CYCLONE IDAI IN ZIMBABWE

An analysis of policy implications for post-disaster institutional development to strengthen disaster risk management

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Commissioned by Oxfam in Zimbabwe

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Cyclone Idai struck Zimbabwe in March 2019, affecting 270,000 people. The storm and subsequent flooding and landslides left 340 people dead and many others missing. Agriculture, schools and infrastructure all suffered heavy impacts; many people lost their homes. Chimanimani and Chipinge Districts were hardest hit.

This policy brief provides an analysis of the impacts and review of the disaster response to draw lessons and policy implications for post-disaster institutional development. Increased climate change-induced hazards will worsen national vulnerability. Key policies and agencies need urgent improvement to frame more proactive disaster risk management (DRM). Stronger social protection systems, enhanced DRM funding, finalizing policy and devolved implementation structures, as well as better settlement systems regulation, are critical for Zimbabwe's ability to deal effectively with future climate-induced risks.

This study was commissioned by Oxfam in Zimbabwe and conducted by Kudzai Chatiza (PhD), Development Governance Institute. Strategic and technical oversight was provided by Oxfam in Zimbabwe's Jabusile Shumba (PhD), Head of Programmes and Influencing, and Lynn Chiripamberi, Humanitarian Preparedness Programme Manager. Valuable contributions were provided at different stages of the study by the following members of the Oxfam in Zimbabwe team: Leonard Unganai (PhD), Sustainable Food Systems Programme Manager; Regis Mututu, Global Social Norms Advisor; Netsai Shambira, Southern Africa Regional Gender Justice and Women's Rights Coordinator; and Arnold Chamunogwa (PhD), Southern Africa Regional Policy and Influencing Manager. The report was edited by Jane Garton. Helen Bunting, Oxfam Great Britain (OGB) editorial project manager, coordinated the editing and design.

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Front cover photo: A boy looks at a section of road that was washed away in the flooding caused by Cyclone Idai, near Chimanimani, Zimbabwe, pictured on 29 March 2019. The town of Chimanimani, where many people lost their lives in the landslides, was largely cut off, with roads and bridges destroyed. Credit: Philip Hatcher-Moore/Oxfam.

Back cover photo: Aaron, 41 (left), and some friends dig out the mud from in front of his damaged home, in Chimanimani, Zimbabwe. Heavy rains caused a landslide which tore through this neighbourhood. Aaron's home was on the edge of the landslide. 'I think I can recover one or two things that can help me to build another house', he says. But before that, he needs a place to rebuild, because here, in the path of the landslide, he says 'I'm no longer safe'. Credit: Philip Hatcher-Moore/Oxfam.

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ACRONYMS

AGRITEX	Agricultural Technical Extension Department
ARDA	Agriculture and Rural Development Authority
CADRI	Capacity for Disaster Reduction Initiative
CEO	Chief executive officer
CPU	Civil Protection Unit
DA/DDC	District Administrator, now District Development Coordinator
DDF	District Development Fund
DCP	Department of Civil Protection
DRM	Disaster risk management
DRR	Disaster risk reduction
EMA	Environmental Management Authority
EPI	Expanded Programme of Immunization
GFDRR	Global Fund for Disaster Risk Reduction
ha	Hectare
HIV and AIDS	Human Immunovirus/Acquired Immune Deficiency Syndrome
ICT	Information and communication technology
IDP	Internally displaced person
IEOC	Integrated Emergency Operations Centre
MSD	Meteorological Services Department
PA/PDC	Provincial Administrator, now Provincial Development Coordinator
RDC	Rural District Council
RINA	Rapid impact needs assessment
RTGS$	Real-Time Gross Settlement Dollar (Zimbabwean currency)
SADC	Southern Africa Development Community
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNOCHA	United Nations Office of the Coordinator for Humanitarian Affairs
WASH	Water, sanitation and hygiene
WFP	World Food Programme
WHO	World Health Organization

EXECUTIVE SUMMARY

Cyclone Idai hit Zimbabwe during the weekend of 15–17 March 2019, bringing heavy rains and strong winds that triggered flooding and landslides. It resulted in loss of life, damage to homes, fields, schools and roads, and disruption to livelihoods. Areas in Chimanimani and Chipinge Districts were hit hardest. Seven other districts in Manicaland, Masvingo and Mashonaland East Provinces were also affected.

A review of the experiences of and response to the cyclone shows that many institutions play a role in Zimbabwe's disaster risk management (DRM) system. However, the agencies lack adequate technical, financial and logistical capacities. Response approaches in use are more reactive than proactive. Agencies do not always work in an integrated manner, and DRM is not yet fully mainstreamed across sectors. Zimbabwe faces increasing disasters associated with climate change. National vulnerability is likely to worsen, given the important role that land, agriculture and related resources play in people's livelihoods. Profiles of common risks, assessments and plans exist in a fragmented manner because of limited resources and low institutional coherence.

Cyclone Idai affected 270,000 people in Zimbabwe: 51,000 were displaced, more than 340 died and many others went missing. Scores of children were orphaned, while female survivors faced gender-based violence. Roads and bridges in Chimanimani and Chipinge were severely damaged; some 1,500km of the road network was rendered unusable for months, affecting market access. Livelihoods were disrupted and 140 schools were affected. Housing, health, irrigation and other agriculture facilities were damaged, as were forests and protected areas. Arable land was rendered unusable and at least 348 cattle, 17,000 chickens, and 222 goats and sheep were lost, alongside losses of stored cereals.

Some aspects of the response were innovative and demonstrated good practice. Councils, local people and companies were the first responders. In the first week following the disaster, Chimanimani Rural District Council (RDC) fed those who had been displaced. The following were also in evidence, and can be built on and institutionalized for future responses: i) public empathy and mobilization, ii) proactive immunizations against cholera and measles, iii) direct private sector emergency responses, iv) national budget reassignments, v) government transparency and communication on responses and funding, vi) mainstreaming of psychosocial support, social and child protection, and vii) numerous service innovations.

However, Zimbabwe's DRM institutions were stretched by the emergency, exposing capacity and policy gaps in coordination of civil and social protection, humanitarian assistance, development planning and management, and settlement and land policies. Local and national government in affected areas were generally unprepared and not visible at the onset of the disaster. Their role and capacity in efforts to 'build-back better' remain unclear and under-developed. Spatial planning, settlement development, enforcement of regulations and access to geospatial information needed attention during the response period and continue to be a concern. Delays in finalizing DRM institutional reforms are also concerning.

Key lessons from the disaster include the following:

1. State capacity at all levels is critical to anticipating and managing disaster risks, leading disaster responses, and overseeing recovery and development.
2. Key agencies of the state tasked with disaster risk management need adequate capacity and resources, including for research and core equipment to gather the knowledge necessary to understand and prepare for the disasters to which Zimbabwe is prone.
3. Participatory hazard profiling helps build local preparedness and capacity, and anchors sustainable (hazard-resilient) development.
4. Zimbabweans across social, economic and political contexts have shown that they can unite in responding to disasters.
5. A dedicated fund for disaster responses is only useful if it is viable, ring-fenced and transparently run.
6. Building the local capacity necessary to ensure ongoing psychosocial and material support is critical for dealing with the long-term effects that disasters have on specific social groups.
7. Disaster risk reduction (DRR) requires the transformation of settlements and ensuring compliance with appropriate building codes that local people are familiarized with and/or receive practical training on.
8. The technical staff of local agencies that respond to disasters require psychosocial support during and after the response.
9. Relocation of people who have been displaced by disasters or who live in risk-prone areas is an important and growing response in Zimbabwe.

The paper's top-level recommendations to the Government of Zimbabwe and its key DRR stakeholders relate to the need for:

1. **Clear funding for disaster risk assessments and analyses;**
2. **Finalizing the DRM policy, legislation and organizational structures;**
3. **Setting up a decentralized 'Corps' of trained DRM volunteers;**
4. **Investing in adaptive and resilience-building measures to protect women and other vulnerable groups;**
5. **Strengthening rural and urban settlement and infrastructure regulatory regimes;**
6. **Setting up social and child protection systems that are sensitive to disaster situations.**

1 INTRODUCTION

Zimbabwe experienced Cyclone Idai, an extreme weather event, during the weekend of 15–17 March 2019. The cyclone was the strongest recorded in the Southern Hemisphere. It developed as a tropical disturbance in the Indian Ocean on 3 March and became a tropical depression by 11 March, characterized by stormy weather between Madagascar and the east coast of mainland Africa. Cyclone Idai made landfall on 15 March near Beira City, Mozambique, as a Category 2 storm with maximum wind speeds of 222km per hour and storm surges of 2.3 metres.[1] It reached Zimbabwe on Friday night[2] and heavy rains continued through to 20 March, hampering early responses.[3] Flooding and landslides caused damage to homes, fields, schools and roads and disrupted livelihoods, particularly in Chimanimani and Chipinge Districts. Seven other districts in Manicaland, Masvingo and Mashonaland East Provinces were also affected but did not suffer to the same extent in terms of infrastructure damage, loss of human life and livelihood disruptions. Cyclone Idai affected 270,000 people in Zimbabwe: 51,000 were displaced, more than 340 died and many others went missing.[4] Against this background, Oxfam in Zimbabwe commissioned a study to document the impacts, and distil lessons and policy implications for post-disaster institutional development focusing on strengthening disaster risk management (DRM).

Notably, Cyclone Idai was not Zimbabwe's first disaster. It followed in the wake of other man-made and natural disasters including droughts, floods, road traffic accidents, disease outbreaks,[5] mining and other industrial accidents, forest fires and stadia stampedes. Lives, livelihoods, infrastructure and overall economic development have been lost in previous disasters. Responses have varied from effective to seriously inadequate, depending on the state of preparedness from local to national level. Because disaster risk factors remain and need to be understood and managed, the building of resilience in Zimbabwe has become very important. This requires evidence-based reduction of risks and building the capacity of potential victims of disaster and their institutions. Institutional and infrastructural changes to better manage and respond to disaster risks are key. This is because appropriate and timely actions during and immediately after a disaster help with early recovery. They also anchor sustainable development actions. Responses and associated processes also need to be changed and challenged as part of efforts to change structures that perpetuate economic, gender and other inequalities.

METHODOLOGY AND CONCEPTUAL PARAMETERS

Figure 1: DRM concepts/cycle

The Disaster Risk Management (DRM) cycle (Figure 1) shows how responses are needed at different levels for mutual reinforcement of efforts towards post-disaster recovery and development. This is the framework used for this paper. It guided secondary and primary data collection as well as the analysis, from May to July 2019. This was followed by a stakeholder validation workshop on World Humanitarian Day, 19 August 2019, in Harare, which was attended by 32 participants from government, civil society and the media.

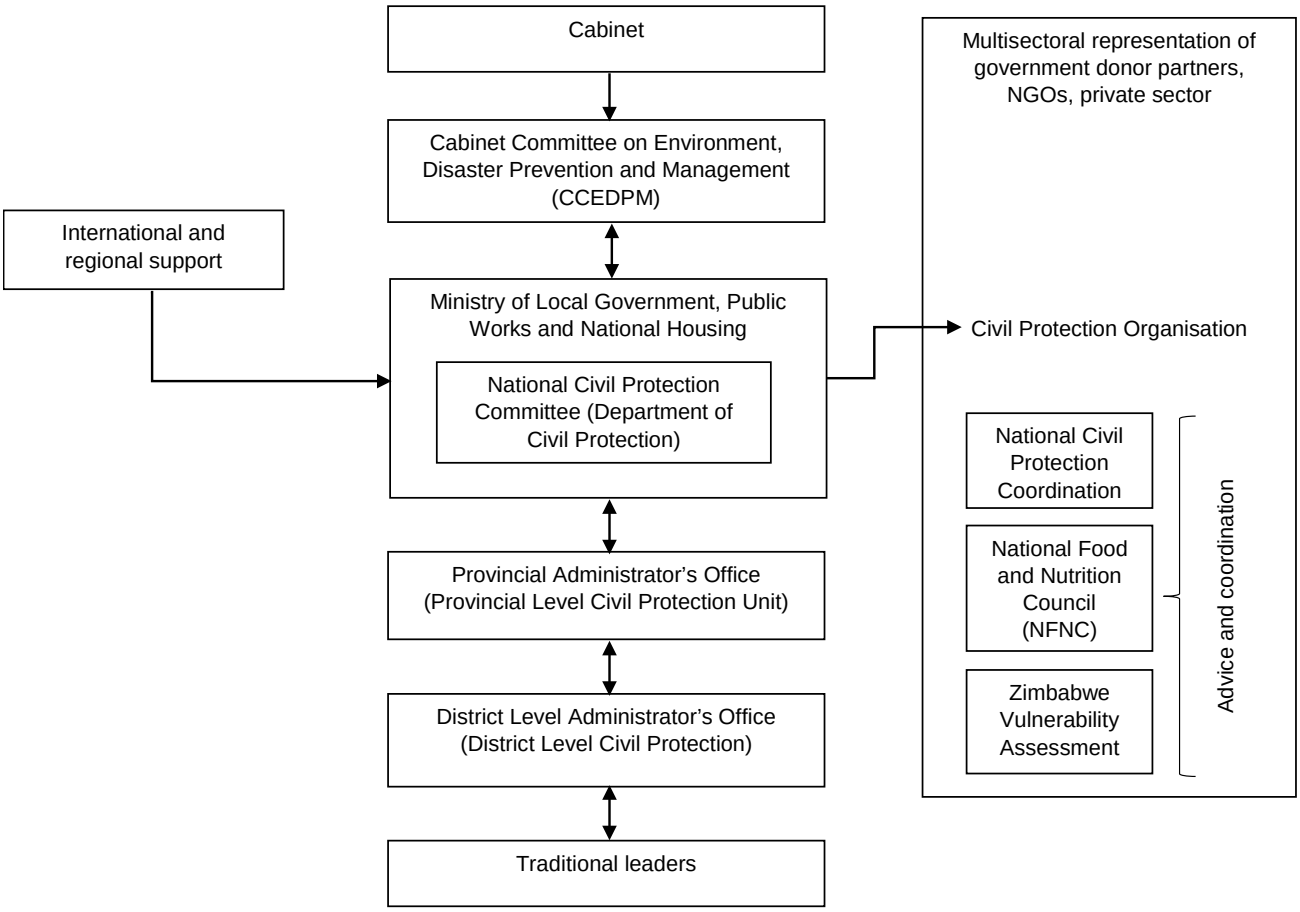
Risk reduction, preparedness, response and post-disaster recovery actions are part of a continuum of services necessary for sustainable socio-economic development. These help *individual, household, community, district, provincial and national* development. This does not necessarily happen in linear fashion, as disasters impact these levels differently – as is revealed in this paper in relation to Cyclone Idai. In the aftermath of the cyclone, recovery and development processes across all these levels are critical.

THE DRM SYSTEM IN ZIMBABWE AND VULNERABILITY CONTEXT

Many institutions play a role in Zimbabwe's multi-sectoral and inter-disciplinary DRM system. These are as shown in Figure 2 below. The agencies were closely involved in the Cyclone Idai response as a national compact and with international support from SADC[6] and beyond. The paper explores their performance in the response and highlights areas for improvement.

Figure 2: Zimbabwe's DRM institutional framework

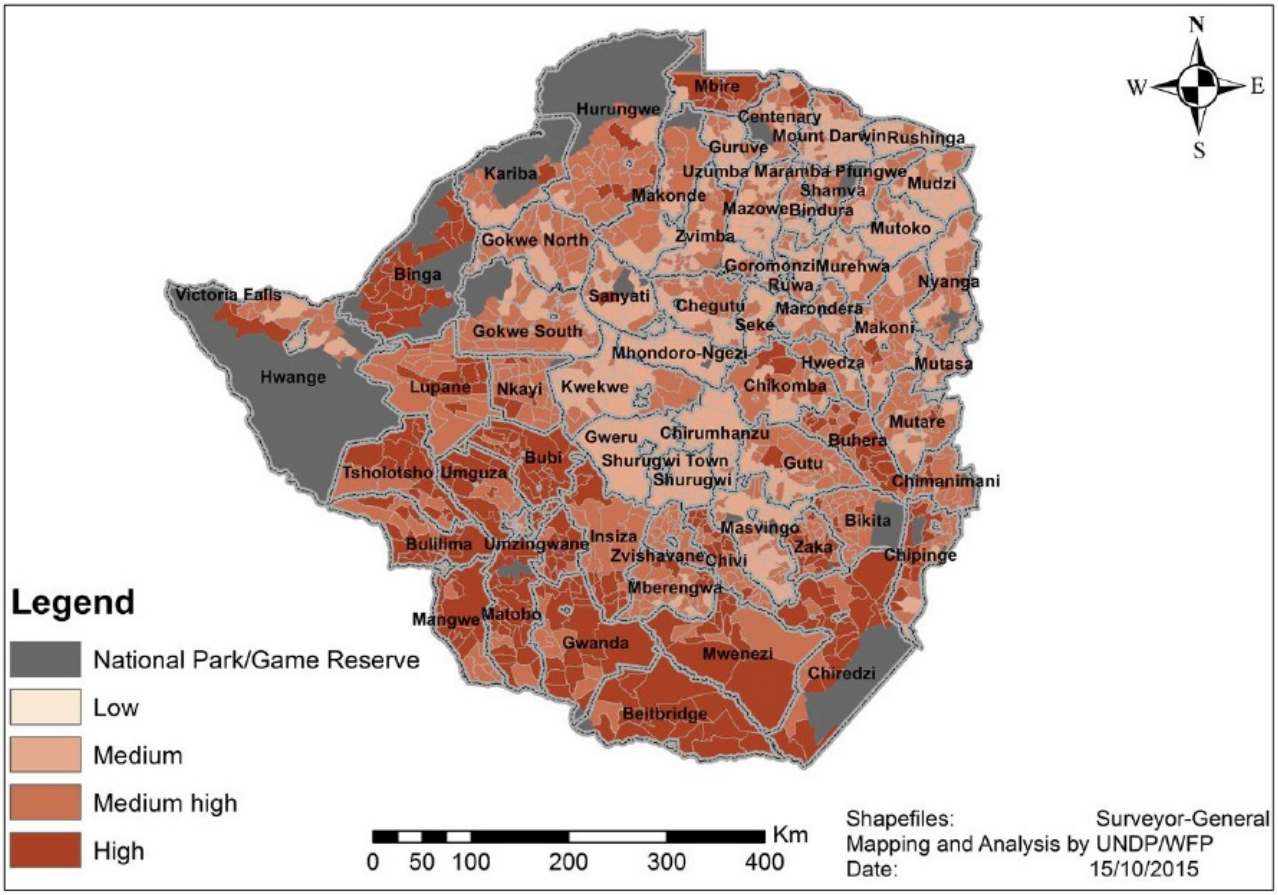
Management and coordination architecture of Zimbabwe's disaster preparedness and response systems



Source: Government of Zimbabwe (2019)[7]

These structures work within a context of national vulnerability to disaster risks associated with climate change, which is due to the country's dependence on rainfed agriculture and climate-sensitive resources.[8] Vulnerability is likely to increase, given the importance of land, agriculture and related resources to Zimbabwe's politics and economics. Policy and regulatory arrangements relevant to civil protection, especially institutional arrangements and capacities, are currently inadequate. Core civil protection legislation (the Civil Protection Act of 1989) was enacted before Zimbabwe became as disaster-prone as it is today in terms of type and frequency of disasters and where these occur in the country, i.e. areas that are vulnerable (see Figure 3). Nevertheless, the existing structures (Figure 2) do provide for multi-sector and interdisciplinary approaches, with a National Civil Protection Fund responsible for finance and a system for presidential declaration of disasters. The coordinating ministry (the Ministry of Local Government, Public Works and National Housing) can also commandeer resources to avert disasters.

Figure 3: Disaster risk vulnerability map of Zimbabwe

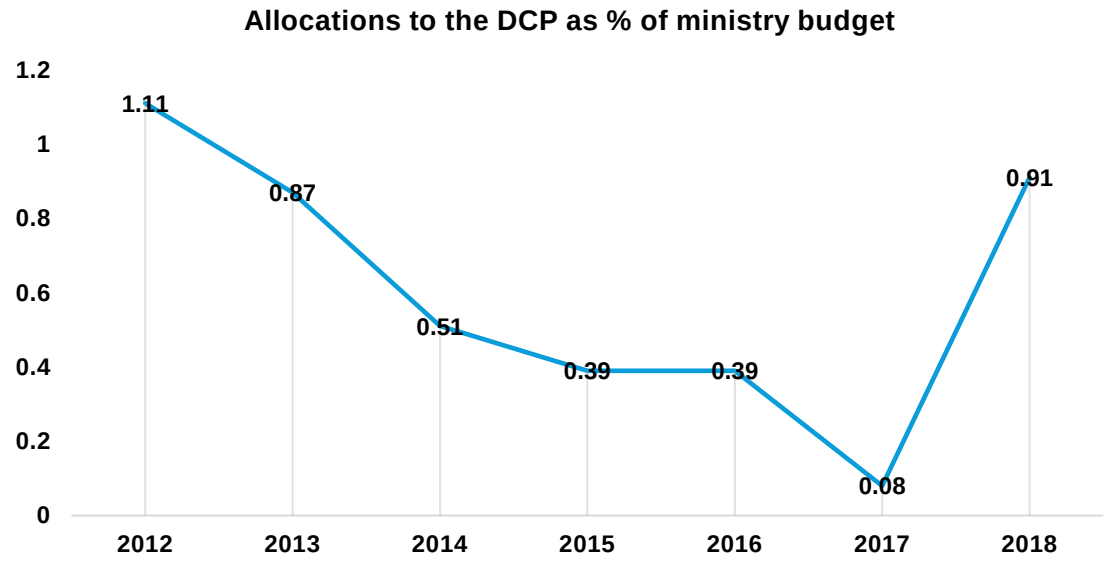


Source: UNDP (2016)[9]

Most of Zimbabwe is vulnerable to climate change induced hazards.[10] Despite this, the technical, financial and logistical capacities of key institutions fall short of meeting current needs and are more reactive than proactive. An appeal by the Portfolio Committee for better resource allocations to the Civil Protection Unit (CPU) and traditional leaders during the consultation cycle for the 2019 budget was not heeded.[11] This partly explains why the current DRM framework has largely remained with a disaster response focus. There is no standby roster of resourced responders. Key structures are male-dominated,[12] hence there is a risk of overlooking and failing to respond effectively to women and girls' specific needs and issues in disaster. Zimbabwe's CPU has a coordination focus. It lacks capacity to design and fund relevant analyses, and to plan and implement actual responses. The CPU is overstretched in terms of staff numbers, financial and capital resources[13] (see Figure 4 below), and is also not fully devolved.

DRM is not yet fully mainstreamed across sectors. As such, no holistic picture exists of common risks, disaster risk assessments, plans and programmes, making responses difficult. This is because of resource constraints and also low institutional coherence. Disaster risk assessments, early warning systems and planning in Zimbabwe remain inadequately resourced. Information and communication technologies (ICT) have not been fully embraced. Key institutions lack access to robust data about risks. This makes it difficult for the different agencies to fully inform policy makers, implementers and citizens about risks and the necessary mitigation measures. The government's appeal for humanitarian assistance in April 2019 observed 'the dire need for an effective national early warning system and knowledge-building'.[14]

Figure 4: Budget allocations to the Department for Civil Protection (DCP) 2012–2018



Source: Government of Zimbabwe 'Blue Books', 2012–2018[15]

The ministry responsible for local government made disaster management a key result area for Provincial and District Administrators (PAs and DAs[16]). Previously, these responsibilities lacked prominence. Unfortunately, resources remain inadequate not only for the offices of the PAs and DAs, but also for the Department for Civil Protection (DCP) (see Figure 3 above). The 2011 DRM Bill[17] proposed a Cabinet Committee, a Working Party (of Permanent Secretaries) and a National Platform of state DRM experts[18] with sub-committees at national level and similar structures at provincial and district levels. However, because the law has not been enacted, these structures are not yet in place.

Under the Bill, which was developed in conformance with the Hyogo Framework for Action,[19] local authorities were to have their own DRM structures. Non-council sub-national DRM structures would be coordinated by PAs and DAs. However, these proposals were prior to the enactment of the 2013 Constitution, which creates a devolved three-tier government system. They also predated the Sendai Framework for Disaster Risk Reduction (2015–2030),[20] whose key pillars are i) disaster risk understanding, ii) governance, iii) DRM investment and financing, and iv) preparedness for response and building back better. The 2013 Constitution is potentially contradicted by the proposed arrangements, which minimize local authority leadership of this key function, considering the importance of DRM in local governance. The Capacity for Disaster Reduction Initiative (CADRI)[21] assessment observed gaps in risk data consolidation and mapping, disparate capacity development, gaps in the capacity of the DCP, and a need to reform law as well as to close gaps in coordination,[22] information dissemination and enforcement of risk reduction regulations. Other areas that the assessment considered weak include the pre-positioning of emergency relief requirements, standby agreements for rapid deployment, and disparate (fragmented) capacities.

In Zimbabwe, the agencies relevant to a holistic and high-performing emergency management framework do not always work in an integrated manner. They are not effectively connected to their sub-national centres for effective data gathering, information dissemination and communication. These ineffective linkages constrain community-based disaster management, hazard profiling and development of disaster management plans, which are an important input for a national disaster map

and response plan. Participants of the validation workshop confirmed that there are coordination gaps which affect the early recovery phase. They also noted that survivors of Cyclone Idai were inadequately informed and supported.

Joshua, 45 (right), and family members search for one of his children who was swept away when their house was taken in the landslide caused after Cyclone Idai, in Chimanimani, Zimbabwe. ‘We were sleeping when we heard a large noise’, he said. They ran out of the house with the baby, but didn't manage to save their three other children, who were swept away. Two days later, they found two of their children, and had been looking for their third child ever since. ‘We weren't warned that it would come here, just that it was in Mozambique’, he said of Cyclone Idai.

2 IMPACT OF CYCLONE IDAI

It was within this institutional context that Cyclone Idai occurred. Westermann[23] points to difficulties that officials from TSURO (a Zimbabwean NGO) faced in even getting the issue of Cyclone Idai onto the local council agenda on 13 March 2019, highlighting response planning gaps. The gaps in the wider DRM system discussed above had a bearing on the extent of damages and losses caused by the cyclone. Its effects included loss of life and disruptions to the lives of communities, families and individuals, including children, damage to the natural environment, disruptions to formal and informal institutions[24] in the public, civil society and private sectors, and infrastructure damage (electricity, education, health, roads, ICT and homes). The worst-affected areas were mainly those populated by the most vulnerable social groups.[25]

Government of Zimbabwe records show that 20,002 households (61.5%) or 100,106 people (74.2% of the 2012 population) in Chimanimani and 18,330 households (28.3%) or 91,658 people (30.7% of 2012 population) in Chipinge were affected.[26] Overall, 270,000 people in Zimbabwe were affected by the cyclone, including 129,600 children.[27] Of those affected, 140,400 were women and girls, 67% of them aged 15–49.[28] Some 51,000 people were displaced by flooding[29] across 12 districts in Manicaland, Mashonaland East and Masvingo provinces. The affected people had '…existing acute levels of vulnerability [due to] repeated stresses since 2008 [that reduced] people's ability to cope with shocks'.[30]

Some 347[31] people died in the disaster, including at least 251 Chimanimani residents;[32] 344 people were reported missing, 183 injured, 354 hospitalized and 1,654 were catered for as internally displaced persons (IDPs) at seven centres.[33] Six of these centres were in Chimanimani[34] and one in Chipinge (Tongogara Refugee Camp); some 859 people (51.9%) stayed in and were fed at these centres, while the remainder only received food.[35] The displacements affected family structures; 96% of those displaced were hosted by other communities.

Women and girls faced challenges of unsafe shelter, exposure to gender-based violence (GBV) and negative coping mechanisms, including transactional sex. Their burdens of unpaid care work intensified. The Zimbabwean NGO Musasa Project provided psychosocial support to 19,000 survivors in Chimanimani and Chipinge in July 2019 alone, the majority of them women.[36] It responded to 49 cases of physical abuse, five of rape and 26 of sexual abuse, showing that the disaster exposed women survivors to GBV.[37] The disaster orphaned 710 children.[38] UNICEF Zimbabwe supported 577 children (316 boys and 261 girls) with identification and access to documents; 527 of the children (282 boys and 245 girls) were placed with extended families, while 50 (34 boys and 16 girls) were placed in alternative care arrangements.[39]

Roads and bridges in Chimanimani and Chipinge were severely damaged, rendering some areas inaccessible for at least two weeks.[40] The damage included soaked road beds, cracked roads, landslides making roads impassable, washed-away culverts, and damaged bridges and bridge approaches. A city engineer[41] observed that the damage was exacerbated by the fact that some of the roads had not been graded since the 1980s; they were poorly maintained, with some culverts and drains completely silted and 'forgotten' with overgrown trees encroaching onto roads; and roads were made of inadequate materials, especially gravel.

According to official estimates, 634km[42] of roads were damaged, with 57.3% of this damage (347km) in Chimanimani.[43] As of July 2019, 16 of the area's roads still

needed permanent works. Nine bridge approaches and four bridges were washed away. The statistics focused on main or state roads, excluding the feeder roads that councils and the District Development Fund (DDF) are responsible for. Given the presence of tea, timber and other plantations in the two districts, the estimation of demand for improved road infrastructure also excludes most of the roads in these economic zones. Combined, these roads run into thousands of kilometres, while the unrecorded bridges and causeways easily number 100. Chief Executive Officers (CEOs) for Chimanimani and Chipinge, the District Development Coordinators, the Agricultural Technical Extension Department (AGRITEX) and DDF officials at the validation workshop confirmed that the damage to feeder roads and related infrastructure would take up to two years to repair. Socio-economic activities in the worst-affected areas ground to a halt due to road closures. Movement in the area remains both slow and expensive. This has affected market access, employment and overall livelihoods for people who depend on supplying agricultural commodities to outside markets. Fruits and other agricultural produce became temporarily unavailable at strategic markets like Mbare in Harare.[44]

UNICEF estimates showed that 140 schools in Zimbabwe were affected by the cyclone,[45] and infrastructure and teaching materials/resources were lost or damaged. Teachers and pupils were traumatized by their experiences of the disaster, loss of life and family dislocations. Disruptions will have a long-term effect on communities, with school drop-outs expected due to extended absenteeism and family break-ups.

With regard to housing, 13.6% (201 of 1,481 homes) in Ngangu Township, Chimanimani were damaged and 14.3% of workshops (2 of 14) were also damaged.[46] Other records show that thousands of rural houses and structures at Tongogara Refugee Camp were devastated by the cyclone. Some sites in Chimanimani and Chipinge remain vulnerable to mudslides, as soil surfaces and mountain slopes remain unstable. Building material supplies were disrupted, with cost implications for rebuilding. Relocations have been planned for some communities, as shown in the table below. Council representatives indicated during the validation workshop that they lack capacity to provide services, particularly for resettling displaced urban residents who require serviced land and assistance in house construction.

Table 1: Planned relocation sites in Chimanimani District

Site and location	Area (hectares)	Remarks
Bonny Eagle (Rusitu)	150	Area formerly utilized by Agriculture and Rural Development Authority (ARDA). Few families which provided estate labour still occupy the compound. Artisanal miners occupy the area. The land is generally flat and close to the affected population of Kopa.
Sunnyside (Rusitu)	20	Area formerly utilized by ARDA. There are no settlements on the site. The land is generally flat with red soils. Electricity cables pass through the site.
Muchadziya (Communal)	150	The area has rugged terrain. It consists of rural households who grow bananas. Development is planned to involve reorganizing existing rural houses.
The Flats (Shinja Resettlement)	913	Area is flat with red clay soils and is rural state land managed by the ministry responsible for lands. A few illegal settlers live in the area.
West End (Shinja Resettlement)	1,081	Site is next to The Flats. There are a few illegal settlers in the area.
Greenmount Farm	180	Site is near Ngangu. A few illegal settlers are in the area.
Lindley Farm	395	The site is to the eastern side of Chimanimani Village.
Total	**2,889**	

Source: Government of Zimbabwe (2019)[47]

The cyclone damaged 250 boreholes, 18 urban and peri-urban water supply systems and 13 healthcare centres.[48] A cumulative total of 354 cyclone-related hospital admissions were recorded at health institutions in Manicaland, and by May the cumulative figure reached 21,952, of whom 14,115 (64.3%) were women.[49] Disease surveillance was increased for malaria, and administration of cholera vaccines and distribution of point-of-use water treatment chemicals took place to prevent disease outbreaks. Disruptions to communication and water infrastructure affected patient referrals and data transmission. The cyclone's effects in other sectors also put pressure on the health sector: for instance, losses in agriculture weakened food and nutrition security in affected areas, increasing risks of malnutrition.

The cyclone affected agricultural activities, damaged support infrastructure and caused loss of arable land, livestock and stored cereal. This will have a medium-term impact on livelihoods, food and nutrition security, and thus resilience. Some 489 tobacco barns, 40 dip tanks and 16% of land under maize were destroyed.[50] The cyclone also destroyed beans (1,492.5ha), tomatoes (192.4ha), seed maize (54ha), commercial maize (129ha), bananas (100.3ha), onions (2ha), cotton (30ha) and sugar (3,556ha), in Chimanimani, Chipinge and Mutare.[51] Irrigation schemes (10 in Chimanimani[52] and seven in Chipinge) servicing communal farmers were damaged, as were weirs, overnight storage tanks/dams, pump stations, canals, access roads, scheme buildings (e.g. pack sheds), water supply pipes and fences. AGRITEX estimates show that in Chimanimani District, 45% of arable and 105 hectares of grazing land were damaged and 348 cattle, 17,000 chickens, and 222 goats and sheep were lost.[53] Indications are that at least 20% of arable land was rendered unusable in Chipinge. Cyclone damages directly affected livelihoods, with smallholder (irrigators and dryland) farmers affected the most.[54]

Damage to agricultural, transport, telecommunications and housing infrastructure affected local economies with implications for smallholders. In Chipinge, a 15-hectare banana plot was damaged at Mutema, pump sets were submerged at Chibuwe, while weirs and pipes were washed away at Musikavanhu irrigation schemes. The cyclone also caused flood damage to arable land in other districts in Manicaland, Mashonaland East and Masvingo, alongside loss of livestock and stored cereal/grain, destruction of farm infrastructure, equipment, forestry resources and orchards. Loss of local seed and other genetic material also presents a major threat to sustainable food production in the affected areas.

Forests (1.17 million hectares[55]), protected areas (104,620 hectares[56]) and some river courses were also negatively affected by the high winds, flooding, mudslides and persistent rains brought by Cyclone Idai. Ecosystem damage also occurred where boulders and mud were dumped downhill. Landslides, gullies, slope damage/scarring and widespread soil erosion resulted in vegetation damage affecting wildlife habitats, water quality, tourism activities and usability of land resources. The cyclone's aftermath has therefore increased environmental risks, which will in turn affect local adaptation. Loss of vegetation cover means the natural defence against future flood waters and landslides is no longer available. Similar events in future are therefore likely to cause even more destruction.

The full cost of Cyclone Idai is difficult to quantify. Lives, livelihoods, homes, infrastructure, natural resources and socio-economic networks were lost, and the disaster caused widespread psychosocial trauma. Local and national productive capacity and aggregate demand were dented. The overall estimated infrastructure costs, at $2bn[57] in the three affected countries (Zimbabwe, Mozambique and Malawi), shows how deeply their economies suffered. Zimbabwe reassigned RTGS$100m from the 2019 budget towards the early response phase and RTGS$179m towards permanent infrastructure.[58] The financial estimate presented in the government's April 2019 appeal for humanitarian assistance suggests $613m is

needed,[59] while other estimates suggest a range of $548–$622m and $557–$767m for emergency response and recovery respectively.[60] The World Bank et al. (2019) Rapid Impact Needs Assessment (RINA) report[61] estimates that Zimbabwe's economy will shrink by 3.1% following Cyclone Idai (a 1.6% drop was estimated before the disaster). The impact of the disaster will continue to be felt for generations to come, and the experience will continue to have a huge influence on the different levels of preparedness and response (as illustrated in Figure 1). The next section considers good practices in the response to Cyclone Idai for the purposes of institutional development in the future.

People walk under downed power lines in Chimanimani, Zimbabwe, pictured on March 28, 2019. After nearly two days of heavy rains, brought on by Cyclone Idai, several landslides engulfed homes in the town on March 15. Credit: Philip Hatcher-Moore/Oxfam.

3 GOOD PRACTICES AND INNOVATIONS

The response to Cyclone Idai involved affected councils, hundreds of local people and companies in affected areas, the Government of Zimbabwe, UN agencies,[62] foreign governments and bilateral agencies, local and international non-government agencies including the private sector, faith-based and community-based organizations, both local and national. For instance, Chimanimani RDC fed displaced people for the first week of the disaster.[63] Locals and outsiders worked closely together to respond to the catastrophe. Their responses covered a wide range of activities, including:

- Counselling and psychosocial support, casework and child protection support, orphan care and family tracing.
- Food and non-food item distribution. The direct feeding programmes run by local authorities and citizens was a particular example of good practice to build on.
- Dedicated investment of long working hours in the field and in meetings by local civil servants.
- Educational assistance to children, including establishing safe spaces.
- Health, HIV and AIDS, and water, sanitation and hygiene (WASH) responses.
- Vocational skills training and support for small to medium-sized enterprises (SMEs).
- Shelter-related work.
- Capacity building of those responding, e.g. social workers, village health workers, etc.
- Research, documentation and needs assessments.

A number of good practices were recorded in the response to Cyclone Idai. Participants at a government workshop[64] in June 2019 observed the following: i) public empathy and mobilization (*vunhu/ubuntu*); ii) proactive immunizations against cholera and measles; iii) private sector support that went beyond donations to direct participation in emergency responses; iv) national budget reassignment towards the relief and recovery effort; v) government transparency and communication with the public; Parliament and international development partners on activities and funding; vi) the mainstreaming of psychosocial support, counselling, social and child protection in the response; and vii) service innovations like health card replacements, Expanded Programme of Immunization (EPI) catch-up, and nutrition assessments.

Updates on inflows into the Disaster Fund at the ministry responsible for finance also reflected good practice, alongside joint reflections and needs assessments between the government and development partners. Various agencies' situation reports cited state-provided data. This helped build state capacity and strengthened its coordination role. Response and recovery activities saw a groundswell of compassion for cyclone survivors, leading to a mobilization of donations and volunteers countrywide and beyond. This showed how Zimbabweans, locally and internationally, can mobilize to alleviate the suffering of others. A Coordination Forum with 11 sub-clusters[65] was established in response to early gaps in coordination.[66] This later became a 19 sub-cluster Coordination Forum.[67]

Women sort their belongings as children sit outside, at the primary school in Chimanimani, Zimbabwe, on March 28, 2019. Hundreds of people took shelter at the school after their homes were swept away in flooding and landslides, after Cyclone Idai hit the region. Credit: Philip Hatcher-Moore/Oxfam.

However, despite these examples of good practice, the disaster was a wake-up call[68] in terms of public policy and administration. Submissions to Parliament by the Executive and relevant post-Cabinet press statements confirmed the realization that more was needed across the different stages of the emergency. The analysis in this study also shows that more needed to be done at the four different phases illustrated in the table below. The performance of public sector institutions across the four phases was generally inadequate, largely because of their starting (pre-disaster) position of low capacity.

Table 2: Key issues by 'headline' disaster phases

I: Immediate pre-disaster phase	II: During the disaster (16–17 March 2019	III: Immediate aftermath (March–April 2019)	IV: Recovery period (May 2019–April 2020)
• Internal agency performance and coordination • Early warning and risk communication, especially to/at community levels • Research and development, e.g. on flood risk management and risks to water infrastructure • Integrity of institutions (policies, laws and administrative practices)	• Search and rescue equipment and preparedness of key agencies • Accessibility of areas • Shelter, food and non-food items for affected communities • Logistics (transport and warehouses) • Service provider capacity across key services (health, education, energy, water, etc.) • Adequate delivery and coordination protocols	• Search and recovery • Rehabilitation and psychosocial support • Shelter, food and non-food items for affected communities • Logistics (transport and warehouses) • Service provider capacity across key services (health, education, energy, water, etc.)	• Plan and implement safer settlements and shelter • Re-establish (or set up new) livelihoods • Capacity support to old (or new) agencies • Institutional reforms and development (policies, laws and organizational arrangements) • Re-establish (or set up new) basic service delivery mechanisms

4 ISSUES AND AREAS FOR IMPROVEMENT

Despite the good practices discussed above, responding to Cyclone Idai stretched Zimbabwe's relatively lean DRM institutional framework. It exposed *capacity and policy gaps* around coordinating responses, civil and social protection, humanitarian assistance, development planning and management, and settlement and land policies. Inadequate coordination within and across sectors highlight the need for immediate application of lessons through, for instance, post-Cabinet briefing sessions by the ministry responsible for local government alongside the ministries responsible for information and finance.

An integrated structure for inter-agency collaboration on policy and local implementation also appeared lacking. Local authorities, who were first responders after the cyclone made landfall, were not made visible at the onset of the response, despite being hard at work from community to council level. The affected councils were themselves unprepared. Local units of national government (coordinated by the DA[69]) lacked the necessary capacity. Urban local authorities later mobilized their equipment and staff to open roads, and made food and material donations including blankets and clothes collected from their areas. This was partly in solidarity with the affected communities and councils, and also to demonstrate disaster response capacities.[70] Cyclone Idai thus showed the limits of Zimbabwe's decentralization. Local authorities were not leading the response, and their sub-structures were also relatively invisible as national government led the response. The gaps identified in this paper are based on the notion that the public sector[71] is the principal responder in disasters. Though most of the policy gaps identified predated the disaster, these gaps arose from delays in instituting the necessary reforms. They were exposed by the seriousness of the disaster and the manner in which the response was managed.

Questions remain regarding the role and capacity of district and sub-district structures in efforts to 'build-back better'. This concern covers aspects of reconstruction of affected lives and livelihoods in existing areas (in-situ) and any resettlement initiatives for establishing safer settlements in new areas, along with stable local institutions and sustainable livelihoods, and rebuilding institutions (policies, laws and organizational practices). For instance, the effectiveness of irrigation schemes reflects as much the infrastructure maintenance regimes as it does their productivity; both depend on the capacity of the irrigation management committees in place. Some studies have shown that 'irrigation infrastructure is in a sorry state'[72] and 'most irrigated land remains unused'.[73] These constraints reflect gaps in the viability of the irrigation management model in use in Zimbabwe, something that the emerging National Irrigation Policy is engaging with. Broadly therefore, the issue of funding of key agencies suggests serious gaps that keep Zimbabwe vulnerable to disasters. Post-cyclone recovery and development planning initiatives need to address these gaps.

Spatial planning, settlement development, enforcement of regulations and access to geospatial information also need attention. Prior to Cyclone Idai, some affected populations had settled in unsafe areas and conducted activities that increased disaster risks, and these activities had continued with inadequate monitoring for disaster risk reduction purposes. The reflection below touches on key planning and housing infrastructure lessons, as reported to the study by a local leader:

> *'Buildings [houses] were not proper. Our bricks were poor and we did not use cement. We were cutting down trees along rivers which the floodwater took, made dams [with] and had more power to break river banks and destroy homes and fields. In future, some areas… we should not build there. High places are safe, but only if we do not cut down trees.'* Key informant interview (21 June 2019)

Construction of rural homes is hardly regulated in Zimbabwe. Developments are not guided by any area-specific siting and construction guidelines. Local authorities do not support relevant processes. Traditional leaders do not follow due process when allocating land and overseeing local development. These factors pre-dispose citizens to disasters, detract from sustainable development, and in turn exacerbate the effects of climate change induced disasters. Better spatial planning and settlement development is critical to resilience. Post-disaster recovery is constrained by pre-existing gaps in construction equipment (including tippers and earth-moving machinery) and financial and staff/technical capacity in affected local authorities. CEOs of the most affected councils confirmed this at the validation workshop. For example, the CEO of Chimanimani RDC noted that a layout of 400 parcels of land to settle displaced people and others had been approved, yet the council did not immediately have the resources to provide the necessary road and water and sanitation infrastructure.[74]

A DCP[75] key informant observed that disaster response outlays are often far higher than the resources made available for disaster prevention and the general smooth functioning of relevant agencies. In the case of the DCP, the annual budget for 2019 and funds in the National Civil Protection Fund[76] were inadequate to effectively execute the necessary activities before Cyclone Idai. Funding gaps were captured in a South African news feature as follows:

> *'The newly introduced RTGS dollar, if allocated efficiently, could have saved a lot of money. By the time government comprehends just how much the destroyed schools, bridges, roads, government buildings and homes will cost to replace, one will appreciate that investing in a viable budget for the CPU is imperative. By November last year, the CPU had already exhausted its mere $3m budget in dealing with the cholera outbreak that killed at least 47 people, 70 bus accidents and a spate of fires that destroyed property in the country's major cities. At the time, the unit [CPU] said they needed at least $10m. However, in the 2019 budget, the CPU got just under $2.4m. Nevertheless, this money should have been spent on effective early-warning systems and coordinated evacuation plans.' TimesLive* (20 March 2019)[77]

Delays in finalizing institutional reforms also reflect challenges. The Parliamentary Portfolio Committee Chair appealed for assistance in terms of i) budget support to the CPU, ii) devolution implementation, and iii) developing DRM/DRR legislation fit for an 'upper middle income country'.[78] Lack of institutional development was seen in the inadequate readiness of the Meteorological Services Department (MSD), the army, police and in the education and health sectors. The lack of localized disaster preparedness was also very evident. It is conceivable that schools could have been closed earlier and children sent home had adequate information been available, and the instruction to 'move to higher ground' should have been part of fully thought-through evacuation process. The situation at St. Charles Lwanga High School, where 200 children, teachers and support staff were stranded for two days and left to face the cyclone alone, is a case in point. Three of the schoolchildren died.

Low preparedness explains why the army could not immediately fly into affected areas, instead having to wait for visibility to improve and flooding to subside. The army lacked equipment (helicopters) that could handle the extreme weather

conditions including mist, strong winds and continuous heavy rain. Equally, the police did not have sniffer dogs capable of detecting buried human bodies. The MSD's Cyclone Idai warnings generally lacked detail of the kind necessary to allow the civil protection community to decide on immediate actions in terms of evacuating people.[79] Even after the disaster, the ministry responsible for health recorded low daily reporting completeness due to inadequate airtime and software.[80] Again, this reflects the capacity challenges facing strategic institutions at both national and local levels with a bearing on disaster preparedness and response management.

As a result of under-resourced agencies, awareness and education on disasters, climate change and DRM are limited. Local myths about boulders on river beds and mudslides, stories about angry mermaids (*njuzu*) and general amazement at the extent of the destruction caused by Cyclone Idai reflect inadequate understanding of the local geology and environment. Scientific evidence on how the soil mounts of Chimanimani (which have been continuously eroded over two decades under land resettlements, with little reforestation) would behave in response to the heavy rainfall and strong winds was lacking. Consequently, both highly educated and ordinary Zimbabweans kept shaking their heads without the benefit of properly researched explanations of the event. Westermann's study identified land use, infrastructure, settlement planning, inequality and poverty, 'angry spirits' and just being unlucky as some of the reasons people gave to explain the event.[81] Survivors still lack answers long after the disaster, preventing closure and healing. TSURO's preliminary work in affected communities shows that children still experience nightmares, and run away from their homes at the slightest disturbance. Musasa Project's experiences include traumatized widows who are being accused of witchcraft.

The general lack of the right capacity was seen at the Battlefields Mine Disaster just a few weeks before Cyclone Idai. The mine disaster exposed how undermining the regulatory powers of agencies like the Environmental Management Authority (EMA) has paved the way for unsafe artisanal mining in Zimbabwe. In general, officials of regulatory authorities technically know what to do, but face threats in the field and in their organizations which force them to look the other way.

The fact that Cyclone Idai struck at night made the situation worse. Zimbabwe has no designated evacuation centres. Chimanimani Hotel led the way when it provided refuge to 200 families,[82] a number that reached 500 over two months.[83] The population's general preparedness is also inadequate. It was difficult to convince people to leave their homes to move to safer places, as previous cyclones cited in the warnings[84] did not cause anything like the level of destruction that Cyclone Idai would cause, especially in the Chimanimani and Chipinge Districts. A key informant from Chimanimani observed that 'we thought Cyclone Idai would be like Eline in 2000, so we relaxed'.[85] This relaxed approach was also taken by authorities at different levels.

5 LESSONS FROM CYCLONE IDAI

While Cyclone Idai had multiple negative effects, the Zimbabwean state and its citizens can draw some useful lessons from it. Socio-economic fragility owing to a stressed and underperforming political economy makes the country vulnerable to disasters, as natural hazards quickly turn into humanitarian emergencies. Before the disaster struck, as many as 5.3 million people in Zimbabwe were estimated to need humanitarian assistance.[86] As such, Cyclone Idai hit an already fragile ecosystem strained by an increasing dependence on natural resources amidst inadequate environmental stewardship.

Strategic institutions lacked the resources and adequate horizontal-vertical connections to gather and disseminate effective information to facilitate appropriate decision making. Existing law is inadequate for the needs exposed by the disaster and is yet to be aligned to the Constitution, and a 2011 DRM Bill remains outstanding. This explains why the institutional arrangements fall short at a time when Zimbabwe's vulnerability to climate change-induced extreme weather conditions is not only proven, but has already been witnessed through some events before Cyclone Idai. The lessons are:

1. State capability at all levels is critical to anticipating and managing disaster risks, leading responses during a disaster, and overseeing recovery and development. This makes for better-coordinated processes during and after a disaster. The capacities of local authorities (and other local institutions) and state institutions need to be built for community resilience.
2. Key agencies of the state tasked with disaster risk management (e.g. the Department of Civil Protection) need adequate capacity and resources, including for research and core equipment to gather the knowledge necessary to understand and prepare for the disasters to which Zimbabwe is prone.
3. Participatory hazard profiling helps build local preparedness and capacity, and anchors sustainable (hazard-resilient) development. Sustainable local development (social, economic and ecological) allows communities to have appropriate natural and other infrastructure that can help them cope with disasters.
4. Zimbabweans across social, economic and political contexts have shown that they can unite in responding to disasters. Social capital remains active and forms a sustainable basis for building viable emergency preparedness and response systems.
5. A dedicated fund for disaster responses is only useful if it is viable, ring-fenced and transparently run. Similarly, where support to disaster efforts is properly run, coordination becomes easier and donors (local and international) are able to use more efficient and less hands-on approaches to deliver assistance.
6. Disasters have long-term effects on specific social groups. Building the local capacity necessary to ensure ongoing psychosocial and material support is critical for recovery. The case of strengthening the capacity of village health workers after Cyclone Idai reflects this lesson, which is true of other local structures involved in development planning and management. Integration of survivors within their own communities helps with healing, as opposed to settling IDPs in camps.[87]
7. Disaster risk reduction may require the transformation of settlements, building new ones, strengthening their regulation and ensuring compliance with

appropriate building codes that local people are familiarized with and/or receive practical training on.

8. The technical staff of local agencies that respond to disasters require psychosocial support. They also go through psychological trauma, especially after the more intensive phase of activities is completed. Often they do not have the kind of post-implementation support that is available to staff of national and international state and non-state development agencies. Further, they remain in the same communities, working with survivors who seek support and answers. Taking care of these staff members' psychosocial, technical capacity and material needs enhances their effectiveness in dealing with planning and implementation in the recovery phase.
9. Relocation of people who have been displaced by disasters or who live in risk-prone areas is an important and growing response in Zimbabwe. Resettlements should be planned and implemented in a participatory manner and guided by an appropriate support framework based on new legislation.

Shaud (46) stands beside a crack that tore through her home in a village 80km away from Chimanimani, pictured on March 26, 2019. On the night of March 15, Shaud says she was awoken by heavy rain at around 1am. The water level quickly rose from knee-height to waist-height, and she rushed to save the family's most important belongings: passports and birth certificates. 'We lost everything', she said. 'I have lost all hope. We don't know where to begin to fix all this.' Credit: Philip Hatcher-Moore/Oxfam

6 CONCLUSION, POLICY AND PROGRAMME CONSIDERATIONS

Zimbabwe has experienced many natural and man-made disasters in recent years. These have included floods and droughts associated with climate change. Others, such as road accidents, grassland fires and disease outbreaks, e.g. cholera in urban areas, reflect socio-economic and service delivery frailties. National vulnerability became more glaring as state capacity reduced after 2000. This period witnessed radical policy changes, societal transformations and rising levels of poverty. Previous Cyclones (e.g. Eline, Dineo and Japhet) affected many parts of the country, but not as deeply as Cyclone Idai. From a policy-making and implementation perspective, a new model is needed. The government is proposing an Integrated Emergency Operations Centre (IEOC) at national level,[88] which suggests movement towards the necessary institutional development. This reform impetus triggered by the disaster is the basis for the following policy and programmatic considerations, which include a need for:

1. **Clear funding for disaster risk assessments and analyses** within an integrated framework, drawing on scientific evidence and indigenous knowledge to better understand and reduce disaster risks.

   Programmatic responses include targeting specific spatial locations to deepen DRR knowledge and broaden resilient responses.

2. **Finalizing the DRM policy, legislation and organizational structures** based on the Constitution, the Sendai Framework and relevant local experiences (e.g. Cyclone Idai, Dineo,[89] etc.) and those from other jurisdictions.

   Programmatic ideas revolve around supporting the establishment and capacity development of devolved DRM structures that are able to generate, analyse and communicate[90] relevant DRM information, conduct participatory needs assessments, implement responses and document experiences.

   In the context of Cyclone Idai experiences, institutional arrangements that place local authorities in a clear leadership role in coordinating sector and inter-sector DRM, from policy making to planning through to implementation and evaluation, are critical. A balance is needed between infrastructure and capacity development of relevant institutions.

   Operationalizing a more robust and devolved DRM framework also involves establishing sub-national (provincial and local authority) DRM centres which are appropriately equipped to respond to and adequately inform citizens about disasters, based on a comprehensive and ongoing hazard-profiling process.

   National government and development partners need to support locally developed recovery frameworks aimed at sustainable and tangible initiatives around resilience building. Practical attention to green jobs,[91] improved water sources (e.g. solar-powered boreholes, etc.) and gender-responsive innovations are needed as part of initiatives to build back better in communities after the disaster.

3. **Invest in adaptive and resilience-building measures to protect women and other vulnerable groups**. There is a need to invest in adaptive and resilience-building measures with a view to protecting the most vulnerable groups, women and children, including investments in disaster risk reduction in the form of early warning systems and early action; climate adaptation investments for key value chains; resilience investments for infrastructure; social protection; and recovery measures for the most vulnerable groups to bounce back from climatic shocks and stresses.

4. **Setting up a decentralized ‘Corps’ of trained DRM volunteers** built around existing community structures and regularly refreshed by partnerships of the public, civil society and private sectors.

   Programmatic responses include co-development of the terms of reference, assessing optimal institutional arrangements for identification of volunteers and setting up (and delivering) capacity-development mechanisms. Based on the Cyclone Idai experience, some of the modules for ongoing training could include civil-military collaboration in emergencies, standard operating procedures (SOPs) or standards in emergency response planning, implementation and evaluation, etc.

5. **Strengthening rural and urban settlement and infrastructure regulatory regimes** based on appropriate policies and standards. These will usefully guide re-planning of settlements and engineering of building materials that are suitable for hazard-prone areas.

   Related programme initiatives include providing support for relevant research as well as practical aid for households as they relocate and rebuild back better (resiliently).

6. **Setting up social and child protection systems that are sensitive to disaster situations** to take care of children and other vulnerable people, procedures for replacing academic and identity documents lost in disasters, provision of shelter, and extending education and health assistance during and after disasters.

   Programmable areas include documenting the innovations instituted during the Cyclone Idai response to ensure greater efficiency in matters that are ordinarily considered to be outside existing standard procedures. These could include the replacement of lost identity documents, health cards, cash transfer modalities, beneficiary validation processes, etc. Collating these innovations (or variations of ‘protocols’) and facilitating participatory policy making around them could aid relevant responses in future.

State capability at all levels is key to building resilience to disasters. Non-state agencies need government at local level with capacity to sustain innovations and to coordinate interventions when disasters occur. State capacity is seen when strategic national institutions competently deploy specialist services as and when required. A more specific implication arising from the institutional challenges witnessed in the Cyclone Idai response relates to a need to rethink the coordination and implementation capabilities of the Department of Civil Protection. Both functions have been severely under-resourced. Cyclone Idai clearly exposed the department’s weaknesses. Local authority civil protection capabilities also need strengthening. In many ways, the disaster gave impetus to the national devolution implementation debate and enhanced collaboration across different actors.

NOTES

1 Global Disaster Alert and Coordination System (GDACS), http://www.gdacs.org/report.aspx?eventtype=TC&eventid=1000552

2 Key informant interview with a Chimanimani resident (telephone call, 21 June 2019).

3 World Vision, https://www.worldvision.org/disaster-relief-news-stories/2019-cyclone-idai-facts#damage

4 UNICEF (2019) Zimbabwe Humanitarian Situation Report No. 7, 31 May; IOM (2019) Zimbabwe Cyclone Idai Response: Situation Report 29, 8–14 May 2019.

5 Cholera, malaria, dysentery, measles, HIV and AIDS, foot and mouth disease, and rabies, among others.

6 The SADC Secretariat has a Regional Inter-Agency Standing Committee (RIASCO) with a remit for aiding and coordinating member state responses.

7 Government of Zimbabwe (2019) Report to Cabinet by the 'Cabinet Committee on Environment, Disaster Prevention and Management' on the Prioritized Cyclone Idai and Drought Programmes and Projects.

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12 Ibid.

13 Government of Zimbabwe and UN (2017) Capacity Assessment of the Disaster Risk Management System in Zimbabwe, (Capacity for Disaster Reduction Initiative, CADRI).

14 Government of Zimbabwe (2019) Tropical Cyclone Idai International Humanitarian Assistance Appeal, April 2019.

15 National Budgets i.e. estimates of Revenue and Expenditure that are approved by the National Assembly are presented as an Official Record commonly referred to as 'the Blue Book'.

16 Note that the portfolio recently changed to Provincial and District Development Coordinator (PDC and DDC).

17 Government of Zimbabwe Disaster Risk Management Bill, 2011.

18 From agencies like the police, army, civil aviation, fire, UN and other humanitarian agencies, Zimbabwe Red Cross Society, representatives of Local Authority Associations and DRM stakeholders in 18 categories.

19 UN (2005) Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters, World Conference on Disaster Reduction, 18–22 January 2005, Hyogo, Japan. The framework focuses on ensuring that DRR is a national and local priority, an institutional framework for implementation exists, disaster risks are identified, assessed and monitored, early warning systems exist, knowledge, innovation and education are used to reinforce a culture of safety and resilience, and disaster preparedness is continuously built for multi-level response effectiveness.

20 UN Office for Disaster Risk Reduction (UNISDR) Sendai Framework for Disaster Risk Reduction (2015–2030) adopted at the Third UN Conference in Sendai, Japan on 18 March 2015. The successor instrument to the Hyogo Framework for Action (2005–2015).

21 Government of Zimbabwe and UN (2017) Capacity Assessment of the Disaster Risk Management System in Zimbabwe, (Capacity for Disaster Reduction Initiative, CADRI).

22 Based on a single strong (resourced and capacitated) agency with adequate clout to coordinate the DRM system

23 W.U. Westermann (2019) The Impact of Cyclone Idai in Chimanimani: An Internal Discussion Paper, WFD and TSURO Consultancy Report, May 2019.

24 It is our imagination that survivors of the disaster developed a better sense of the relative importance of actual organizations or modes of governance to their lives, including in emergencies.

25 Children, women, people living with disability, etc.

26 Government of Zimbabwe (2019) Manicaland Province Cyclone Idai Disaster Report, 11 May 2019.

27 UNICEF (2019) Zimbabwe Humanitarian Situation Report No. 6, 17 May; UNICEF (2019) Zimbabwe Humanitarian Situation Report No. 7, 31 May.

28 UN-OCHA (2019) Flash Appeal: Revised following Cyclone Idai, March 2019.

29 UNICEF (2019) Zimbabwe Humanitarian Situation Report No. 7, 31 May; IOM (2019) Zimbabwe Cyclone Idai Response: Situation Report 29, 8–14 May 2019.

30 UN-OCHA (2019) Flash Appeal: Revised following Cyclone Idai, March 2019.

31 Government of Zimbabwe (2019) Workshop on Validation of the damage assessments, support of Early Recovery Plans and Lessons Learned from Cyclone Idai Disaster, 19–22 June 2019, Mutare. Ministry of Local Government, Public Works and National Housing.

32 Government of Zimbabwe (2019) Tropical Cyclone Idai International Humanitarian Assistance Appeal, April 2019.

33 Government of Zimbabwe (2019) Manicaland Province Cyclone Idai Disaster Report, 11 May 2019.

34 Two schools, two churches, a hotel and a club in Chimanimani.

35 Government of Zimbabwe (2019) Manicaland Province Cyclone Idai Disaster Report, 11 May 2019.

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37 Ibid.

38 Government of Zimbabwe (2019) Manicaland Province Cyclone Idai Disaster Report, 11 May 2019.

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42 Government of Zimbabwe (2019) Workshop on Validation of the damage assessments, support of Early Recovery Plans and Lessons Learned from Cyclone Idai Disaster, 19–22 June 2019, Mutare. Ministry of Local Government, Public Works and National Housing.

43 Government of Zimbabwe (2019) Manicaland Province Cyclone Idai Disaster Report, 11 May 2019.

44 Speech at the Oxfam-convened validation workshop on World Humanitarian Day, 19 August 2019, by the Chairperson of the Parliamentary Portfolio Committee responsible for local government, Hon M. Chikukwa.

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50 Ibid.

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56 Ibid.

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59 Government of Zimbabwe (2019) Tropical Cyclone Idai International humanitarian Assistance Appeal, April 2019.

60 World Bank, Government of Zimbabwe and Global Facility for Disaster Risk Reduction (2019) Zimbabwe Rapid Impact and Needs Assessment (RINA), May 2019.

61 Ibid.

62 UNFPA, UNICEF, WHO, WFP, UNDP and UNHCR.

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65 Rescue, Roads, Health, Psychosocial and Food, Shelter, Power, Weather, Fuel, WASH, Funerals and Resource Mobilization.

66 Oxfam Humanitarian Dossier, Annex D: Oxfam Emergency Strategy Template; W.U. Westermann (2019) The Impact of Cyclone Idai in Chimanimani: An Internal Discussion Paper, WFD and TSURO Consultancy Report, May 2019.

67 Government of Zimbabwe (2019) Manicaland Province Cyclone Idai Disaster Report, 11 May 2019.

68 Key informant interview with Director of CPU, 24 May 2019.

69 District Administrator now Office of the District Development Coordinator.

70 Bindura Town Clerk presentation at a Devolution Indaba, 26 March 2019, Harare (26–27March)

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