

Disability and Climate Change

Understanding vulnerability and building resilience in a changing world

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Climate change is having the largest impact on the world’s poorest and most vulnerable people. Within this group, 20% are people with disabilities, who are nearly always doubly disadvantaged.

The topic of ‘Disability and Climate Change’ is of large significance to CBM’s work. It is about food, water and shelter security for people with disabilities and their families. It is about their right to access health, education and livelihood opportunities in changing environments. It is about hope and innovation. It is about ensuring people with disabilities are front and centre in seeking to create awareness, understanding and solutions.

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Introduction

The vulnerability of poor nations, communities, families and individuals to the impacts of climate change is of growing significance. The World Report on Disability confirms that more than 20% of the poorest people worldwide are people with disabilities (World Report on Disability 2011), and that 82% of persons with disabilities in developing countries live below the poverty line (Elwan 1999).

Policy development and interventions at all levels need to address the specific circumstances of persons with disabilities in relation to climate change, together with those of their families.

The Intergovernmental Panel on Climate Change (IPCC) defines climate change as *'any change in climate over time, whether due to natural variability or as a result of human activity'* (IPCC 2001). In discussing the impacts of climate change, this article assumes the validity of observed and anticipated increases in average global temperature, extreme weather events, rising sea levels and changes to the timing and amount of rainfall.

This article also recognises that the impacts of climate change are intersecting with all key current concepts and priority areas of international development and poverty alleviation, including food, water and energy security, resilient livelihoods, resource distribution, public health, education, human rights, gender, ethnicity, protection, sustainability, national and regional security and migration.

Much is written about the impact of climate change on the world's most vulnerable groups of people – who it is anticipated will be disproportionately affected. However there is little literature to date that discusses the vulnerability of persons with disabilities within these groups. Climate related reports such as the IPCC and the Human Development Report 2007-08 do not identify persons with disabilities as requiring particular inclusion measures in adapting to their changing environment (Wolbring 2009).

It is anticipated that extra funds required for climate change adaptation and mitigation, will cause a significant shortfall in financial resources needed to achieve the Millennium Development Goals (Stern 2009).

The topic of 'Disability and Climate Change' is about equity and justice. It is about hope and innovation. It is about working together with persons with disabilities to create awareness, understanding and solutions.

The Impact of Climate Change

It is anticipated that climate change will cause increasing hardship for persons with disabilities (and other vulnerable groups). 'Quality of Life' is likely to deteriorate. The ability to adapt, livelihood opportunities and resilience are all anticipated to decline in a changing environment. Climate change is also likely to cause an increase in the incidence and prevalence of many disabling impairments.

Key issues CBM has identified as impacting on 'quality of life' and well-being of persons with a disability as a result of climate change are:

- Decreasing food security and resulting malnutrition
- Decreasing access to clean water, sanitation and hygiene (WASH)
- Increasing emergencies due to extreme weather events
- Reducing access to infrastructure, shelter and basic services
- Increasing displacement / migration
 - OR necessary migration not possible due to disability
- Increasing human security and protection issues (including due to conflicts resulting from climate change)

Decreasing food security and resulting malnutrition

In many communities persons with disabilities and their families already face food shortages on a daily basis due to their poverty. Climate change is projected to exacerbate food shortages and malnutrition in the world's poorest regions. We note that:

- Increases in the frequency of droughts and floods (including from rising sea levels) are projected to cause decreases in local crop production, especially in subsistence sectors at low latitudes, in seasonally dry and tropical regions (IPPC 2007).
- Regional changes are expected to have adverse effects on food production from aquaculture and fisheries (IPPC 2007). Many of the world's poorest people depend on ocean and inland fish as a significant part of their diet.
- Malnutrition is estimated to cause approximately 20% of impairments worldwide (DFID 2000). With increasing malnutrition, we must expect that more children (including those of parents with disabilities) will acquire disabling impairments.
- 'Fuel poverty' (of firewood and other fuels for cooking) is an increasing cause of malnutrition in many parts of South Asia. It can be difficult to obtain adequate nutrition from uncooked food (Northcott 2007). As climate change and resource shortages advance it is anticipated that access to cooking fuel will be an increasing concern for vulnerable groups in many parts of the world.

Decreasing access to clean water, sanitation and hygiene (WASH)

We are aware that many persons with disabilities already face daily hardship in accessing adequate safe water for drinking, hygiene and sanitation. During this century, hundreds of millions of people, especially in the poorest regions, are expected to be exposed to increased water stress due to climate change (IPPC 2007).

Changes in precipitation and temperature lead to changes in runoff and therefore water availability and quality. Increased temperatures will also affect the physical, chemical and biological properties of freshwater lakes and rivers, causing reduced quality. In coastal areas, sea level rises will exacerbate water resource constraints due to increased salinisation of groundwater supplies. This is already evident in many countries (IPPC 2007).

In regions with declining water quality and quantity, it is expected there will be increasing prevalence of water-borne diseases including those causing diarrhoea, with associated dehydration and malnutrition. An estimated 6·8% of DALYs (Disability Adjusted Life Years) worldwide are attributable to unsafe and inadequate water for drinking and sanitation. With decreased clean water, an increase in resulting disability is expected, including in families where disability already exists (Murray and Lopez 1997).

Increasing emergencies due to extreme weather events

Research indicates that weather related disasters are increasing in number and severity. A study in Asia found these emergencies have increased by four times in the past 20 years, and that the number of people affected by them has risen, from an average of 174 million per year to 254 million in the same period (Oxfam Australia 2007.)

Disasters and their aftermath have a huge impact on persons with disabilities. They are among the most vulnerable in an emergency, sustaining disproportionately higher rates of morbidity and mortality, and at the same time being among those least able to access emergency support. In addition, there is a large tendency for persons with disabilities to be *invisible* and overlooked in emergency relief operations (Choy 2009). When the emergency hits they may have difficulty reaching safe areas, become separated from family and friends which is a key to survival and coping, have trouble accessing vital emergency information, or lose assistive devices such as wheelchairs, crutches, prostheses, white canes or hearing aids.

In addition persons with disabilities who also belong to other minority groups based on gender, race, religion or ethnicity may face added disadvantages in having their needs met. Inclusive practice in all relief operations are needed to ensure that response and service delivery is not fragmented but mindful of all sources of vulnerability (Kett & Scherrer 2009).

In the aftermath of a disaster, the damage to infrastructure caused by extreme weather events can reduce or completely remove access and safe mobility.

Reducing access to, infrastructure, shelter and basic services

In the world's poorest regions climate change is causing an 'erosion' of services, infrastructure and shelter. This may occur suddenly, due to an extreme weather event, or be slow and insidious.

As climate change places increased pressure on national budgets and resilient livelihood opportunities diminish, there are less resources available for affordable and accessible services and infrastructure to the poorest people. This is particularly so for those with a disability who may be more reliant on these.

Accessible basic health and other services may disappear. As an example, the loss of immunisation services will increase the risk of the poorest families, including those of persons with disabilities, contracting preventable disabling diseases (WHO 2003).

In island and other coastal communities, sea level rise is expected to exacerbate inundation, storm surge, erosion and other coastal hazards. This will threaten vital infrastructure, settlements and facilities which support livelihoods (IPPC 2007). Clearly all these factors impact heavily on persons with disabilities and their families.

Increasing displacement / migration OR necessary migration not possible due to disability

There are large numbers of climate refugees worldwide and within this group we know there are many persons with disabilities. They are also frequently left behind in a degraded environment, when others in their family or community move on. The situation as social and support networks disappear can be devastating hardship.

An example of a significant people movement is the migration of large numbers of people from the marginal Sahel zone of West Africa to densely populated coastal areas, due to regular crop failures in their home regions (Brauch 2002).

Most people moving from rural to urban environments have no choice but to settle in slums, where housing and basic services are inadequate. They remain vulnerable to weather related risks, live in substandard and over-crowded housing prone to the spread of disease, have inadequate access to clean water, drainage, sanitation and waste removal, and often have few ongoing livelihood opportunities (Little and Cocklin 2010).

These conditions are all amplified for persons with disabilities. They may face severe hygiene issues in accessing toilets, increased health consequences of living in a crowded degraded environment, and may have very limited social/support networks and livelihood opportunities as a result of decreased mobility and dislocation.

Increasing human security and protection issues (including due to conflicts resulting from climate change)

Poverty, dislocation and the breakdown of social structures are key factors which result in decreasing human security and protection. As the impacts of climate change increase, we must expect that persons with disabilities and their families will face increasing risks.

During the coming century it is expected that scarce water and food resources caused by climate change, may cause conflict in a number of regions. For example, the current conflict in Darfur is said to be a struggle between nomadic and pastoral communities for resources that are becoming increasingly scarce as a result of the changing climate (Borger 2007).

Such conflicts will increase the risks and hardships for persons with disabilities. During conflicts, persons with disabilities are additionally vulnerable due to difficulty moving to safety and because, as for other emergencies, they may be *invisible* to relief workers, who are unaware of their specific vulnerabilities.

Conflict is known to be a leading cause of physical and psychological disability (IPCC 2007). People may be unable to access appropriate interventions and assistive devices for health conditions and impairments which were either pre-existing or caused by the conflict. As a result their condition or impairment becomes a long term disability.

Additionally during a conflict, health and social systems often break down, increasing the hardship for those who may be more reliant on these. Due to their vulnerability, all these issues directly impact persons with disabilities and their families.

Conflict and other emergencies may also increase levels of social exclusion. An example of this was recorded in Sudan, where people with impairments caused by earlier leprosy infection were not allowed by other refugees into the camps – instead being sent to the leprosy village (Kett & Scherrer 2009). This example highlights the priority need for awareness raising within relief agencies and community, to ensure services are accessible for everyone.

Increasing impairments leading to disability

As indicated earlier, it is anticipated that many factors connected with climate change, will increase the incidence and prevalence of impairments leading to disability. This is due to both disease and injuries.

Disabling injuries may result from extreme weather events or conflict.

Malaria is a key example of a disease which may cause disability. Roughly one in ten children will suffer from neurological impairment after suffering cerebral malaria, including epilepsy, learning disability, changes in behaviour, loss of coordination or speech impairments (Jones 2002). Warmer temperatures, with increased surface water and humidity, allow increased reproduction of mosquitoes which spread malaria (and other diseases such as dengue and yellow fever). In addition, changing weather conditions facilitate epidemics in areas where malaria was not previously present. The populations in these 'new' areas lack protective immunity and are particularly at risk (IPPC 2007). Even by the year 2000, the World Health Organisation (WHO) had estimated that climate change was responsible for 6% of malaria in some countries (WHO 2002).

Including Persons with Disabilities in a Global Response

'Nothing about us, without us'

The issue of climate change and its role in increasing the poverty and vulnerability of the world's poorest people, including those with disabilities, is of enormous significance to this generation.

Persons with disabilities are in the best position to understand their own situations and be part of seeking solutions to the problems they face. We need to adopt the slogan '*Nothing about us without us*' and work together in mutual learning and empowerment, to ensure that their strengths and vulnerabilities are represented in all key international, national and local forums, strategies and research on climate change.

Recognising vulnerability and capacity for adaption

Vulnerability to the effects of climate change will depend on the resilience of each individual and community and their ability to adapt. Critical factors shaping the resilience and adaptive capacity of individuals, households and communities are their access to and control over natural, human, social, physical, and financial resources (Care International 2009).

Persons with disabilities are typically among the most 'resource poor' within a community, due to poor education, lack of income, social exclusion and limited access to decision-making authorities. Therefore, as for other marginalised groups, they will have little access to or control over those resources which would facilitate adaption.

In outlining a response we emphasise some key principles

- The central role of persons with disabilities (and their carers) in representing their own vulnerabilities, needs and solutions in their situations.
- A 'Rights Based' Approach, in line with the United Nations Convention on the Rights of Persons with Disabilities.
- A 'Twin-track' Approach, which promotes both 'specialist disability initiatives' designed to include and empower persons with disabilities and the 'mainstreaming' of disability inclusion into all policies, strategies and activities.
- The use of the WHO Community Based Rehabilitation Matrix as a framework outlining the right of persons with disabilities to health, education, livelihood, social inclusion and empowerment; with the associated guiding principles of inclusion, participation, self-advocacy, accessibility and sustainability.

- The critical need to end the 'cycle of poverty and disability'. There are strong links between extreme poverty and disability - each resulting from the other. Ending the cycle must also include addressing discrimination and negative attitudes which create barriers and exclusion, exacerbating the hardships persons with disabilities may face.

Some actions to start with

Arguably, 'climate change' represents the most overwhelming issue currently facing the entire global population. There are no single or simple answers. The development community needs to work together with persons with disabilities to build strong, sustainable and innovative solutions and actions.

The actions we list here are just a start.

- Climate funds are being created to assist in mitigation, adaptation and building resilience in the poorest and most affected countries, e.g. 'Fast Start Financing for Climate Change'. Strong advocacy by and with persons with disabilities is needed to ensure disability inclusion is a key criterion in all 'climate funds'.
- The evidence base concerning the vulnerability of persons with disabilities in weather related emergencies, and key factors which create resilience, need to be greatly strengthened, with key messages disseminated.
- Evaluations of both emergency and development programmes, in areas affected by a changing climate, need to clearly include disability in their terms of reference. The lessons learned, in relation to both 'specialist' and 'mainstreamed' activities need to be clearly documented and shared.
- In the reconstruction phase following severe weather and other emergencies it is essential that universal accessibility standards are applied. This is important for all public buildings and spaces, water and sanitation points and for the homes where people with mobility disabilities live.
- 'Disaster Risk Reduction' activities at all levels need to specifically include persons with disabilities as a vulnerable group.
- This article has emphasised the link between poverty and vulnerability. Along with ensuring access to health and education, the inclusion of persons with disabilities and their families into mainstream livelihood, food production, water, sanitation & hygiene (WASH) and energy programmes in both rural and urban areas, is an essential key to building resilience.
- We need to be part of advocacy encouraging governments, the private sector, civil society and individuals in all parts of the world to reduce carbon emissions. We need to model responsible use of the world's resources ourselves.

The intersection between 'disability and climate change' requires more than an advocacy strategy. Working together with persons with disabilities, we need to create a 'movement' of understanding and action, to ensure their full participation and inclusion in the mainstream development process, as it adapts to the new paradigm climate change is bringing.

What is CBM doing?

CBM is becoming increasingly active around 'disability and climate change'.

1. CBM has for many years directly supported limited programmes in the areas of [food security](#), [WASH \(water, sanitation and hygiene promotion\)](#), [livelihood](#), access to services and '[disaster risk reduction](#)'
 - Through advocacy, capacity development and strategic partnerships, CBM will work together with people with disabilities, to ensure their growing inclusion into mainstream activities in these areas.
 - Our objective is to see resilience built, which is inclusive for whole communities, which of course includes people with disabilities.

2. At the recent Rio+20 conference (June, 2012) , US\$513 billion was pledged for activities in sustainable development. These activities include preservation of forests, tree planting and empowering women entrepreneurs in the 'green' economy in Africa.
 - CBM will be part of efforts to ensure people with disabilities are mainstreamed as key groups in the use of these funds.
 - We want to see people with disabilities and their and families included into forest initiatives. We want to see women entrepreneurs with disabilities included in 'green' economy initiatives. We want to see 'disabled people's organisations' active in planning and implementation in the use of these funds in all countries.

3. CBM supports world-wide efforts aimed at limiting global temperature rise to less than two degrees Centigrade. The Inter-governmental Panel on Climate Change forecasts that this requires an immediate annual reduction of emissions by 4% per year.
 - a. We are therefore joining other international NGOs to reduce our environmental footprint, and encouraging our partner organisations relating to this.

Activities include:

 - a. Reducing energy consumption and use of resources including paper and water in offices;
 - b. Working to minimise carbon consuming travel;
 - c. Ensuring recycling and the minimising of waste

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Notes

CBM is an international development organisation committed to improving quality of life of the world's poorest persons with disabilities and those at risk of disability. CBM seeks an inclusive world in which all persons with disabilities enjoy their human rights and achieve their full potential.

The primary indicator used to summarise the burden of premature mortality and disability (including temporary disability) is the disability-adjusted life year (DALY)