

World Day to Combat Desertification 2014 Land Belongs to the Future – Let’s Climate Proof It!

Theme: Ecosystem-based adaptation

Part I: What is the World Day to Combat Desertification?

Part II: What is ecosystem-based adaptation?

Part III: How can I get involved?

Part V: Additional resources

Part I: What is the World Day to Combat Desertification?

In 1995, the United Nations designated 17 June as the World Day to Combat Desertification and Drought (WDCD) to raise awareness about the threats and consequences of desertification and drought. But the goal of the day is not only to talk about the problems, but also the solutions. Through proper planning and sustainable land management, the effects of desertification and drought can be lessened and even prevented.

The theme of this year’s observance is ecosystem-based adaptation. We chose this theme to increase awareness about the potential of ecosystem-based adaptation as a strategy for coping with the impacts of climate change, especially in the drylands. Ecosystem-based adaptation means the strengthening of natural systems to cushion the worst impacts of climate change. When ecosystems are healthy, they are less vulnerable to the impacts and hazards of climate change.

What is desertification?

Desertification means land degradation in the drylands, which are technically known as arid, semi-arid and sub-humid areas. It is a gradual process of soil productivity loss and the thinning out of the vegetative cover that occurs as a result of human activities and climatic variations such as prolonged droughts and floods. While fertile topsoil takes centuries to form, if mistreated, it can be blown or washed away within just a few seasons. Among the reasons for desertification caused by humans are over cultivation, overgrazing, deforestation, and poor irrigation practices.

How does desertification affect me?

The effects of desertification, land degradation and drought are the most extreme for the rural poor. Approximately 1.5 billion people globally depend on degrading areas for their livelihoods, and nearly half of the world’s very poor (42%) live in degraded areas. While these people may seem far away to those of us who live in cities or developed countries, the effects of their

suffering ripples across the globe.

Drylands regions are some of the most insecure places in the world, and in some cases their instability can destabilize entire political regions. Desertification, land degradation and drought are a major cause of migration and displacement. While the number of climate related migrations is debated, it is estimated that by 2020 some 60 million people will migrate from the desertified areas in sub-Saharan Africa towards Northern Africa and Europe.

The Millennium Development Goals and other development targets cannot be achieved without sustainable futures for people in the drylands.

But desertification and land degradation are not just problems of the very poor. More than 110 countries are potentially at risk of desertification, and half of the world's livestock can be found in the drylands. If food production in the drylands collapses, food prices worldwide will skyrocket.

World Water Assessment Programme 2012.

The global economic losses from desertification and land degradation amount to approximately USD 42 billion each year. But drylands are not only a cause for concern; they are a home to resilient resourceful cultures and tremendous biodiversity. Dryland habitats are home to endangered species such as lions, elephant, rhino, buffalo, giraffe and many others which are further threatened by desertification. The drylands are the original source of one in every three plants that we cultivate, such as oats, barley, tomatoes, potato, cabbage and the saffron spice. They are also home to tremendous genetic resources that are commonly used for medical infections (like antibiotics), ingredients for cosmetics (like Marula oil) and unique strains of drought resistant plants. At least 30 per cent of the world's cultivated plants and many livestock breeds originate in drylands, providing an important genetic reservoir that is becoming increasingly valuable for climate change adaptation.

The costs of land degradation and desertification are generally measured in terms of productivity, i.e. reduced crop yields or grazing intensities. Secondary costs include loss of ecosystem services and indirect costs are those associated with mitigating desertification.

Part II. Ecosystem-Based Adaptation

- What is an ecosystem? When you look at a map of the world, what do you see? Politicians see continents and oceans. Politicians see regions like Africa and Asia or countries like Brazil or Germany. But ecologists see water and land, lakes and rivers, deserts and mountains. They call each of these units ecosystems, even if they are viewed at different scales – local or global. An ecosystem is a dynamic complex of plant, animal, and microorganism communities and the nonliving environment, interacting as

a functional unit.

2. Humans are integral parts of ecosystems, and every ecosystem supports our lives in multiply ways, which in economic terms can be described as ecosystem services. Some of these services are obvious, such as water, food or natural resources, and others are not so obvious, such as nutrient cycling that maintains the conditions on earth. The Millennium Ecosystem Assessment, conducted in 2005, is the first major effort to analyse what the world looks like from such a biophysical standpoint.

2. Desertification, defined as the final stage of land degradation in the drylands, has been a major challenge to the productivity and health of dryland ecosystems long before the impacts of climate change have become understood. Desertification affects Africa the most in terms of area, where two-thirds of the continent is desert or drylands, Asia is most affected in terms of people. About one-third of the world's population lives in drylands, 90 per cent of whom live in developing countries.

Some examples of ecosystems: Grasslands/savannahs, marine, coastal, inland water, forest and woodland, drylands, island, mountain, polar, cultivated and urban.

Drylands ecosystems, with their vast open spaces and fragile soils, are sensitive to even slight climate and weather variations. These variations are already apparent in places like the Sahel, the Horn of Africa and the Middle-East and their negative impacts are becoming more and more evident at country and regional levels. Agricultural productivity is falling, people are fleeing, or even dying, from drought, famine and flood related disasters. More and more conflicts over scarce water resources are emerging.

People in the drylands are among the most vulnerable to climate change because the majority earn their livelihoods as pastoralists and farmers. Without fertile land, they cannot survive.

While drylands are one type of ecosystem, they are often a mosaic of complex habitats such as forests, lakes, rivers, coasts, mountains, grasslands and rangelands. They are susceptible to droughts and desertification, but also floods and other elements like saline that can cause erosion and degradation.

The health and productivity of drylands extend far beyond the people living there. As the "breadbasket of the world," the drylands are home to nearly half of livestock and cultivated systems globally. They also contain habitat for indigenous plants and drought-resistant strains of seed for use by future generations that will be critical as the climate changes and the population grows.

Types of Ecosystem Services

· Provision of food, fuel and fiber ·

Regulating services to temper floods, climate and drought · S

upporting services such as soil formation and nutrient cycling ·

Cultural services such as recreation and other non- material benefits.

What is Adaptation?

Scientists warn that the climate is changing abnormally fast and in ways that could significantly disrupt our livelihoods and security, from our economies and infrastructure to the social and ecological systems we depend on. Climate change is affecting biodiversity and ecosystem functioning and the many benefits that they provide to society.

Terrestrial ecosystems are vulnerable to climate change for two reasons. First, climatic impacts may be too severe for an ecosystem to withstand them. For example, heavy and sudden downpours wash away fertile soil. Prolonged drought destroys soil nutrients. If these phenomena become a normal part of the local weather, soil erosion will exceed the natural rate of soil formation and degrade the land irreparably.

Second, how we use the ecosystems increases their vulnerability to climate change. For instance, natural processes of soil erosion could be accelerated by the continuous and unsustainable farming and livestock practices. As a result of misuse, land can turn into a hard crust that does not allow for water to infiltrate and replenish underground water sources. Soon, the water levels in lakes and rivers would decline, shrink or disappear altogether.

Adaptation refers to actions taken to ensure that these negative impacts are prevented or minimized and that both people and ecosystems are equipped to withstand potential damage. Adaptation strategies involve a range of actions, including behavioural change, technical or hard engineered solutions such as construction of sea defences or risk management, and disaster reduction strategies such as the establishment of early warning systems. There is growing recognition of the role healthy ecosystems can play in adaptation, known as ecosystem-based adaptation. These so-called natural solutions are based on sustainable land and water management as well as the restoration of degraded ecosystems. These efforts require investments and leadership at all levels, from global policy makers, to community leaders, to scientists and farmers.

4. What is Ecosystem-based Adaptation (EbA)?

Ecosystems are complex and interconnected. They are naturally adaptable and resilient-- up to

a point. When ecosystems are healthy, they can better adjust to the effects of climate change and related disasters. Sustainably-managed ecosystems reduce the vulnerability of people to climate change impacts and hazards.

Ecosystem-based adaptation implies the strengthening of natural systems to cushion the worst impacts of climate change.

Types of Ecosystem-based Adaptation

- Sustainable water management, where river basins, aquifers, flood plains and their vegetation are managed to provide water storage and flood regulation

- Disaster risk reduction, where restoration of coastal habitats such as mangroves can be effective against storm surges, saline intrusion and coastal erosion ·

Sustainable management of grasslands and rangelands, to enhance pastoral livelihoods and increase resilience to drought and flooding

- Establishment of diverse agricultural systems, incorporating indigenous knowledge, and maintaining genetic diversity of crops and livestock

- Strategic management of shrublands and forests to limit size and frequency of uncontrolled forest fires

- Establishing and effectively managing protected areas systems to ensure the continued delivery of ecosystem services that increase resilience to climate change.

5. What are the benefits? Healthy ecosystems provide a variety of services such as drinking water, habitat, shelter, food, raw materials, genetic materials, a barrier against disasters and the formation and regeneration of the natural resources in the ecosystem that people depend for their livelihoods.

Ecosystems are natural safeguards that are often more effective and cheaper to maintain than physical engineering structures, such as dykes or concrete walls. For instance, planting trees to improve water infiltration and replenish underground water sources is often cheaper and more sustainable than building a new water supply system.

Examples of benefits of EbA

- Food security

- Habitat

- Preservation of genetic materials ·

Water security

- Soil health · Barriers to disaster
- Erosion prevention
- Conservation of biodiversity
- Drought prevention
- Regeneration of natural resources
- Empowerment of the rural poor
- Incorporation of indigenous knowledge · Holistic approaches to development, non-siloed approach

9

existing community-based approaches to combat desertification and mitigate the effects of drought. EbA strategies are also compatible with many of the ways local and indigenous populations manage their environments, and can help support the adaptive capacity of local communities and indigenous groups.¹³ Ecosystem-based adaptation strategies offer significant opportunities to strengthen the links between conservation, agriculture, water and land management and drought prevention.

6. How does it work in practice? Ecosystem-based adaptation practices include the sustainable management, conservation and restoration of ecosystems to provide those services that help people adapt to both climate variability and climate change.¹⁴ For the drylands, sustainable land and water management or integrated land and water management practices are also be considered EbA.

Examples of EbA Approaches

1. By popularizing the concept of Farmer Managed Natural Regeneration (FMNR), World Vision Australia has changed how thousands of farmers manage their land, particularly in West Africa, by helping them cultivate buried root systems or "underground forests," in degraded landscapes, over time restoring productivity. Watch a Video¹⁵
2. Through mobilizing local populations to care for common lands, the Foundation for Ecological Security in India has restored 200,000 ha of common property rangelands through holistic landscape approaches that empower communities in India. Watch a Video¹⁶
3. By mobilizing farmers and small land holders to restore a vital watershed in Central Mexico,

Consejo Civil Mexicano para la Silvicultura Sostenible has shown how an integrated landscape approach can be a cost-effective sustainable development strategy for an entire region. Watch a Video¹⁷

7. What are the challenges to implementing EbA? Ecosystem-based adaptation initiatives still face a range of barriers. At the national levels, the different ecosystem services and functions are managed by diverse stakeholders and sectors that often do not work in a coordinated fashion. For instance, managing water resources in an ecosystem may be under the department of water, facilitating access to the trees and other products under the department of forests, and land for farming under the department of

13 Ecosystem-based Adaptation. A UNEP Flagship Programme, p.2 14 As defined by the second Convention on Biodiversity AHTEG on Biodiversity and Climate Change (2008). More: <http://www.cbd.int/doc/publications/cbd-ts-41-en.pdf> 15 <http://www.youtube.com/watch?v=22a10dHwHSE> 16 <http://www.youtube.com/watch?v=JQ5tDNwA0aA> 17 http://www.youtube.com/watch?v=3vvtJX_IF7E

10

agriculture. If all are working independently in their silos, competition over the use of services could lead to degradation.

EbA requires consultation and engagement with the people that depend on the resources. This may be hindered by the lack of access to the required information and knowledge, the inability of local communities to participate in forums where the decisions on ecosystem management are being undertaken, or even alienation as urbanization takes people further and further away from the ecosystems that provide them with various services.

EbA is an emerging ecosystem management approach within the evolving context of climate change. As with all new practices, it will take time for people to understand and implement EbA. Some may fear that it will impose a new financial burden. Others may feel threatened by the loss of control over the current processes they use to manage ecosystems and seek to co-opt it by re-naming their old practices as EbA instead of integrating the missing principles of EbA into existing processes.

8. Supporting a future of ecosystem-based adaptation As policy makers and leaders at all levels prepare their strategies for climate change adaptation and mitigation, there is a need for greater attention and investments in land-based adaptation strategies, such as:

- Include land management related targets and indicators in the Sustainable Development Goals and post-2015
- Encourage ecosystem-based adaptation in the drylands and beyond
- Rehabilitate degraded land to increase climate change resilience
- Increase recognition of the role of ecosystem based adaptation, especially in the drylands, within the negotiations of the UN

Framework Convention on Climate Change and the Convention on Biodiversity · Build technical and institutional capacity for sustainable land management · Create national and sub-national policies for drought mitigation and prevention.

11

III. Take Action 1. How can I get involved? As signatories to the Convention, every government is responsible for hosting the World Day to Combat Desertification in their country. Each country has designated a focal point to the UNCCD which holds primary responsibility for organizing the day's observance. However, anyone is welcome to organize events to celebrate the World Day to Combat Desertification. We especially encourage the participation of civil society, schools, community groups and the private sector.

Action ideas:

1. Build coalitions Check if there is a possibility to work with your country's focal point or non-governmental organization accredited to the Convention. National focal point contacts are listed here¹⁸ and the list of all accredited NGOs here.¹⁹ Consider other stakeholders that are invested in the issue of sustainable land management. 2. Organize Events Bring people together to discuss how land degradation affects local lives. Explain the issue through a panel discussion with experts and other stakeholders, lecture or film screening. Display photos, show videos or invite local cultural groups and media to make the event more interesting. 3. Share information Distribute information on how desertification is affecting your country. Distribute WDCD posters and flyers in shops, agricultural institutions and organizations where land users go to get their local supplies like fertilizer or agricultural loans. 4. Get online Take part in our social media campaign by sharing our messages and graphics to help us reach as many people as possible through Twitter, Facebook and other channels. #WDCD14 5. Be creative Organize local cultural shows or street theater. Consider visual exhibits to show the scale of the problems of desertification and land degradation. 6. Reach out to the media · Write articles for publication in your local media (you can even send them to us, and we may even publish them on our site). · An op-ed by the UNCCD Executive Secretary will be available, which can be published in local newspapers on 17 June. · A video will be available that can be shared with TV or programmes to report on topic of desertification. · Messages from the UN Secretary-General, UNCCD Executive Secretary and ministry responsible for the event in your country should also be available closer to the date.

¹⁸ <http://www.unccd.int/en/about-the-convention/Official-contacts/Pages/default.aspx> ¹⁹ <http://www.unccd.int/Lists/SiteDocumentLibrary/CivilSociety/List-of-civil-society-organizations-having-confirmed-their-interest-in-remaining-accredited.pdf>

Potential stakeholders · Government Ministries of Agriculture, Environment, Water, Land use,

Mining, or Climate · Donors and international organizations · Scientists and universities · NGOs and civil society · Farmers and local land users · Indigenous people · Schools and youth groups · Women's groups · Business and the private sector

12

7. Contact us You can also sign up as a UNCCD volunteer to provide essential skills to support the campaign, such as: feature writers; editors; local media mobilizers; video film and cartoon developers, app developers for smart and non-smart phones; etc.

Send an email explaining the services you can offer to: wmwangi@unccd.int and copy

mkapiniaris@unccd.int.

2. What support can I receive? The key materials for the campaign are available for download, publication and re-distribution at no cost. You can also translate the contents of these materials into the local language.

· 2014 Theme: Ecosystem-based adaptation · Slogan: Land Belongs to the Future, Let's Climate Proof It! (see Annex for UN language translations) · Logo · Social media messages and resources will be posted on Facebook, Thunderclap, Twitter & Youtube o Follow us on Twitter @UNCCD o Find us on Facebook at <https://www.facebook.com/UNCCD> · Concept note for WDCD 2014 · Infographic · Frequently Asked Questions on Ecosystem Based Adaptation · Message from the UN Secretary General Ban Ki-moon · Message of the UNCCD Executive Secretary Monique Barbut · Messages from other senior heads of UN agencies · Messages from the UNCCD Drylands Ambassadors (to be published closer to 17 June)

Tips for Advocacy Event planning

· Reach out to your local experts on areas of desertification, drylands, water, land, drought, soil, climate change · Check statistics about your country and region from the World Bank,¹ or these links to environmental data from Visualizing.org · Ask people you know how land degradation affects their lives, and give people affected by desertification and drought a chance to share their experiences · Invite a broad spectrum of participants to your event, coalitions are harder to ignore than single groups · Link the issues of land, water, desertification and climate change to broader development issues such as security, gender, human rights
1<http://datbank.worldbank.org/data/home.aspx> ; <http://visualizing.org/data/browse/109>

13

The materials are posted here and those not yet available will be uploaded as soon as they are ready. <http://bit.ly/WDCD2014>

You can also use the capacity building marketplace of the UNCCD to post your requests for

various kinds of support or to find the support you need for your activities. <http://bit.ly/ccd-cbm>

Note: The Secretariat does not provide financial support to organize national events. 3. How can I publicize my activity? 1) Advise us of your event in advance. Email us any time before 30 May 2014 with details about your event and we will post them on our website and include them in the media materials going out. Please provide the information requested below for the text.

2) Advise us of your event after the fact. On 18 June, we will issue a media report on the activities that took place worldwide. We will be updating this information as we are notified of new events through 31 July. Send your details as soon as possible.

Information we need: 1) Name of event 2) Type of event (workshop, panel, TV, etc.) 3) Organizer 4) Photos 5) Date and venue of the event, include country name 6) Audience invited and titles of speakers and special guests 7) Number of participants 8) Key outcomes 9) A contact name and email address for a person who can be interviewed

To have your event listed, email: cvoigt@unccd.int

This guide will be updated with more materials, including social media tools, as we come closer to 17 June. Please check our website <http://unccd.int> for the latest information. Thank you for helping make the World Day to Combat Desertification a success in 2014!

14

IV. Additional Resources

1. About the UNCCD, desertification, land degradation and drylands Zero Net Land Degradation: Sustainable Development Goal for Rio+2020 The Forgotten Billion: MDG Achievement in the Drylands²¹ Climate Change in African Drylands: Options and Opportunities for adaptation and mitigation²² Full list of Publications by the UNCCD²³

2. About Ecosystem-based Adaptation Connecting Biodiversity and Climate Change. A collection of resources from the Convention on Biodiversity. Convenient Solutions to an Inconvenient Truth: Ecosystem-based Approaches to Climate Change (WorldBank 2009). Ecosystem-based adaptation: a natural response to climate change²⁴ (IUCN 2009) UNFCCC Database on ecosystem approaches to adaptation²⁵ Ecosystem-based adaptation Community of Practice²⁶ Social Dimension of Ecosystem-based Adaptation²⁷ Science for Environment Policy Thematic Issue: Ecosystem-based Adaptation²⁸

3. Additional Advocacy Resources Primer on Citizen Advocacy and Desertification²⁹ World Water Day 2014 Advocacy Guide³⁰ Climate Change in Africa: A guidebook for journalists³¹

<http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/ZNLD%20Summary%20final.pdf> 21
<http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/Forgotten%20Billion.pdf> 22
<http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/Climate%20Change%20Adaptation%20and%20Mitigation%20final.pdf> 23
<http://www.unccd.int/en/resources/publication/Pages/default.aspx> 24
http://www.iucn.org/news_homepage/events/unfccc2/events/2011_durban/publications/?uPubsID=3944 25
http://unfccc.int/adaptation/nairobi_work_programme/knowledge_resources_and_publications/items/6227.php 26
<http://ebacommunity.com/en/>
27 http://www.unep.org/ecosystemmanagement/Portals/7/Documents/policy_series_12-small_Nov_2013.pdf 28
<http://www.seachangecop.org/sites/default/files/documents/2013%2003%20EC%20-%20Ecosystem-based%20Adaptation.pdf> 29
<http://www.earthaction.org/2012/08/primer-on-citizen-advocacy-and-desertification.html> 30
http://www.unwater.org/fileadmin/user_upload/worldwaterday2014/documents/WWD2014_Advocacy_Guide_WEB.pdf 31
<http://www.unesco.org/new/en/communication-and-information/resources/publications-and-communication-materials/publications/full-list/climate-change-in-africa-a-guidebook-for-journalists/>

15