

Addressing Mental Health and Wellbeing in the Context of Climate Change: Examples of Interventions to Inform Future Practice

Julian Eaton¹, Emeka Nwefoh², Joshua Duncan³, Oumar Sangare⁴, Yukara Weekes⁵ & Ben Adams⁶

¹MD, CBM Global Disability and Inclusion, Laudenbach, Germany, ²MD, Imo State University, Nigeria, ³MPA, Njala University, Sierra Leone, ⁴MSc, CBM Burkina Faso, Burkina Faso, ⁵MA, CBM UK, UK, ⁶MSc, CBM Global Disability Inclusion, Ireland

Abstract

Climate change is now recognised as contributing to an increasing number of emergencies globally, which are having substantial effects on mental health and wellbeing of affected populations. In this report, we give case studies of mental health and psychosocial support (MHPSS) activities linked to climate change-related emergencies in Bangladesh, Burkina Faso, Madagascar, Nigeria, Sierra Leone and Zimbabwe. The emergencies range from floods and cyclones to drought and food scarcity, often in complex humanitarian settings including conflict affected regions. A range of activities, based on the Inter-Agency Standing Committee Guidelines for MHPSS in emergency settings, are discussed, many of which also focus on inclusion of people with disabilities. These include preparedness and resilience building as well as responses such as provision of basic needs, strengthening community capacity to provide psychosocial support and mental health system strengthening. We conclude that meeting basic needs is an essential prerequisite to address mental distress, that MHPSS is an essential component of any climate change-related response, that advance preparedness and adaptation is a good investment, and that meaningful participation of people in the global South, particularly marginalised communities such as people with disabilities and the very poor, is essential for the transformative change needed in addressing climate change.

Keywords: adaptation, climate change, disability inclusion, mental health, psychosocial support

Introduction

Climate change is now estimated to directly lead to at least 150,000 deaths per year (McMichael, 2004), and disproportionately impacts the world's poorest and most vulnerable people. There are many indirect impacts of climate change and increasing regularity of weather-related humanitarian emergencies on communities (Intergovernmental Panel on Climate Change, 2021), including threats to shelter, infrastructure and basic services; declining food, energy and water security (Nelson et al., 2018); increasing displacement (Schwerdtle et al., 2018), or being left behind in degraded environments (Heslin et al., 2019); and reductions in human security due to competition and conflict over increasingly limited resources (Human Rights Watch, 2015).

Each of these crises has the potential to negatively impact the mental health and wellbeing of the communities surviving in it (Patel et al., 2018), with these social determinants often clustering together to particularly affect those with multiple vulnerabilities (i.e. working in a syndemic way). For example, the poorest 20% of

people in Nigeria are 50% more likely to be impacted by a flood and 130% more likely to be affected by drought (Hallegatte and Rozenberg, 2017). Moreover, those same people who are more likely to be in poor housing in areas with increased risk of flooding or landslides are also least likely to have financial resources to protect themselves in future, for example, to move or to rebuild in a way that will reduce the risk of catastrophic effects of future events, and therefore have fewer means of building resilience. Even within such communities, specific groups such as people with disabilities (Keogh and Acuna Gonzales, 2021), older people or women (Eastin, 2018) are likely to be particularly impacted.

Address for correspondence: Julian Eaton, CBM Global Disability Inclusion, Dr. Werner-Freyberg-Straße 7, 69514 Laudenbach, Germany.
E-mail: julian.eaton@cbm-global.org

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While climate change is largely driven by the high-resource use of the wealthiest countries, it is having its effect disproportionately in low-income countries – notably low-lying islands and environments that are particularly affected by weather events such as El Niño, tropical storms and cyclones, as well as changes to fragile environments that are prone to climate-related effects, such as desertification. It is likely that communities in low-income countries will continue to be most affected by climate change given higher risk and vulnerability (Abeygunawardena et al., 2003). Adaptation funds to enable local adaptation acknowledge the injustice of this state of affairs (Persson and Remling, 2014), but unfortunately, even funds promised to start to address this to date have not yet been forthcoming.

The volume of research on mental health and climate change is increasing (Cianconi et al., 2020), but to date, there has been little research carried out on specific interventions for either protecting populations from the worst mental health impacts of climate change (Inter-Agency Standing Committee (IASC), 2021a), or designed to respond effectively with mental health and psychosocial support (MHPSS) measures following climate-related events (Charlson et al., 2021). A prioritisation exercise carried out to inform a research agenda for MHPSS and climate change identified one priority which is aligned to this report: “Assess the appropriateness, feasibility, effectiveness, and scalability of mental health and psychosocial interventions (clinical and nonclinical) in the context of climate change.” In this report, we review a range of MHPSS interventions that were put in place as a response to climate-related risks or emergencies. We recognise that many of the impacts of climate change on mental health and wellbeing are likely to operate through similar mechanisms as other emergencies (Berry et al., 2010). We seek to draw common lessons from across this diverse range of interventions to inform the development and implementation of future interventions.

Methods

We drew upon the range of programmes being supported by an international nongovernmental organisation (CBM) to access information about their MHPSS programmes responding to climate-related emergencies. Many of these have been documented in a report prepared for the UNFCCC COP26 event in Glasgow (CBM Global Disability and Inclusion, 2021). We contacted 10 Country Offices of the organisation to ask whether they were supporting partners running interventions that may be responding to MHPSS in relation to climate change. We used a broad definition of these emergencies, and of the link between climate change and emergencies (based on the list of potential impacts in the introduction above), taking the view that relevant lessons could be applied from a range of emergencies, and that a direct link between the cause of the emergency and climate change was not necessary for the MHPSS response to provide opportunity for learning.

Once examples were received from countries, we worked with the Country Office teams and local implementing partners to draft the case studies in a similar frame, allowing some comparison, and edited for readability and

length. Of interest to us, in this frame was to document the context and the impacts of climate-related events or gradual change, the programme/intervention delivered in response, and the key lessons that we were able to learn from the experience.

Results

We received positive responses describing six programmes, all focused on communities living in low-resource settings; in Bangladesh, Burkina Faso, Madagascar, Nigeria, Sierra Leone and Zimbabwe. Of potential responses from programme countries, none was received from Indonesia, Philippines, Laos or Nepal, but in fact, all of these countries are prone to severe climate-related emergencies, demonstrating the ubiquity of this issue in international development. While all the examples related to MHPSS preparedness or responses, the degree to which the crisis itself could be attributed to climate change is a matter of judgement. For example, in the case of Madagascar, the United Nations has explicitly stated the famine is a result of climate change, but in most other cases, these links are complex and not usually directly attributable, even though climate change is certainly a contributory factor.

Many cases also highlighted inclusive approaches to climate change mitigation and resilience-building, as CBM Global has a focus on disability rights and inclusion. The specific acute or long-term crises that led to the need for MHPSS responses included severe weather events such as cyclones and their effects (floods and landslides), draught and desertification, conflict and migration and threats to food security.

In this report, we present each as a case study, after which we will review common lessons that can be drawn from the experience in each country.

Nigeria: Forced Migration and Insurgency

Climate change is causing huge changes in the landscape of sub-Saharan Africa, which also affect the political and economic environment. For example, the Sahara desert is fast expanding and encroaching into arable land in the countries that make up the Chad basin – Nigeria, Cameroon, Chad Republic and Niger Republic. Indigenous people of this region are mainly migrant herders, farmers and fishermen. As the Lake Chad basin shrinks, there is increasing pressure on land and water resources, causing intercommunal conflict as herders and their cattle have started to migrate towards southern Nigeria in greater numbers in search for pasture and water. This leads to outbreaks of conflict with settled farmers. These are also the areas most affected by the Boko Haram insurgency, which is itself in part provoked by a long-term reduction in economic opportunities for young people, made worse by the effect of climate change on farming and the linked economy. The result of these conflicts is huge internally displaced person (IDP) camps in Nigeria, estimated to number over 2.6 million people in 2020 (UNHCR, 2021), as well as migrant communities in nearby countries.

These issues of violence, conflict and forced migration have led to distress and mental health problems, including precipitation of conditions such as acute stress, depression, posttraumatic stress disorder, harmful use of alcohol and drugs and suicide (Sheikh et al., 2015). Some people receiving treatment for existing mental health conditions such as psychoses may flee their homes without prospects of continuing their treatment. Destruction of healthcare delivery services in these locations compound the problem.

The Programme

CBM Nigeria has worked since 2019 with the Methodist Church Nigeria in three Nigerian North-eastern states (Borno, Adamawa and Yobe) and Gede Foundation in three North Central states (Plateau, Benue and Nasarawa) to facilitate MHPSS in a wider transitional aid programme. The aim of the projects is to help communities returning to their homes to settle quickly by rebuilding destroyed infrastructure. Work at community level builds understanding of mental health, to reduce stigma and to facilitate participation of people with psychosocial disabilities in community life. In addition, the project facilitates integration of mental healthcare into primary and secondary care services, which are being redeveloped after many years of insurgency.

Main mental health activities include:

1. Rebuilding and re-equipping of destroyed health centres.
2. Training, retraining and support of healthcare workers to be able to integrate mental healthcare into the services in the health centres.
3. Training and support of family members, Village Health Workers, Junior Community Health Extension Workers and community volunteers to support persons with mental health problems in the community.
4. Provision of essential medicines and establishment of Drug Revolving Funds.
5. Provision of water, sanitation and hygiene in the community.
6. Support of livelihood opportunities in communities.
7. Ensuring inclusion of persons with disability in the community, for example, being members of the Water Committee and training to maintain the water pumps.
8. Raising awareness on the availability of mental health services.

Severe gaps in basic mental healthcare were identified in planning this intervention, even compared to other areas of health. Without determined advocacy and committed implementation, mental health is often neglected in broader health system strengthening, yet is an essential need in protracted and postconflict settings.

Zimbabwe: MHPSS Response to Cyclone Idai

Zimbabwe was hit by Cyclone Idai in March 2019. The tropical storm caused riverine and flash flooding in the eastern and southern parts of Zimbabwe, resulting in loss of life, injury, destruction of livelihoods, houses, roads, bridges and other public infrastructure. The government reported a total of 344 deaths, and an estimated 270,000

people were affected. The cyclone had a devastating impact on infrastructure, which was linked to the psychological, emotional and social wellbeing of the survivors.

The Programme

In 2019, CBM Zimbabwe, Regional PsychoSocial Support Initiative (REPSSI) and the Ministry of Health and Child Care established a project with the goal of building the capacity of nurses and key community stakeholders on MHPSS to support the wellbeing of individuals and communities affected by Cyclone Idai and coronavirus disease 2019 (COVID-19).

The project sought to address issues of stigma and discrimination in relation to both mental health and disability to increase awareness of mental health issues and to improve capacity for delivery of mental health services. The MHPSS Emergency Response to Cyclone Idai project specifically:

1. used the IASC intervention pyramid model (IASC, 2007); focusing on improving service delivery of mental healthcare and improving access to services through community awareness and training in MHPSS,
2. targeted primary healthcare workers with training based on the mhGAP-Humanitarian Intervention Guide and trained 253 community health workers and professionals,
3. built capacity of community influencers and leaders in MHPSS in Chipinge and Chimanimani districts, to improve MHPSS in their communities and
4. engaged communities to ensure strengthening of existing community and family support structures.

The programme identified substantial negative psychological impacts, particularly on young people with whom the partner, REPSSI, mainly works. The combination of strengthening health systems, building of informal networks of support and addressing community attitudes and exclusion (multiple levels of the IASC MHPSS pyramid) was found to be particularly important, and each complemented each other.

Madagascar: Emergency Response to the Humanitarian Crisis in the Great South Regions

The southern regions of Madagascar are subject to recurrent drought, disturbing agricultural production for the past 10 years. The erratic rains and the shortening of the rainy season have led to the decrease or even the absence of food production and to crop losses of up to 60%. Since 2020, the drought, the most severe since 1981, has affected more than 1.14 million people, including 300,000 children and 700,000 women. Among them, 300,000 people have experienced severe food insecurity, according to Integrated Food Security Phase Classification. The United Nations identified climate change is responsible for the drought and hunger (“kere” in Malagasy) in the Great South of Madagascar, which is unusual in the lack of clear complexities caused by political insecurity, mismanagement or conflict (United Nations, 2021).

There is population wide distress as a result of loss of income and security. Communities can no longer plan into

the future and are dependent on aid from the government and humanitarian actors. Persons with disabilities are among those most severely affected. They have limited access to aid because of discrimination in the distribution process, and challenges with transportation of donated food if appropriate assistance is not provided. Criteria such as age and having a national identity card also constitute a barrier to people with disabilities who are often hidden by their families and their births not registered. Moreover, there has been increased insecurity, theft and violence reported.

The Programme

Since May 2021, CBM has been implementing the project “Emergency Response to the Humanitarian Crisis in the Great South of Madagascar.” A total of 1100 households with persons with disabilities have been targeted and the aim is to increase their resiliency to climate change. The response features:

1. Community awareness sessions on inclusive cash assistance and the rights of persons with disabilities including those with psychosocial disabilities. Targeting of households of persons with disabilities who will benefit from cash distribution.
2. Distribution of cash (the amount being agreed at the cash working group cluster). Distribution sites are in accessible areas and the number of distribution points is increased to avoid long lines and facilitate access for persons with disabilities.
3. Post-distribution Monitoring Survey conducted after the first and the last transfer to assess the safety, accessibility and use of the cash transfer.
4. Capacity building of organisations of persons with disabilities on advocacy for an inclusive humanitarian response towards the government and other humanitarian actors.
5. The distribution of information materials that focus on mental health and wellbeing awareness during times of crisis.

Persons with disabilities are represented and consulted during all phases of the project, from the analysis phase, identification and targeting, to distribution and postcontrol distribution.

The project enables vulnerable households to meet their basic needs through cash transfers, but also aims to reduce the negative effects of climate change on mental health and wellbeing. Persons with disabilities are supported to redevelop their livelihoods and build resilience.

Burkina Faso: Food Security and the Mental Health of Vulnerable Populations

Since 2015, the fragile security situation in northern Mali has forced thousands of people to move to neighbouring countries, including Burkina Faso. More than a million people have been forced to flee their homes, putting pressure on the local natural resources through overgrazing, the excessive cutting of wood and overuse of water resources. In terms of health, 294 health facilities remain closed or have reduced operations, depriving more than 1.2 million people of access to adequate healthcare.

More than 3,000 schools are closed, depriving more than 350,000 children of education.

The Haut-Bassins region has almost 20,000 IDPs, 53% of whom are women with children. This degradation of resources leads to conflict, impacting livelihoods, including a decline in agricultural production, which plunges vulnerable households into food and nutrition insecurity. This pressure on natural resources has increased the impact of climate change already existing and has been more profound on poor households and people with disabilities.

The attacks by armed groups, the flight of populations leaving fields and granaries, combined with climate change and the impact of COVID-19 contribute to distress and poor mental health. Field accounts describe loss of goods, food insecurity, fear and anxiety due to violence and insecurity, and limited ability to take care of families, trigger or worsen the psychological impact on those affected.

The Programme

The integrated production diversification and nutritional improvement programme in the Haut-Bassins region (PADI), led by Action Contre la Faim, and supported by CBM in relation to MHPSS and inclusion elements, started in January 2018. It addressed food and nutritional security in the project area, particularly that of vulnerable households and people with disabilities. It sensitises all stakeholders to sustainable management of natural resources in the context of the effects of climate change. The aim is to promote good practices in adaptation to climate change.

1. Improving knowledge and practices of municipalities in terms of climate risks and integrated management of natural resources, including agricultural production.
2. Supporting income-generating activities of vulnerable households.
3. Strengthening MHPSS, including self-help groups.
4. Sensitisation of local populations and traditional, religious and political leaders of displaced populations on stress factors, risks related to drug addiction and gender-based violence.
5. Training of health and community workers on the management of conditions linked to stress aimed at ensuring comprehensive care in nonspecialised health centres using mhGAP.
6. Training of health workers and traditional healers on the rights of people living with a psychosocial and intellectual disability according to the principles of Quality Rights.

The loss of food production increases the cases of malnutrition and stunted growth, especially among children under 5 years old. This demonstrates the link between malnutrition and the onset of mental health problems. Climate change is a driver for insecurity, violence and migration, with loss of means of production drives undernourishment, stress and psychological impacts.

Bangladesh: Disability-Inclusive Disaster Risk Reduction

The geography of Bangladesh makes it prone to frequent natural hazards including floods, cyclones and earthquakes,

particularly in the Gaibandha district, North of the country (Hossain et al., 2020). These phenomena are becoming more frequent, triggering widespread loss of life and damage to assets and livelihoods. Each year floods can submerge between 30% and 70% of the country's land, and unfortunately, due to the general lack of preparedness, despite the frequency of these events, the impacts are often large. For persons with disabilities in particular, the costs of failing to prepare for disasters can be severe. Shakil Mahmud et al. (2014) found that among 50 people living with disabilities in the Gaibandha district, 60% claimed that there was no advance warning system in their community, and 24% stated that they had experienced psychological effects as a result of floods and cyclones.

The Programme

The Gaibandha Model for Disability-Inclusive Disaster Risk Reduction (DRR) was developed in 2018 based on an in-depth study of good practices in a longstanding comprehensive DRR Programme implemented by CBM and two local partners; the Centre for Disability in Development and Gaya Unnayan Kendra (CBM, 2018).

The model includes five interlinked interventions, all of which are needed to build resilient and inclusive communities:

1. Strengthening representative groups of people with disabilities.
2. Advocating to local government for inclusive disaster risk management (DRM).
3. Building accessible DRM infrastructure and capacity for inclusive DRM at community level.
4. Strengthening household disaster risk awareness and preparedness in schools.
5. Promoting and supporting sustainable, resilient livelihoods.

All interventions were implemented across the *household level* (persons with disabilities were identified and supported individually with rehabilitation measures and livelihood support), the *community level* (self-help groups and community-based Ward Disaster Management Committees established) and the *municipal level* (Disabled Persons Organisations, consisting of representatives from the self-help groups).

This comprehensive, tertiary approach not only supports the livelihoods of persons with disabilities in the direct sense, but also contributes to positive mental wellbeing in the long-term.

Sierra Leone: System Strengthening and Preparedness

The past three decades in Sierra Leone have observed a series of major emergencies which have resulted in substantial challenges to long-term development, and the country remains one of the poorest in the world. Sierra Leone was overrun by a brutal civil war between 1991 and 2002, and subsequently the Ebola virus disease epidemic of 2014–2015, which again frustrated efforts at economic recovery, despite substantial natural resources and positive economic reforms. In 2017, mudslides that followed

excessive rainfall killed over 1100 people living in poorly built housing on the hills around Freetown, displacing many more.

The Programme

Prior to 2010, mental health services in Sierra Leone consisted of a single psychiatric hospital in Freetown (WHO, 2012) located near the coast and inaccessible to most of the population.

Subsequently, the Sierra Leone Ministry of Health and Sanitation, and other partners established a coalition (Mental Health Coalition – Sierra Leone) through the CBM-supported “Enabling Access to Mental Health in Sierra Leone” initiative (Mohammed et al., 2015), which worked to strengthen governance and greater prioritisation of mental health in the country; developing a mental health policy, liaising with a Steering Committee at the Ministry of Health and Sanitation, and building a network of experienced and effective advocates. Between 2010 and 2014, 21 psychiatric nurses were trained, mental health skills were provided to over 400 other clinicians, and Mental Health Units (MHUs) were integrated into primary care services in the then 14 districts across the country.

The presence of these clinicians and the Primary Care MHUs, when the Ebola outbreak, and the mudslides, occurred, meant that they could be utilised to support wider MHPSS efforts across the country.

1. They proved to be an essential complement to the training of frontline workers in Psychological First Aid (PFA; WHO/CBM/WV/UNICEF, 2015) carried out by most responding organisations. Without this, the full range of recommended interventions in a balanced approach to MHPSS, as recommended in the IASC Guidelines on MHPSS in Emergency Settings (IASC, 2007) would not have been available.
2. The psychiatric nurses played an essential role, not only seeing the many patients referred by people providing PFA, but also supporting Ebola Treatment Centres and survivors' clinics, services for children orphaned by the epidemic, and supporting health and other staff who themselves experience high levels of distress.
3. Following the devastating landslides, the psychiatric nurses provided support directly to the survivors and victims' families at the scene, in addition to responding to later referrals from other agencies involved in the response.
4. In both cases, local organisations of people with disabilities worked to ensure that key public health messages were made available in accessible formats, that barriers to accessing response services were addressed and that people with disabilities participated in planning and coordination, so that their needs and priorities were heard.

These services were an essential element of the provision of care, which was only possible because they were set up *in advance*, demonstrating the importance of investment in strengthening (decentralised) mental health services, if an efficient and effective response is to be possible.

In a recent publication of case studies for MHPSS and DRR (Gray et al., 2021), the Mental Health Coalition – Sierra Leone, shared their experience in strengthening health and social systems, and argue that investment in basic health and social systems is essential, and represents very good value, in ensuring availability of support when emergencies happen.

Discussion

These programme examples were all aligned to the IASC MHPSS pyramid (IASC, 2007), which is largely due to a policy of using such evidence-based global normative guidance, but also reflects the fact that such approaches suit the needs of climate preparedness and response well. A common theme was that the implementation examples were integrated into wider programmes, often responding to specific gaps identified following local situation analysis. For example, in Nigeria, the focus was on rebuilding primary-care systems that included mental health services (to complement widespread PFA training), whereas in Burkina Faso, the focus was on aligning psychosocial support to a broad nutrition programme, and in Madagascar, the focus is on basic needs and security.

While we found that the existing MHPSS responses recommended and practiced were a useful framework and addressed many needs well, there are some issues specific to climate change that the sector will need to develop more specific responses to. First, climate-related changes are inevitable, and far more can be done to prepare for them – both the occasional crises, and the slow-burn of increased temperature, rising sea levels, and associated ecological impacts. DRR must therefore become a greater focus for the MHPSS community. Historically, it has always been far harder to mobilise resources for preparedness, but it is possible that this will change in the context of recognition of the need for resources to support adaptation. Second, while climate change is now happening, its scale remains open and depends largely on political decisions. The MHPSS and linked humanitarian and development communities can be an important voice in promoting more substantial mitigation and carbon reduction efforts to reduce the ultimate need for MHPSS responses.

The common focus on disability inclusive approaches was also a function of partnership with CBM but demonstrates the effectiveness and feasibility of these approaches being combined, as recommended in the new IASC Technical Note on MHPSS and Disability Inclusion (IASC, 2021b) and linked Action Sheet and Checklist.

Across these programmes, the authors identified common themes which might inform planners and implementers in future climate-linked preparedness and response activities.

1. Any intervention needs to address the core basic needs that have been disrupted (e.g. nutrition, shelter, livelihoods, education and health infrastructure). Reducing sources of stress as far and as quickly as possible is a priority. A rights-based approach to equitable access to basic needs facilitates such work.

2. MHPSS components are essential to a comprehensive response. This includes building resilience, support for distress, initial provision of basic psychological support as well as access to more specialist services. This is well described in the IASC Guidelines on MHPSS in Emergency Settings, and there is increasing evidence for efficacy of interventions at every level.
3. Working to prepare systems in advance is essential and a good investment, as support mechanisms (like trained nurses) are far harder to develop after an emergency occurs. Mental health systems are generally very weak in low-income settings and humanitarian emergencies offer an opportunity to Build Back Better in advance of future emergencies (WHO, 2013).
4. Participation of people affected is the only way to ensure an appropriate and effective response. This is particularly true of marginalised groups such as people with disabilities, whose views may not be well represented unless specifically sought.

There are some clear limitations to these case studies, with the information available being heterogenous, lacking detail and subject to recall biases. They were not designed as research projects in advance, and therefore lack the rigour of formal qualitative and quantitative research methods, which would be designed to address more specific research questions, would be more independent of implementers and seek to reduce systematic bias.

Conclusion

The impact of the climate emergency has become ever more evident, and is affecting large populations in many parts of the world, including many countries already affected by other emergencies. In responding to existing emergencies, these programmes demonstrate how by building resilience, engaging with communities for provision of basic needs and psychosocial support, reinforcing equal access to local mitigation measures and strengthening mental health systems, the distress associated with climate change can be addressed. If the fields of MHPSS and global mental health are to better respond appropriately to the climate crisis, more research will be needed to examine, using more rigorous methods, the most effective means of building resilience and providing response to the needs of populations affected. While this report fits into the broader range of research needed, this is formative in nature, and our conclusions will need to be further elaborated following more detailed examination.

Protecting communities facing the brunt of climate change and it will only be through addressing the driving factors of climate change – unsustainable release of carbon and environmental destruction – that we can move towards a world where all are protected. In bringing about these fundamental changes and addressing injustice, greater participation of people from the global South, including people most vulnerable to the impacts of climate change, is essential.

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Conflicts of interest

The authors are all involved in some way with CBM, which supports the programmes being documented in this paper.

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