official drought forecast (in January 2015), predicting a high probability of below average rainfall for the three months ahead.¹⁰

31. For the most part, the available drought preparedness and early warning systems across many drought-affected regions are not yet designed to include much local level scientific observation and measurement concerning drought exposure, vulnerability and impacts. Instead, they rely almost entirely on remote sensing tools and methods (e.g. the African Drought Monitor¹¹ and the current UNCCD online Drought Toolbox¹²). However, since significant relevant information and local knowledge is available at the local level in drought affected areas¹³, there is an opportunity to co-develop and improve these systems including hydrological observation systems on the ground.

32. In some drought-affected countries, such as Colombia, national sectoral water resource monitoring systems have been established and are contributing to drought preparedness. But in others, such as Kenya, on-the-ground monitoring of water resource status is carried out more frequently systematically through the donor-supported drought early warning system¹⁴ than is yet possible for development planners to do through their own sectoral water resource planning systems.

33. The available systems for drought early warning could be improved upon and integrated in preparedness, recovery and resilience-building systems by:

(a) Building on the existing regional climate outlook processes and models and connecting them to existing national systems, e.g. strengthening the connections between the regional and local systems in the Horn of Africa and strengthening connections within the Caribbean drought and precipitation monitoring network, etc;¹⁵

⁹ See description on p. 111 of <<http://documents.worldbank.org/curated/en/428511521809720471/pdf/124547-REVISED-PUBLIC-17045-TF-Annual-Report-web-Apr17.pdf>>.

¹⁰ See <<http://www.caribbean360.com/news/jamaicas-drought-tool-could-turn-the-table-on-climate-change#ixzz41qSrKMaE>>.

¹¹ See: Sheffield et al. 2014.

¹² <<https://knowledge.unccd.int/drought-toolbox>>.

¹³ See for example Jarso et al. (2017).

¹⁴ For information, see <<https://www.ndma.go.ke/index.php/resource-center/early-warning-reports>>. For the time being, this consists of identifying only the sources in use and distances from households. It does not yet include any field measurement of water levels or water quality, nor any calculation of the total volumes of water available. It does not therefore support the quantification of deficits to be replenished or the effective appraisal of necessary measures and resources, anticipated seasonal timeframes for recovery, etc.

¹⁵ See <<http://rcc.cimh.edu.bb/climate-monitoring/caribbean-drought-and-precipitation-monitoring-network/>>.

(b) Improving the design of field data collection systems and data management infrastructure so that global drought indicators and databases can include more local-level information. Citizen science can help to co-design and maintain effective systems and may be combined with more effective use of available automated field measurement and mobile devices, modelling interfaces and online platforms to collect, process and share relevant information in manageable formats.

34. To achieve this, the regional and national organizations should reach out to resource user groups at other levels and work with them to analyse the function of their cross-scale drought preparedness, recovery and resilience-building systems and processes. The UNCCD Drought Initiative could provide a forum for discussion of the relevant challenges and ways forward in this endeavour. This would enable the UNCCD to track and improve drought preparedness, recovery and resilience.

35. Recently, the WMO agreed to develop a Global Hydrological Status and Outlook System. This could help to move the global observation systems beyond the remote sensing of climate indicators and enable the consideration of the critical hydrological conditions that mediate or deepen exposure and vulnerability to drought.

36. Significant effort will still be needed from development planners in most drought-affected countries to transform the available short-term early warning databases into effective long-term resource planning and hydrological status monitoring systems for drought preparedness and resilience-building. But having a global system that provides a basis for sharing capacity and experiences should facilitate progress. The UNCCD could work alongside and coordinate with the WMO processes to accelerate the establishment of the global system, as needed.

III. Financing Instruments

37. It is important to consider who will pay the costs and what the sources of financing are for drought risk reduction. As yet, drought risks are unevenly distributed, falling most heavily on those who are the least able to cope (Hallegatte et al. 2017). Overall, the proportion of global capital presently channelled to drought risk reduction is disproportionately small in comparison to the global risks of drought. Therefore, the global community might be called upon to consider whether and how best the additional capital needed for investments in drought risk reduction could be mobilized without generating additional financial risks and burdens for the future.

38. This section considers options to establish additional funds and to make use of other available financing instruments, such as insurance schemes. A range of funds and other financing instruments have already been established at the global, regional and national levels to target the reduction of drought risks. Other relevant financing systems that may be worthy of additional consideration include: the major investments often made by affected communities themselves, as well as the contributions of community business leaders and philanthropic contributions that may include faith-based donations such as zakat and bequests made through religious foundations.

A. Available funds to support drought risk mitigation and preparedness

39. International financial institutions, such as the Green Climate Fund (GCF), are already enabling countries to invest in mitigating and adapting to climate change, including the effects of drought. In addition, a range of funds have been established to enable countries and regions to respond to drought. Examples of regional funds include a fund established for the Intergovernmental Authority on Development (IGAD) Drought Disaster Resilience Initiative programme in the Horn of Africa, as well as the African Risk Capacity (ARC). The World Bank also operates a suite of different global funds, several which are dedicated to addressing water scarcity and exposure to drought.¹⁶ The Global Forum for Disaster Risk Reduction, for

¹⁶ See <<http://documents.worldbank.org/curated/en/428511521809720471/pdf/124547-REVISED-PUBLIC-17045-TF-Annual->

example, works through Multi-Donor Trust Funds (MDTF).¹⁷ In the design of many of these funds, considerable attention has been devoted to the challenges of channelling national funds to the local level and reaching drought-affected communities.

40. According to the World Bank (International Bank for Reconstruction and Development 2017), Ethiopia's Productive Safety Net Programme (PSNP) is an MDTF that provides financial support¹⁸ to the Ethiopian government's safety net programme, along with other funding sources (see King-Okumu, 2019). The PSNP was created following the 2002–3 El Niño drought and the realization that ten years of expensive annual 'emergency' food aid appeals had still not addressed the underlying causes of food shortage, nor built resilience to shocks. The PSNP has been championed as the main contributor to resilience in particularly drought-prone and food-insecure¹⁹ areas of Ethiopia and as the first national-level social protection programme in Africa.²⁰ A sovereign national drought emergency fund has also recently been put in place in Kenya.²¹

41. Namibia is experimenting with the resourcing of national funds during drought²² from the private sector rather than relying only on public funds. The government aims to raise USD1.1 million to go towards a state-owned Game Products Fund for wildlife conservation and parks management by selling 1,000 wild animals.

42. There is a need to ask whether the available national-level funds are already enough to enable drought preparedness, and whether it would be of use to establish an additional mechanism at the global or regional level. This will require a focused investigation into the global, regional and national funds contributing to drought risk reduction. This should include an analysis of the effectiveness of the funds, not only in reaching the most vulnerable (as is presently the focus of attention in much of the international literature on climate finance), but also in achieving tangible long-term reductions in their exposure and vulnerability to drought.

43. The availability and constraints of funds already operating at the regional and global levels should be taken into consideration. Some examples can be described as follows:

1. A Regional Fund: The Intergovernmental Authority on Development Drought Disaster Resilience and Sustainability Initiative (based on European Union 2015)²³

44. Up to the third quarter of 2016, the European Union invested EUR 5 million in an operating grant given straight to the Intergovernmental Authority on Development (IGAD). The geographical scope of the project covered the countries of the IGAD region.²⁴ The intervention logic of the project was based on the assumption that a stronger IGAD with greater administrative, financial and technical capacity will be better able to make informed decisions on future policy and investments, and therefore to transform the resilience of communities and individuals of IGAD member states, including refugees and internally displaced people, particularly those in areas that have not received assistance in the past.

2. A Global Fund: The GCF (based on: GCF 2019)²⁵

45. GCF interventions in the water sector, including those intended to enable adaptation to drought risks, aim to promote IWRM, ensuring a synergistic approach to tackling the

[Report-web-Apr17.pdf](#).

¹⁷ See <<https://www.gfdrr.org/en/funding-structure-partnerships>>.

¹⁸ In 2017, ten contributors to the Productive Safety Net Programme included the World Bank, the United Nations Children's Fund, and the governments of the United Kingdom, United States, Canada, the European Union, Ireland, the Netherlands and Sweden. See p20:

<<http://documents.worldbank.org/curated/en/428511521809720471/pdf/124547-REVISED-PUBLIC-17045-TF-Annual-Report-web-Apr17.pdf>>.

¹⁹ <<http://www.braced.org/contentAsset/raw-data/18256c98-2a10-4586-9317-17a68b45c1a7/attachmentFile>>.

²⁰ See <<https://www.theguardian.com/world/2019/jun/16/namibia-drought-auction-1000-wild-animals>>.

²¹ (see discussion in: King-Okumu et al. 2019 in press).

²² See <<https://www.theguardian.com/world/2019/jun/16/namibia-drought-auction-1000-wild-animals>>.

²³ <<https://ec.europa.eu/trustfundforafrica/sites/euetfa/files/igadresilience.pdf>>.

²⁴ Intergovernmental Authority on Development members as of September 2018 include Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan, Uganda and South Sudan.

²⁵ See <<https://www.greenclimate.fund/documents/20182/194568/gcf-wp1.pdf/9215ecb7-923a-9cfb-e4ae->

water-energy-food security nexus, and bridging between Integrated Adaptation and Transformative Resilience. Furthermore, the GCF aims to stimulate private sector investment in water resources development and in water supply and sanitation, focusing particularly on less developed countries and the Small Island Developing States (SIDS). The GCF also supports the scaling-up of innovative technologies and financing models.

46. To create an enabling environment for climate resilience in the water sector, the GCF seeks to:

- (a) Promote IWRM, building synergies to ensure water-energy-food security;
- (b) Manage water demand via cost-reflective pricing, regulation and consumer awareness; and
- (c) Promote national, basin and coastal zone planning, particularly in least developed countries and SIDS.

47. All these actions need to take place within a stable governance system – fostered by the national action programmes and sectoral plans – that provides an effective enabling environment for change to take place. This is a major assumption for many drought-affected communities and countries. It is also important to consider that to access the GCF, a strong climate science argument must be the basis for the design of all projects. This is based on the idea that standard development approaches cannot withstand the increasing impacts of current and future climate variability and change. Whereas standard development projects do not mainstream climate risks in their design, a climate finance project must first establish the climate risks of the project to make the project design climate-resilient against current and future climatic extremes.

B. Drought Insurance Products

1. Insurance

48. Where sufficient capital assets are not available to enable communities to withstand the effects of droughts, or in cases where the required depletion of capital assets would be harmful, insurance schemes sometimes offer a means by which the assets of insurance companies can be used. Overall, insurance schemes using the capital of different companies are less beneficial than a situation in which the exposed group would have direct access to sufficient capital to withstand the drought independently. This is because a premium must usually be paid to the insurance companies so that, in the long run, the insurance company will gain more than the cost that it will bear through the pay-outs. Nonetheless, insurance schemes can often be helpful in spreading and smoothing risks so that they are not over-concentrated at particular locations and points in time.

49. Commercial insurance schemes are routinely used by some farmer groups in developed countries to protect themselves from the worst impacts of natural hazards, such as drought. A recent survey of relevant insurance instruments for drought risk reduction focused on schemes for crop insurance, index-based insurance, weather index-based insurance and area yield index insurance (see Tsegai and Kaushik 2019 in press).

50. A recently established example of an index-based weather risk insurance pool and early response mechanism is the ARC,²⁶ established in 2012 by the African Union. It combines the concepts of early warning, disaster risk management and risk finance with an emphasis on African ownership. The ARC's mission is to develop a pan-African natural disaster response system that enables African governments to meet the needs of people at risk of natural disasters (Koch 2019). The ARC engaged eight countries to roll out insurance

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²⁶ African Risk Capacity (ARC) has received donor support from the French Development Agency, International Cooperation and Development, International Fund for Agricultural Development, Kreditanstalt für Wiederaufbau, the Rockefeller Foundation, Swiss State Secretariat for Economic Affairs, Sweden, United States Agency for International Development and World Food Programme.

policies.²⁷ In the 2017/2018 agricultural season, the risk pool of ARC covered five countries: Burkina Faso, Senegal, The Gambia, Mali and Mauritania.

51. At present, the development partners in the scheme are making payments to a series of international companies to establish the scheme, on the understanding that African countries will be expected to make these payments for themselves in the future. The main constraint for covering additional countries through the ARC's insurance scheme has been the lack of financial resources available in national country budgets to pay for the ARC insurance premium²⁸ (Koch 2019).

2. Insurance-linked debt securities/bonds

52. Insurance-linked debt securities (ILS) are financial instruments sold to fixed-income investors whose value is affected by an insured loss event (Aon Benfield 2015). The term insurance-linked security encompasses catastrophe bonds and other forms of risk-linked securitization (Koch 2019). Catastrophe (CAT) bonds²⁹ are a form of ILS that transfers insurance risks to the debt capital market. This enables insurance protection against natural catastrophes. Most CAT bonds issued to date have insured against catastrophes such as hurricanes, earthquakes, wildfires and flooding (Koch 2019).

53. CAT bonds have not yet insured against the risk of a lack of rainfall or severe drought. In 2014, African States announced that the ARC would establish a new Extreme Climate Facility,³⁰ a multi-year funding mechanism that would issue climate change CAT bonds to complement existing bilateral, multilateral and private sources of finance enabling proactive adaptation by leveraging private sector funds through the market (Vincent, Besson, Cull and Menzel 2018). The bonds would provide additional financing to participating countries to enhance adaptation investments and support risk-reduction activities in the event that extreme heat, droughts, floods or cyclones increase in frequency and intensity in Africa (Koch 2019). It is important to consider who will pay the debt for these bonds and whether the capital needed for investments in drought risk reduction could be mobilized without generating and transferring additional financial risks and burdens for the future.

54. An innovative CAT bond could be issued to specifically protect against the risk of a lack of rainfall and the resulting severe drought in a defined regional area on the African continent. Such a drought bond could target a single region in a given country, one entire country or a group of countries. In the event of a severe drought, the bond proceeds would be partially or fully paid out to the insured countries to provide fiscal resources in order to address the impact of the drought in the affected agricultural areas, such as by funding emergency assistance programmes. Buyers of the drought bond would include international institutional investors following socially responsible investment principles.

55. A drought bond would offer investors a financial return composed of the interest income earned on investing the bond proceeds in the capital markets plus the periodic insurance risk premium to be paid by the insured beneficiary country (or countries) in Africa. In practice, the insurance risk premium could be covered by one or several official development assistance donor countries so as to alleviate the need for fiscal outlays in the beneficiary country (or countries) (Koch 2019).

²⁷ An insurance policy is issued for each agricultural season, covering one or several specified crops and specifying the level of coverage as a percentage of the total estimated risk to the country population. This insurance protects against a lack of available water for agricultural production due to weather-related events as evidenced by satellite data.

²⁸ The ARC risk premia per country per season ranges between USD 400,000 and USD 5 million.

²⁹ A catastrophe bond transfers insurance risks from the risk carrier (i.e. an insurance company, or a country or regional government) to risk buyers in the financial markets. The investor provides capital that acts as a security for the insurance and in return receives periodic interest income. To protect both the investor and the risk carrier, the proceeds from the bond sale are placed in a Special Purpose Vehicle (SPV), the sole purpose of which is to manage the security and pay claims to the risk carrier if the terms of the insurance are fulfilled. There is a reinsurance agreement between the SPV and the risk carrier that defines the terms and conditions that must be fulfilled in order for some or the whole security to be paid out (Koch 2019).

³⁰ More information about the Extreme Climate Facility can be found at: <<https://www.africanriskcapacity.org/wp-content/uploads/2016/11/XCF-flyer-EN.pdf>>.

IV. Legal Instruments

56. The following section presents various types of legal instruments currently used for international environmental cooperation, that could be considered for use by the UNCCD to address drought. These instruments are protocols, annexes and amendments, principles, declarations and statements, decisions, standards and gentlemen's agreements. They represent both 'hard' and 'soft' law: the former referring to instruments that are considered binding, i.e. presumed to create enforceable obligations for countries and other international entities, and the latter to instruments that are negotiated among countries in an international context but not, strictly speaking, legally binding. Further information may be found in the full version of this assessment, which is available on the UNCCD Evaluation Office webpage.³¹

A. Protocols

57. A protocol is a legal instrument that complements and adds to a treaty. It may specify the provisions of the treaty, address a new concern, or add a procedure for the operation and enforcement of the treaty. The preparations of a protocol are carried out through a formal intergovernmental process in pre-determined phases (prenegotiation, initiation and negotiations), and the entry into force requires a national legislative (parliamentary) ratification process. A protocol is not automatically binding on countries that have ratified the original treaty; it needs to be ratified or acceded to independently. The treaty enters into force after an agreed number of countries have ratified/acceded to it.

58. A protocol is typically served by the treaty secretariat and holds its official sessions together with the treaty, although often with dedicated resources in addition to the treaty budget. Many protocols also establish new processes to support their implementation and progress monitoring, such as regular national reporting and review, expert working groups and committees and compliance mechanisms, which require resources in addition to the original convention budget. The protocols tend to require (additional) staff with expertise different to that of the original convention's staff.

59. For the negotiations of a protocol to be launched within the UNCCD process, the COP should agree on the need for a protocol and adopt the negotiating mandate (scope, types of provisions, schedule etc.). The topic of the protocol (what is meant by addressing drought by this means) should be well defined, possibly through scientific background studies. The COP should also agree on the modalities of the negotiations, which may include different committees or working groups, and on the provision of related resources. After the completion of the negotiations, the protocol text should be adopted by the COP and opened for signature, ratification and accession. The protocol would enter into force after an agreed number of countries have ratified/acceded to it.

60. One of the main challenges of a drought protocol would be identifying a common "nominator" – the key objective – as the impacts of drought and the measures to address them differ greatly from one country to another. This would be likely to lead to lengthy negotiations. With regard to decision-making, monitoring compliance and assessing progress, a protocol to address drought under the UNCCD would probably require at least some additional institutional arrangements and resources. In terms of financial implications, a protocol would require additional expertise in UNCCD staffing and the additional institutional arrangements would also incur additional expenses. Using the Kyoto Protocol and Cartagena Protocol budgeting for an indication of the range (protocol funding amounting from 15 per cent to 30 per cent of the Convention secretariat's budget), the increase needed for the UNCCD secretariat regular budget (currently approximately EUR 10.7 million) could be roughly estimated at around EUR 1.8 to 3.6 million per biennium. This amount mainly covers costs related to the presumed core work of the secretariat. It does not include funding for the implementation of the protocol.

³¹ See <<https://www.unccd.int/about-us/evaluation-office>>.

B. Annexes and amendments

61. Many international environmental treaties contain provisions for annexes and amendments. Annexes are additions detailing some aspects of the treaty, while amendments add extra information, delete unnecessary or outdated information or correct errors in the text. The procedures for amendments and annexes offer a simplified process for updating or specifying a treaty in a relatively short time. On the other hand, amendments and annexes are likely to be adopted only if their content is such that it can be accepted by the involved Parties without extensive negotiations.

62. There are no formal obstacles in the UNCCD articles or procedures for preparing an amendment or annex for addressing drought under the Convention. However, the rationale of preparing an amendment or an annex for addressing drought can be questioned. Amendments and annexes tend to be practically oriented tools that build on existing content or specify some concrete details of the Convention – this is also clear in the UNCCD regional implementation annexes that, while spelling out region-specific conditions and ambitions, derive directly from the structure and content of the Convention text.

63. The ideal added value of addressing drought through an amendment or annex would be in specifying the (technical) measures to be taken toward broader UNCCD aims concerning drought. This would require Parties to already have a shared understanding of what such broader aims are and a commitment to working toward them to allow the amendment or annex to be adopted and implemented smoothly and rapidly. If the political process to generate such understanding and commitment is yet to be completed, the preparatory process would likely take longer than usual for amendments and annexes and, in the event of significant diversity in national positions, there would be a high risk of countries deciding to stay outside the adopted amendment or annex by non-acceptance.

C. Principles

64. Principles as general norms are frequently found in the preambular section of various treaties. They have also been used as independent instruments of international environmental law, typically about matters that are critically important but on which countries differ significantly, either in terms of necessary measures for implementation or political interest. The preparation of principles usually involves formal negotiations; however, they may also be extended beyond governmental stakeholders to international or regional organizations or the private sector. Principles linked to a treaty are negotiated, approved and ratified within the treaty process, while stand-alone principles are valid as soon as the body working on them decides to adopt them.

65. The negotiation of drought principles under the UNCCD could aim to create generally formulated norms for addressing drought, with the understanding that more precise definitions and measures would be specific to countries or situations. The negotiation process could be more inclusive than negotiations for a UNCCD protocol or amendment/annex, involving, for example, major international organizations, scientific institutions and non-governmental organizations working on drought. Their involvement could be reflected in the language of the principles, as norms that influence decisions and activities beyond the usual UNCCD stakeholder groups. The principles would be adopted as a COP decision, possibly at the high-level segment so as to highlight their importance. Should other organizations or institutions choose to follow the principles in their work, their commitment could be expressed through statements of endorsement or similar formal expressions.

66. The monitoring and reporting requirements and modalities would depend on the scope of the drought principles and the extent of participants outside the UNCCD process. The UNCCD national reporting on drought (strategic objective 3) could serve as the framework for reporting on the principles under this Convention, and other participating organizations could arrange the reporting according to their own procedures. Information from different sources could be compiled in a global assessment or status report at regular intervals.

67. With regard to institutional and budgetary needs, the preparation of the drought principles could be dealt with in the regular UNCCD process, probably through a working

group to draft them, with minor additional costs. The additional staff and other resource needs relative to the implementation and monitoring of the principles post-adoption would depend on the scope of the principles and the roles of the UNCCD and other participating organizations and institutions.

D. Declarations

68. A declaration is a formal statement, proclamation, or announcement of intent. It does not create a legally binding obligation but expresses the aspirations of the participating countries. Declarations are often approved at the level of political authorities, ideally heads of state or ministers. They do not entail any ratification procedures, and their requirements and procedures for follow-up, monitoring and reporting differ from one declaration to another.

69. A declaration of addressing drought under the UNCCD would be a political statement about Parties' commitment to the matter. Its content could outline the aims for the coming years, as well as the measures that Parties intend to take to address drought. This "UNCCD drought declaration" would be negotiated in the context of the COP and concluded through a COP decision. The COP could also decide to actively monitor and review its implementation, or it could be taken as a general framework that guides other actions and monitoring and reporting would be used to assess its implementation. Related additional costs would be minor as the preparation and follow-up of the drought declaration could be dealt with in the regular UNCCD process.

E. Decisions

70. In the context of the United Nations system, decisions and resolutions are formal expressions of the opinion or will of the member states. The nature of the decision or resolution determines if it is considered binding for countries. As a general rule, it may be said that a decision/resolution is binding when it is capable of creating obligations for its addressee. The terminology used is also important: a decision through which member states decide, adopt or request something generates more explicit responsibilities than a decision through which member states invite or take note of something.

71. In the UNCCD, the COP has a recognized authority to interpret the provisions of the Convention and its decision-making offers a quick and continuous process for adapting and developing implementation. The range of actions and topics that may be covered through a COP decision is limited only by the willingness of the Parties. The flexibility and rapidity of COP decisions are particularly useful for integrating new information and modalities into implementation. In terms of follow-up, many decisions include a request to the secretariat to report on its implementation to the following COP session, and that reporting serves as a detailed account of measures taken on each decision.

72. Since 2013, COP decisions have been a regular tool for addressing drought under the UNCCD and likely to also be used in the future. The negotiation and approval of COP decisions takes place within the regular UNCCD process, involving all UNCCD Parties and the decisions are valid as soon as they are decided upon. The process of making COP decisions has no cost implications other than those already included in the UNCCD budget, but the content of a decision may involve measures that require additional resources.

F. Standards

73. International standards are documented agreements containing technical specifications or other precise criteria to be used consistently to ensure that materials, products, processes and services are fit for purpose. They are frequently referenced by regulators and legislators for protecting user and business interests. The preparatory process involves the definition of the standard and design of a certification, accreditation and monitoring system, and the establishment of a governance system. Most standards are independent and based on voluntary participation, and each standard system has its own requirements for monitoring, reporting and verification.

74. In October 2017, ISO published a new standard, ISO 14055, for establishing good practices for combatting land degradation and desertification. Similarly, an international standard could be established to address drought. Should the standard be established within the UNCCD process, it could provide general guidance and support for the harmonization of practices and terminology, with a simple registration, monitoring and verification process. A more detailed or technical standard with stricter requirements could benefit from association with an existing international standard system, with the UNCCD taking on an advisor role.

75. The cost of preparing and maintaining an international standard to address drought could vary greatly, depending on the depth and duration of the preparatory process and the requirements for the registration, monitoring and verification process. However, the resources required from the UNCCD budget are likely to be minor or none if the standard is under an existing international standard system.

G. Gentlemen's agreements

76. Gentlemen's agreements are produced by informal or formal negotiation processes between or among countries and/or other stakeholders such as organizations, regions or individuals. They may take various forms such as declarations of intent, joint statements, joint press releases or discussion reports, and their fulfilment relies upon voluntary action by the participants. Usually, gentlemen's agreements are focused on one target or problem, in which the participants have a shared interest. Their preparation may take various forms – they may be launched spontaneously at short notice, or as a result of extensive talks. They may be initiated by two or more participants and later joined by others. They do not entail any formal accession or approval procedures. Gentlemen's agreements are essentially voluntary commitments without procedures for formal follow-up, monitoring or reporting. However, participants usually want to demonstrate progress made through their commitment, which entails tracking actions and results at the level of individual participants, even if there is no shared methodology for collecting and reporting information.

Table
**Potential legal instruments for addressing drought under the United Nations
 Convention to Combat Desertification: a comparison**

<i>Instrument</i>	<i>Type of content to address drought</i>	<i>Preparatory process</i>	<i>Approval and entry into force</i>	<i>Monitoring & reporting</i>	<i>Institutional needs for the secretariat</i>
Protocol	Legal text on (global) obligations. Should have well-defined objectives.	Formal intergovernmental negotiations following standard phases. Likely to take several years.	Parliamentary ratification in each country. Countries choose whether to join.	Regular reporting on progress at national level (indicators for protocol objectives). Periodic review.	More staff with drought expertise. New reporting tasks or extension of the existing ones.
Amendments and annexes	Specific additions or modifications to the United Nations Convention to Combat Desertification (UNCCD) text. Should be relatively explicit and non-controversial.	Negotiations in the context of the Conference of the Parties (COP). Likely to take at least two COPs to complete.	A specified number of Parties to give formal acceptance. Coverage all or selected Parties.	May be something to be added to the UNCCD reporting process	Likely to involve some additional staff and facilities for reporting and review.
Principles	Broadly formulated general norms and standards; details to be defined by country or situation.	Negotiations in the context of the COP. Preparatory work may involve also other stakeholders.	Approval by a COP decision. Other stakeholders may endorse in their own forums.	May be added to the UNCCD reporting process and/or compile overviews of reports outside the UNCCD.	May involve some additional staff and facilities for reporting and review.
Declarations	Political announcement of commitments.	Negotiations in the context of the COP if to be adopted.	Adoption or approval by a COP decision.	No immediate effect but may lead to new requirements later.	No immediate effect but may lead to new requirements later.
Decisions	Any topic that Parties agree on.	Negotiations in the context of the COP.	Approval by the COP.	May involve new requirements.	May involve new requirements.
Standards	Clearly defined technical norm or minimum requirement.	To be initiated at the UNCCD and done by an expert entity.	Through the expert entity process; may be endorsed by the COP	Through the expert entity; may be linked to the UNCCD reporting system.	Minor or none.
Gentleman's Agreements	Any topic that involved partners agree on.	To be done by partners outside the UNCCD process.	Agreement by partners.	No influence on the UNCCD system.	None.

V. Conclusions and recommendations

77. The menu of potential technical/policy, financial and legal instruments presented in this document could be considered by Parties to the UNCCD. These options should enable Parties to achieve the intended global-level outcomes from drought risk reduction, including:

- (a) Reduction of exposure;
- (b) Reduction of vulnerability;
- (c) Increased resilience;
- (d) Transformation;
- (e) Preparation, response and recovery; and
- (f) Transfer and sharing of risk.

78. The UNCCD emphasis on a proactive, land- and ecosystem-based approach is at once differentiated from, and complementary to, the work of the United Nations Framework Convention on Climate Change, IPCC, Warsaw International Mechanism and United Nations Disaster Risk Reduction. These will complement and boost the national drought preparedness plans and policies that are already receiving support through the UNCCD Drought Initiative.

79. Together, the options and legal instruments for discussion during COP 14 will offer a host of feasible measures, as needed, for the UNCCD Parties to comprehensively address the drought challenge. It is for the Parties to select and activate the arrangements they need the most.

Annex

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