



General Assembly Plenary Topic Background Guide  
***Topic 1: Deserts and Desertification<sup>1</sup>***

July 25, 2014

Drylands, which cover 41.2% of the earth's total land area, constitute a group of ecological systems with sparse rainfall, ground saturation, and vegetation. About 2.1 billion people, or one in every three people worldwide, live in drylands. Nearly 44% of cultivated land is located in drylands, and rangelands provide about 50% of the world's livestock.<sup>2</sup> Today, 25% of drylands are degrading, of which 20-25% constitute degrading rangelands, and 20% of which is cropland. This degradation affects approximately 1.5 billion people who depend on these degrading lands. Most of these people (about 90%) are impoverished and/or live in developing countries.<sup>3</sup>

There are four variations of drylands, including dry sub-humid lands, semi-arid lands, arid lands, and hyper-arid lands (i.e. deserts). Dry sub-humid lands predominately feature rangelands,<sup>4</sup> which refer to "any extensive area of land that is occupied by native herbaceous or shrubby vegetation which is grazed by domestic or wild herbivores." These include sub-climates such as tallgrass prairies, shortgrass prairies (or steppes), desert shrublands, shrub woodlands, savannas, chaparrals, and tundra.<sup>5</sup> Sub-humid areas exist in every continent, with large areas located in North America, especially Canada; South America; Northern Africa; Southern Africa; Australia; the Mediterranean, particularly Spain, Italy, Morocco, and Algeria; Eastern Europe; and Asia, primarily in Russia, China, and India.<sup>6</sup>

Semi-arid drylands are mainly comprised of grasslands.<sup>7</sup> Grasslands are characterized by a continuous cover of grass without larger plants, such as trees and shrubberies.<sup>8</sup> The geographical range of semi-arid lands also covers every continent, with some variation from sub-humid areas. Large semi-arid lands exist in North and Central America, mostly in the US and Mexico; South America, with considerable areas in Brazil and Argentina; Northern Africa; Southern Africa; Spain; Australia; Asia, including Russia, China and India; as well as the Middle-East.<sup>9</sup>

Arid drylands are mostly composed of semi-deserts. Semi-deserts refer to regions with similar geographic characteristics to deserts, but with greater precipitation.<sup>10</sup> Small regions of arid drylands are located in North and South America, particularly the western US and Mexico, Peru, Argentina, and Bolivia. Northern Africa; Southern Africa, specifically South Africa and Angola; the Mediterranean; Australia; the Middle-East; Central Asia; and western China feature vast areas of arid drylands.<sup>11</sup>

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<sup>1</sup> This background guide was written by Nicholas Potratz. Copyright 2014 by Nicholas Potratz.

<sup>2</sup> United Nations, "Global Value," UN Decade for Deserts and the Fight Against Desertification website, available at [http://www.un.org/en/events/desertification\\_decade/value.shtml](http://www.un.org/en/events/desertification_decade/value.shtml), accessed 14 June 2014.

<sup>3</sup> UN Convention to Combat Desertification, "Desertification: The Invisible Frontline."

<sup>4</sup> United Nations, "Global Value."

<sup>5</sup> "Rangeland," *Encyclopedias Britannica*, available at <http://www.britannica.com/EBchecked/topic/491143/rangeland>.

<sup>6</sup> UNEP, "UNCCD Delineation of Drylands," Decade for Deserts and the Fight Against Desertification website, available at [http://www.un.org/en/events/desertification\\_decade/global\\_drylands\\_map.pdf](http://www.un.org/en/events/desertification_decade/global_drylands_map.pdf), accessed 15 June 2014.

<sup>7</sup> UN, "Global Value."

<sup>8</sup> "Grassland," *Encyclopedia Britannica*, available at <http://www.britannica.com/EBchecked/topic/242201/grassland>.

<sup>9</sup> UNEP, "UNCCD Delineation of Drylands."

<sup>10</sup> Merriam-Webster, "Semidesert," available at <http://www.merriam-webster.com/dictionary/semidesert>.

<sup>11</sup> UNEP, "UNCCD Delineation of Drylands."

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A desert is “any large, extremely dry area of land with sparse vegetation.” They are one of Earth’s primary ecosystems and feature sparse flora and fauna due to exorbitantly dry conditions. These conditions occur naturally over much of the earth and, when formed naturally, occur in drylands that have “hyper-arid” conditions.<sup>12</sup> Desert exist in six biospheres: (1) Australasian deserts (Australia); (2) Afrotropic deserts in Southern Africa, Central Africa and the southern Arabian Peninsula (e.g. Yemen); (3) Indo-Malay deserts (India and Pakistan); (4) Nearctic deserts in North America; (5) Inotropic deserts in South America; and (5) the Palearctic realm (the largest desert area), in North Africa (e.g. the Sahara desert), the northern Middle-East, Europe, and Central and Eastern Asia.<sup>13</sup>

Not all “deserts,” however, occur naturally. Desertification refers to “land degradation in arid, semi-arid and sub-humid areas resulting from various factors, including climatic variations and *human activities*.” It does not refer to the expansion of existing deserts, but to desert-like conditions that result from drought and poor land management, such as the loss of nutrients in dry land soil.<sup>14</sup> In fact, despite their already unlivable appearance, natural deserts, and their native flora and fauna, also suffer from land degradation. This is a result of their desiccated conditions and fragile ecosystems, which are susceptible to human activity on their human-inhabited fringes.<sup>15</sup> While land degradation can occur in all regions and environments, the paucity of water in dryland soil makes it particularly vulnerable to land degradation. For instance, though one-third of land in general has suffered from some degradation,<sup>16</sup> more than two-thirds of drylands have experienced some degradation.<sup>17</sup>

According to the UN, desertification is a global problem that could have “serious implications for efforts to promote biodiversity, eco-safety, poverty eradication, socio-economic stability, and sustainable development.”<sup>18</sup> What can the GA do to encourage member states to stop desertification in their own countries and worldwide?

### ***History and Current Events***

#### *Desertification and Land Degradation Historically and Today*

Desertification has occurred for millennia. Instances of desertification even contributed to the fall of several great empires, such as the Akkadan Empire in 2200 BC.<sup>19</sup> More recently, droughts that occurred during the Great Depression, coupled with poor farming techniques, contributed to widespread desertification in the Great Plains in

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<sup>12</sup> UN, “Global Value.” “Desert,” *Encyclopedia Britannica*, available at <http://www.britannica.com/EBchecked/topic/158992/desert>.

<sup>13</sup> United Nations Environment Programme, “Global Deserts Outlook,” 2006, pp. V-VI, available at <http://www.pnuma.org/deat1/pdf/Global%20Deserts%20Outlook.pdf>.

<sup>14</sup> United Nations, “Why Now?” UN Decade to Combat Desertification, available at [http://www.un.org/en/events/desertification\\_decade/whynow.shtml](http://www.un.org/en/events/desertification_decade/whynow.shtml), accessed 19 June 2014.

<sup>15</sup> UNEP, “Global Deserts Outlook,” pp. 81-84.

<sup>16</sup> UNCCD, “Desertification: The Invisible Frontline,” 2014, available at <http://www.unccd.int/en/media-center/MediaNews/Pages/highlightdetail.aspx?HighlightID=275>.

<sup>17</sup> “Desertification,” *Encyclopedia Britannica*, available at <http://www.britannica.com/EBchecked/topic/159114/desertification#toc282092>.

United Nations, “Desertification,” UN World Day to Combat Desertification website, available at <http://www.un.org/en/events/desertificationday/background.shtml>, accessed 12 June 2014.

<sup>19</sup> Harvey Weiss, “Seven Generations Since the Fall of Akkad,” Yale: Tell Leila Project website, 2007, available at [http://leilan.yale.edu/works/seven\\_generations/](http://leilan.yale.edu/works/seven_generations/).

<sup>19</sup> Harvey Weiss, “Seven Generations Since the Fall of Akkad,” Yale: Tell Leila Project website, 2007, available at [http://leilan.yale.edu/works/seven\\_generations/](http://leilan.yale.edu/works/seven_generations/).

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the US (i.e. the Dust Bowl), which displaced millions of people from farmlands and prairies. Beginning in 1968, the Sahelian drought, coupled with the impact of desertification, killed between 100,000 and 250,000 people, disrupted the lives of millions, and caused the collapse of agricultural industries in five West African states.<sup>20</sup>

While desertification is not a new phenomenon, it has accelerated in recent years, occurring at a rate of 30-35 times that of historical desertification.<sup>21</sup> According to a report released by the UN Convention to Combat Desertification (UNCCD), 168 countries across the world experienced severe land degradation in 2013, up from 110 countries in the mid-1990s. The report warns that degradation destroys land three times the size of Switzerland (or about the size of New Mexico) and costs states' economies \$490 billion per year.<sup>22</sup>

### Causes of Desertification

Desertification has many causes, but several general causes of desertification have greatly impacted drylands in recent decades. First, poor farming practices have led to desertification and land degradation by abusing topsoil. To increase short-term crop yields, farmers often grow crops continually on land, without respites for restoration. In doing so, people deprive the soil of vital nutrients, which creates infertile (desert-esque) soil.

Second, overgrazing contributes to desertification. While drylands provide an abundant and valuable resource for feeding much of the world's livestock, the failure of people to properly rotate and conserve grazing grounds has contributed to overgrazing. Overgrazing depletes grass and plant cover, which binds soil together and protects it from wind and water erosion. As the soil becomes unbound, wind and water remove fertile soil and replace it with infertile topsoil, such as sand. Animals' hooves exacerbate this problem by eroding topsoil as they walk over soil that is no longer bound by plants and roots.<sup>23</sup>

Third, desertification occurs as a result of poor water management. This happens in two ways. First, "secondary desertification" occurs as irrigation systems used to grow crops in otherwise dry soil leave salt deposits in the soil that make it less fertile or infertile.<sup>24</sup> Second, poor water management causes desertification when human action depletes major sources of water and water-based resources. The Poyang Lake, China's largest freshwater lake, offers one example of poor water management. Typically covering an area of 3,500km, the lake shrank to an area of 200km in 2012, leaving a barren desert of approximately 3,300km. While drought contributed to the lake's decline, much of the loss of water could be attributed to the construction of the Three Gorges Dam, which reduced the size of the lower Yangtze River, a tributary to Poyang, to maximize power production at the dam.<sup>25</sup>

Fourth, climate change constitutes a significant inducer of desertification. In its most recent (2014) report, the IPCC documented the effects climate change, which result from on average rising global temperatures and shifts in climatic patterns has already had worldwide. Among other effects, observed impacts include disruptions in food and water supply from an increased number of droughts, heat waves, and wildfires due to climate change. These are significant for drylands, because low rainfall makes them extremely susceptible to the effects of climate change.<sup>26</sup>

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<sup>20</sup> USGS, "Desertification," 29 October 1997, available at <http://pubs.usgs.gov/gip/deserts/desertification/>.

<sup>21</sup> United Nations, "Desertification."

<sup>22</sup> Ed King, "Desertification Crisis Affecting 168 Countries, Worldwide, Study Shows," *The Guardian*, 17 April 2013, available at <http://www.theguardian.com/environment/2013/apr/17/desertification>.

<sup>23</sup> United Nations, "Desertification."

<sup>24</sup> UNCCD, "Desertification: The Invisible Frontline."

<sup>25</sup> Harold Thibault, "China's Largest Freshwater Lake Dries Up," *The Guardian*, 31 January 2012, available at <http://www.theguardian.com/environment/2012/jan/31/china-freshwater-lake-dries-up>

<sup>26</sup> IPCC, "Summary for Policy Makers," *Climate Change 2013: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2014, pp. 4-8, available at [http://ipcc-wg2.gov/AR5/images/uploads/WG2AR5\\_SPM\\_FINAL.pdf](http://ipcc-wg2.gov/AR5/images/uploads/WG2AR5_SPM_FINAL.pdf). UNCCD, "The UNCCD: Laying the Groundwork for Future Security," 2014, available at

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In addition, in its fourth and fifth assessments the IPCC discussed the likely future impacts of climate change, including, inter alia, increased incidence of drought and spread of desertification; extinction of plant and animal species, with effects on human food supply; and the loss of income and livelihood for farmers in semi-arid regions, due to insufficient drinking and irrigation water. According to the IPCC, all of the countries and regions of the world will be affected by climate change, both directly by the changes listed above and indirectly by the disruptions in other parts of the world. But “[c]limate-related hazards affect poor people’s lives directly through impacts on livelihoods, reductions in crop yields, or destruction of homes and indirectly through...increased food prices and food insecurity.”<sup>27</sup>

Fifth, deforestation directly and indirectly causes or expedites desertification. Dry forests or patches of forested areas, made up trees and shrubbery that thrive in drylands despite limited precipitation,<sup>28</sup> comprise approximately 18% of drylands. As people clear trees and brushes for fuel, timber, or to cultivate land, it removes necessary roots that bind soil together. Similar to overgrazing, this makes the soil susceptible to water and winds and destroys nutrient-rich soil.<sup>29</sup> Deforestation also contributes to desertification indirectly by facilitating rising temperatures and climate change. Deforestation, both in drylands and in wetter forests such as the Amazon, reduce the earth’s ability to naturally absorb carbon dioxide, a major greenhouse gas emission. This increases the greenhouse effect, in which greenhouse gases trap heat in the Earth’s atmosphere, and leads to rising temperatures.<sup>30</sup>

Finally, poverty acts as a broader indirect catalyst of desertification. Activities such as deforestation and the abuse of soil on lands result from the necessity of impoverished individuals to produce energy and heat (e.g. by burning wood) and provide for their physical and economic well-being, which often leads them to exploit resources such as dryland forests and fertile lands. This leads to a vicious cycle as poverty represents both a cause and an effect (see below) of desertification.<sup>31</sup>

### Consequences of Desertification and the Degradation of Deserts

Desertification and desert land degradation are concerning for several reasons. First, as noted, about one-third of the global population depends on drylands for their physical well-being. This predicament will become worse in the future. The UN Food and Agricultural Organization predicts that by 2050, the world will need an additional 120 million hectares (about twice the size of Texas) of agricultural production to feed the global population.<sup>32</sup> With degrading land, however, the area available for arable land is already eroding. The UN predicts that in the next 25 years, land degradation will decrease the world food supply by 12%, and cause a 30% rise in global food prices.<sup>33</sup>

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[http://www.unccd.int/Lists/SiteDocumentLibrary/Partnerships/partnership%2024\\_01\\_14%20low%20res.pdf](http://www.unccd.int/Lists/SiteDocumentLibrary/Partnerships/partnership%2024_01_14%20low%20res.pdf).

<sup>27</sup> IPCC, “Summary for Policy Makers,” *Climate Change 2013*, pp. 6-8, 13. IPCC, “Summary for Policy Makers,” *Climate Change 2007: Impacts, Adaptation and Vulnerability*. pp. 10-11, available at [http://ipcc-wg2.gov/AR5/images/uploads/WG2AR5\\_SPM\\_FINAL.pdf](http://ipcc-wg2.gov/AR5/images/uploads/WG2AR5_SPM_FINAL.pdf).

<sup>28</sup> UN Convention to Combat Desertification, “Desertification: The Invisible Frontline.” UN Convention to Combat Desertification, “REDD+ and Desertification,” *UNCCD Thematic Fact Sheet Series*, 9 January 2013, available at <http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/Factsheet%207%20redd.ENGweb.pdf>.

<sup>29</sup> United Nations, “Desertification.”

<sup>30</sup> King “Desertification Crisis Affecting 168 Countries.”

<sup>31</sup> UN Convention to Combat Desertification, “Background Information,” 2014, available at [http://www.un.org/en/events/desertification\\_decade/background.shtml](http://www.un.org/en/events/desertification_decade/background.shtml). See also, United Nations, “Desertification.”

<sup>32</sup> King, “Desertification Crisis Affecting 168 Countries.”

<sup>33</sup> UN Convention to Combat Desertification, “Desertification Land Degradation & Drought – Some Global Facts and Figures,” available at <http://www.unccd.int/Lists/SiteDocumentLibrary/WDCD/DLDD%20Facts.pdf>.

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Second, desertification will lead to greater water scarcity. Today, 1 billion people already experience water insecurity. By 2025, the UNCCD estimates that 2.4 billion people (as a result of desertification and land degradation, drought, and poor water management) will live in areas subject to severe water scarcity.<sup>34</sup> Lake Chad, located on the borders of Chad, Niger, and Nigeria, exemplifies this consequence. Between 1963 and 2001, the open water of the lake declined by 94% due to land degradation (specifically deforestation and overgrazing of nearby drylands). This has also resulted in a loss of other vital resources (e.g. fish) for nearby populations.<sup>35</sup>

Third, there are political and social consequences of desertification and land degradation. As the former Executive Secretary of the UNCCD Luc Gnacadja said:

If we do not take bold actions to protect, restore and manage land and soils sustainably, we will not alleviate rural poverty and hunger, ensure long-term food security, build resilience to drought and water stress. This will lead to consequences including more political conflicts over scarce resources and continued forced migrations.<sup>36</sup>

As desertification and land degradation deprive people of resources such as water and food, the probability of conflict and unrest over natural resources, as well as global migration, increases. In 2008, political demonstrations and unrest in 30 states centered on the problems of food insecurity and resource conflicts. The UN estimates that 40% of civil wars over a 60-year period already occurred due to fights for land resources, and expects these to increase as desertification and land degradation make these resources scarcer.<sup>37</sup> The UN further estimates that 60 million people will have migrated as a result of desertification by 2020.<sup>38</sup>

Finally, desertification will decrease biodiversity in plants and animals. A vicious cycle occurs as land degradation reduces the quality and variety of plant and animal life in drylands, which in turn damages dryland ecosystems and contributes to inhospitable conditions for other species of plants and animals.<sup>39</sup>

### *Places of Particular Concern*

Africa has experienced the worst desertification. Approximately 65% of Africa is drylands, and two-thirds of those drylands support large populations of people. So far, one-fifth of the irrigated cropland, three-fifths of the rain-fed cropland, and three-fourths of the rangeland in African drylands have undergone moderate to severe land degradation.<sup>40</sup> Somalia, Ethiopia, Djibouti, and Kenya, located in the Horn of Africa, have drawn particular attention in recent years as places that have extraordinarily high desertification levels. Climate change has induced a paucity of rainfall in these countries in recent years, making their drylands even more arid. Additionally, weak governance

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<sup>34</sup>UNCCD, “Desertification: The Invisible Frontline.”

<sup>35</sup> UNCCD, “Desertification: The Invisible Frontline.” See also, United Nations Environment Programme, “Lake Chad: almost Gone,” 2008, available at <http://www.unep.org/dewa/vitalwater/article116.html>.

<sup>36</sup> William Dar, “We Must Make Up Ground in the Fight Against Desertification,” *The Guardian*, Poverty Matters Blog, 18 October 2011, available at <http://www.theguardian.com/global-development/poverty-matters/2011/oct/18/fight-against-desertification>.

<sup>37</sup> UN Convention to Combat Desertification, “Desertification: The Invisible Frontline.”

<sup>38</sup> United Nations, “2014 Theme: Land Belongs to the Future - Let’s Climate Proof It,” World Day to Combat Desertification website, available at <http://www.un.org/en/events/desertificationday/background.shtml>.

<sup>39</sup> Jonathan Davies et al. “Conserving Dryland Biodiversity,” *UNCCD*, 2012, pp. 4-6, 39, available at [http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/drylands\\_bk\\_2.pdf](http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/drylands_bk_2.pdf).

<sup>40</sup> “Desertification,” *Encyclopedia Britannica*.

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in the region, particularly in Somalia as a failed state, have made conservation and restoration efforts difficult in these countries, according to a report from the UNCCD.<sup>41</sup>

Next to Africa, Asia (particularly China, Japan, South Korea) and Mongolia, has experienced high levels of desertification. Primarily as a result of deforestation, 27.5% of Chinese land alone has suffered desertification, while a total of 30% has been directly or indirectly affected. This costs the Chinese government \$6.7 billion per year.<sup>42</sup>

### Stopping and Reversing Desertification

As noted by the UN, the prevention and reversal of desertification occurs in two ways. First, states, organizations, and people can prevent degradation on lands that have not been affected by desertification, or which have only begun to degrade. Second, actors can combat desertification and land degradation by restoring lands (i.e. bioreclamation), followed by efforts at preservation.<sup>43</sup>

A number of strategies exist to protect drylands. These include rotating lands used for growing crops or livestock grazing, desalinization, adding nutrients to exhausted soil such as zinc and boron, and/or growing crops that can survive on saltwater from the ocean in coastal areas.<sup>44</sup> For farmlands, the US Geological Survey suggests building sand walls, as well as planting tree fences and grass belts to prevent sand from blowing across farmable drylands.<sup>45</sup> At the national and international levels, states and organizations can encourage local actors to adopt these practices, or adopt policies that require the sustainable use of drylands. Another strategy, known as Sustainable Land Management (SLM) refers to using land for multiple uses, as opposed to mono-uses of land (e.g. only for grazing cattle). The use of SLM not only promotes the prevention of land degradation, but also has been shown to increase crop yields by 30-170%, according to the United Nations.<sup>46</sup>

In regard to restoring and reclaiming lands, in many cases bioreclamation occurs as actors restore or enhance the quality of soils for agricultural production. For instance, local actors might use mulch and other fertilizers or nutrients to make land arable. One method uses zai pits (small mulch-filled holes) to grow vegetation or crops. Some have also used a technique called microdosing to restore vegetation to previously barren lands. This technique involves planting drought-tolerant trees and crops, and applying small doses of fertilizer directly to the plants' roots to facilitate their growth.

Actors can enhance the benefits of land reclamation by planting dryland-resilient trees with advantageous qualities. For instance, the Pommés du Sahel (apples of Sahel) offer 10 times the vitamin C of apples, as well as calcium, iron, and phosphorous. Moringa trees contain four times the vitamin A of carrots in their leaves. Some drought-tolerant crops such as the pigeonpea can restore vital nutrients such as nitrogen to soil and still bear harvests even when it rarely rains.<sup>47</sup>

Internationally and regionally, actors can reinforce these efforts in various ways. This includes strategies such as dryland degradation awareness campaigns to help local populations understand the danger of abusing

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<sup>41</sup> King "Desertification Crisis Affecting 168 Countries."

<sup>42</sup> Patricia Blazey, "Approaches to Increasing Desertification in Northern China," *The Chinese Economy*, vol. 45 no.3 (May-June 2012), pp. 88-89.

<sup>43</sup> United Nations, "United Nations Conference on Environment & Development AGENDA 21," *UN Sustainable Development*, 14 June 1992, available at <http://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>

<sup>44</sup> Dar, "We Must Make Up ground in the Fight Against Desertification."

<sup>45</sup> USGS Publication Service Center, "Desertification," United States Geological Survey website, 29 October 1997, available at <http://pubs.usgs.gov/gip/deserts/desertification/>.

<sup>46</sup> United Nations, "Why Now?"

<sup>47</sup> Dar, "We Must Make Up ground in the Fight Against Desertification."

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dryland resources; interstate technology transfers and information-sharing (e.g. of best practices); financial contributions from developed states to developing states to purchase resources (e.g. fertilizer and soil nutrients or drought-resilient plants) and reduce poverty as a cause of resource exploitation; and promoting international research of the causes and novel solutions for desertification.<sup>48</sup>

Mitigating climate change also plays a role in preventing and restoring degraded drylands. In order to prevent rising temperatures and increasing droughts in the future, states and other actors must reduce greenhouse gases emissions that contribute to the greenhouse effect. Typically this involves commitments to place limits on carbon emissions (e.g. through agreements such as the Kyoto Protocol). Past disagreements between states such as the US and China over what states should take greatest responsibility for limiting emissions, however, have stymied these in the past.<sup>49</sup> Drylands themselves can play a role in mitigating climate change and overcoming this challenge. Ground sequestration refers to the process of “recycling” CO<sub>2</sub> from the atmosphere by using carbon sinks, comprised of organic matter such as plants, to absorb carbon in the atmosphere. Because drylands can store approximately 46% of the world’s carbon share, restoration of vegetation in drylands can mitigate carbon emissions that cause climate change to combat climate change and further desertification.<sup>50</sup>

### ***Previous Committee Work on This Topic***

Desertification represented a major international political issue in 1992, when Agenda 21 was adopted by 179 UN member states at the United Nations Conference on Environment and Development. Because it was held in Rio de Janeiro, Brazil, the conference is often referred to as the Rio Conference or Earth Summit. With regard to desertification, the primary objective of Agenda 21 was to combat desertification through “the implementation of preventive measures for lands that are not yet degraded, or which are only slightly degraded.”<sup>51</sup>

The 1992 Rio Conference is also where the UN Framework Convention on Climate Change (UNFCCC), which first addressed carbon emissions, was drafted. The Kyoto Protocol (2005) is a related treaty in which certain developed countries pledged to reduce their carbon emissions by December 2012.<sup>52</sup> In addition to failing to meet Kyoto’s targets for their 2012 emissions, developed countries have been unable to agree with developing countries about what targets all countries should meet. Instead, in December 2012, at the UN Climate Change Conference in Doha, Qatar, the FCCC simply extended the Kyoto targets for developed countries from 2013 to 2020 and agreed to establish, by 2015, new targets for all countries after 2020.<sup>53</sup> In November 2013, the 2015 targets were discussed at the annual FCCC conference in Warsaw. While the FCCC called the talks a “success” towards putting states “on track” for new a 2015 agreement,<sup>54</sup> others have criticized the discussion as being “counterproductive” and focusing too heavily on gaining concessions from others rather than implementing policies.<sup>55</sup>

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<sup>48</sup> UN Sustainable Development, “Agenda 21,” <http://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>.

<sup>49</sup> Coral Davenport, “Climate Study Puts Diplomatic Pressure on Obama,” *New York Times*, 31 March 2014.

<sup>50</sup> United Nations, “Why Now?” UNCCD, “Climate Change and Desertification.” Also see, Elizabeth Rosenthal, “Enveloping Desert Conditions to Trigger Unrest in Africa and Asia,” *New York Times*, 28 June 2007, available at <http://www.nytimes.com/2007/06/27/world/africa/27iht-desert.4.6365456.html>.

<sup>51</sup> UN Sustainable Development, “Agenda 21.”

<sup>52</sup> UN Framework Convention on Climate Change (FCCC), “Kyoto Protocol,” [http://unfccc.int/kyoto\\_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php).

<sup>53</sup> John Broder, “Climate Talks Yield Commitment to Ambitious, but Unclear, Actions,” *New York Times*, 8 December 2012, available at <http://www.nytimes.com/2012/12/09/science/earth/talks-on-climate-produce-promises-and-complaints.html?ref=kyotoprotocol>.

<sup>54</sup> United Nations Framework Convention on Climate Change, “Warsaw Climate Change Conference – November 2013,” available at [http://unfccc.int/meetings/warsaw\\_nov\\_2013/meeting/7649.php](http://unfccc.int/meetings/warsaw_nov_2013/meeting/7649.php), accessed 25 July 2013.

<sup>55</sup> Joseph Zammit-Lucia, “COP19: the UN's climate talks proved to be just another cop out,” *The Guardian*, 2 December 2013, <http://www.theguardian.com/sustainable-business/cop19-un-climate-talks-another-cop-out>.

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In 1994, the United Nations adopted the UN Convention to Combat Desertification (UNCCD). This remains the sole international legal instrument for protecting ecosystems from desertification. By accepting the UNCCD, states must cooperate in informational exchange, scientific research, technologies, and other capacities as they relate desertification. More specifically, developed states are required to provide assistance to affected countries. States party to the Convention in Africa, Asia, Latin America and the Caribbean, the Northern Mediterranean and Central and Eastern Europe commit themselves to create national action programs to combat desertification and cooperate at regional and sub-regional levels, while other state parties have the option to create national action programs, or establish “strategies and priorities” to combat desertification. All parties must report to the UNCCD secretariat on the state of desertification in their country and any progress they have made in implementing the Convention.<sup>56</sup>

At the eighth Conference of Parties of the UNCCD, held in September 2007, state parties to the convention adopted a 10 year strategy (2008-2018) for combating desertification. The strategy includes five strategic objectives:

1. Advocacy, awareness raising and education
2. Policy framework (i.e. creating enabling environments for National Action Programs)
3. Science, technology and knowledge
4. Capacity-building
5. Financing and technology transfer<sup>57</sup>

In March 2013 Canada withdrew from the Convention. The Canadian government stated that it withdrew because the Convention had actually done very little in “anti-drought” initiatives.<sup>58</sup> Canada is currently the only UN member not party to the UNCCD.<sup>59</sup> South Sudan became the 195<sup>th</sup> state (excluding Canada) to become party to the agreement in May 2014.<sup>60</sup>

Also in 1994, the UN General Assembly declared June 17<sup>th</sup> as World Day to Combat Desertification. The theme for 2014 was “Land Belongs to the Future – Let’s Climate Proof it,” which focused on adapting to the effects of climate change by building healthy eco-systems that can better withstand climate change than degraded land.<sup>61</sup>

In December 2007, the GA adopted Resolution 62/195 (A/RES/62/195), which declared 2010-2020 the UN Decade for Deserts and the Fight against Desertification.<sup>62</sup> In December 2009, the General Assembly added to the Decade by passing Resolution 64/201, which laid out three objectives for the UN and states to pursue in the decade. These three objectives include (1) coordinating events to recognize the decade and raise awareness regarding the causes and solutions to desertification and land degradation within the 10-year framework for enhancing the implementation of the UNCCD; (2) Generating financial support for the UNCCD secretariat to support “special

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<sup>56</sup> UNCCD, “Benefits and Responsibilities of Parties to the Convention,” available at <http://www.unccd.int/en/about-the-convention/the-convention/benefits/Pages/default.aspx>, accessed 21 June 2014.

<sup>57</sup> UNCCD, “The reporting process and the UNCCD 10-Year Strategy,” available at <http://www.unccd.int/en/programmes/Capacity-building/CBW/Resources/Pages/5RC/ReportingandTheStrategy.aspx>.

<sup>58</sup> Christopher F Schuetze, “Canada’s Latest Climate Change,” *New York Times*, 1 April 2013, available at <http://rendezvous.blogs.nytimes.com/2013/04/01/canadas-latest-climate-change/>

<sup>59</sup> Secretariat of the UNCCD, “Update on Ratification of the UNCCD,” 28 March, 2013, available at <http://www.unccd.int/Lists/SiteDocumentLibrary/convention/ratification-eng.pdf>. See also, Schuetze, “Canada’s Latest.”

<sup>60</sup> UNCCD, “South Sudan Becomes Party to the Convention,” *UNCCD News*, 19 May 2014, available at <http://www.unccd.int/en/media-center/MediaNews/Pages/highlightdetail.aspx?HighlightID=303>.

<sup>61</sup>United Nations, “2014 Theme: Land Belongs to the Future.”

<sup>62</sup>[http://www.un.org/en/ga/search/view\\_doc.asp?symbol=A/RES/62/195](http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/62/195).



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initiatives” in observance of the Decade; and (3) monitoring progress on desertification and land degradation in preparation for the Secretary General’s report in the 69<sup>th</sup> Session (2014) of the General Assembly.<sup>63</sup>

In June 2012, UN Member States held a follow up conference to the 1992 United Nations Conference on Environment and Development entitled the United Nations Conference on Sustainable Development, informally referred to as Rio+20. On desertification, UN Member States decided to

reaffirm [their] resolve in accordance with the [UNCCD] to take coordinated action nationally, regionally and internationally, to monitor, globally, land degradation and restore degraded lands in arid, semi-arid and dry sub-humid areas...to support and strengthen the implementation of the Convention and the 10-year strategic plan ... including through mobilizing adequate, predictable and timely financial resources... [and to] note the importance of mitigating the effects of desertification, land degradation and drought, including by preserving and developing oases, restoring degraded lands, improving soil quality and improving water management, in order to contribute to sustainable development and poverty eradication.<sup>64</sup>

In January 2014, the UN General Assembly passed its most recent UN resolution on desertification (A/RES/68/213). In addition to reaffirming commitments to reverse desertification, restore degraded lands, and implement systems for monitoring and sharing information on desertification, Member States resolved to incorporate desertification into the Post-2015 Sustainable Development Goals, which could replace the current Millennium Development Goals after the deadline of 2015 passes.<sup>65</sup>

### **Conclusion**

How can the GA encourage UN member states to stop and reverse desertification. As you write your position paper on this topic, consider the following questions:

- Does your country have drylands or deserts? If so, what kind does it have? Does it have natural deserts?
- What is the role of dryland or desert products in your country’s economy (exports, imports, manufacturing) and your people’s lives and livelihoods?
- To what extent is desertification occurring in your country and/or in neighboring countries?
- Has desertification in your country or region had any of the effects discussed above? To what extent is your country experiencing or likely to experience the effects of climate change? What is it doing to contribute -- or limit its contribution -- to the greenhouse effect?
- What measures has your country taken to stop desertification within its borders and/or in other countries? Is it party to the UNCCD? If not, why not?
- What can the GA do to address desertification while at the same time considering the economic and other needs of member states that depend on economic activities that cause desertification?

### **Recommended Reading**

The Guardian. “Desertification.” Available at <http://www.theguardian.com/environment/desertification>.

This page from The Guardian features recent news articles about or related to desertification.

United Nations. “Desertification.” World Day to Combat Desertification website. Available at <http://www.un.org/en/events/desertificationday/background.shtml>.

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<sup>63</sup> UN Convention to Combat Desertification, “Background Information.”

<sup>64</sup> United Nations, “The Future We Want,” Outcome of the UNCS D (A/CONF.216/L.1), 19 June 2012, available at <http://www.unccd.int/Lists/SiteDocumentLibrary/Rio+20/TheFutureWeWantRIOplus20.pdf>.

<sup>65</sup> United Nations General Assembly Resolution 68/213 (A/RES/68/213), available at [http://www.un.org/en/ga/search/view\\_doc.asp?symbol=A/RES/68/213](http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/68/213).

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This page includes some basic information and statistics on desertification. Explore the links on the left for documents, speeches, events, and other resources regarding desertification. See also the Desertification Decade website for similar background information ([http://www.un.org/en/events/desertification\\_decade/](http://www.un.org/en/events/desertification_decade/)).

United Nations Convention to Combat Desertification. “Regions.” Available at <http://www.unccd.int/en/regional-access/Pages/default.aspx>.

Use this page to explore issues related to desertification and land degradation facing different regions of the world. In particular click on the region in which your country resides to determine how the region is affected by desertification, and what regional strategies have been adopted to deal with the issue.

United Nations Convention to Combat Desertification “Land Based Adaptation.” 6 June 2014. Available at [http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/Land\\_Based\\_Adaptation\\_ENG%20Sall\\_web.pdf](http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/Land_Based_Adaptation_ENG%20Sall_web.pdf).

This document from the UNCCD discusses some of the consequences of desertification, as well as some local strategies for combating desertification. Also see the publications page of the UNCCD website (available at <http://www.unccd.int/en/resources/publication/Pages/default.aspx>), which offers information on topics related to desertification such as migration, climate change, and dryland deforestation (REDD+).

UNCCD Decision 3/COP.8. “The 10-Year Strategic Plan and Framework to Enhance the Implementation of the Convention.” Available at <http://www.unccd.int/Lists/SiteDocumentLibrary/10YearStrategy/Decision%203COP8%20adoption%20of%20The%20Strategy.pdf>.

Read over the 10-year strategic plan (2008-2018) passed by the Parties to the UNCCD to determine what actions states have taken already. Consider what actions might facilitate or improve upon the strategic plan, based on your country’s position, as you read.

United Nations Environment Programme, “Global Deserts Outlook,” 2006, available at <http://www.pnuma.org/deat1/pdf/Global%20Deserts%20Outlook.pdf>.

This publication from the UNEP discusses a broad range of topics related to deserts. In particular it discusses the importance of deserts and land degradation in deserts in more detail than discussed above. (Skim anything that seems interesting or useful, but give particular attention to Chapters 4-6.)

United Nations General Assembly Resolution 68/213 (A/RES/68/213), available at [http://www.un.org/en/ga/search/view\\_doc.asp?symbol=A/RES/68/213](http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/68/213).

This is the most recent resolution passed by the General Assembly on Desertification. Review it to see what recent actions the GA has taken on the issue. Think about these actions as you develop your position to determine what kind of policies your state would support to improve on actions already being performed. (Also see A/RES/64/201 regarding the Decade to Combat Desertification. Available at [http://www.un.org/en/ga/search/view\\_doc.asp?symbol=A/RES/64/201](http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/64/201).)

William Dar. “We Must Make Up Ground in the Fight Against Desertification.” *The Guardian*, Poverty Matters Blog, 18 October 2011. Available at <http://www.theguardian.com/global-development/poverty-matters/2011/oct/18/fight-against-desertification>.

This article discusses the challenges and some solutions to the problem of land degradation. It specifically focuses on local level solutions.

World Wildlife Fund. “Deserts and Xeric Shrublands. WWF website, available at <http://www.worldwildlife.org/biomes/deserts-and-xeric-shrublands>, accessed 20 June 2014.

This webpage from the World Wildlife Fund contains some basic information on Deserts. See the links regarding the six desert regions at the bottom of the page for information on deserts within your state.