

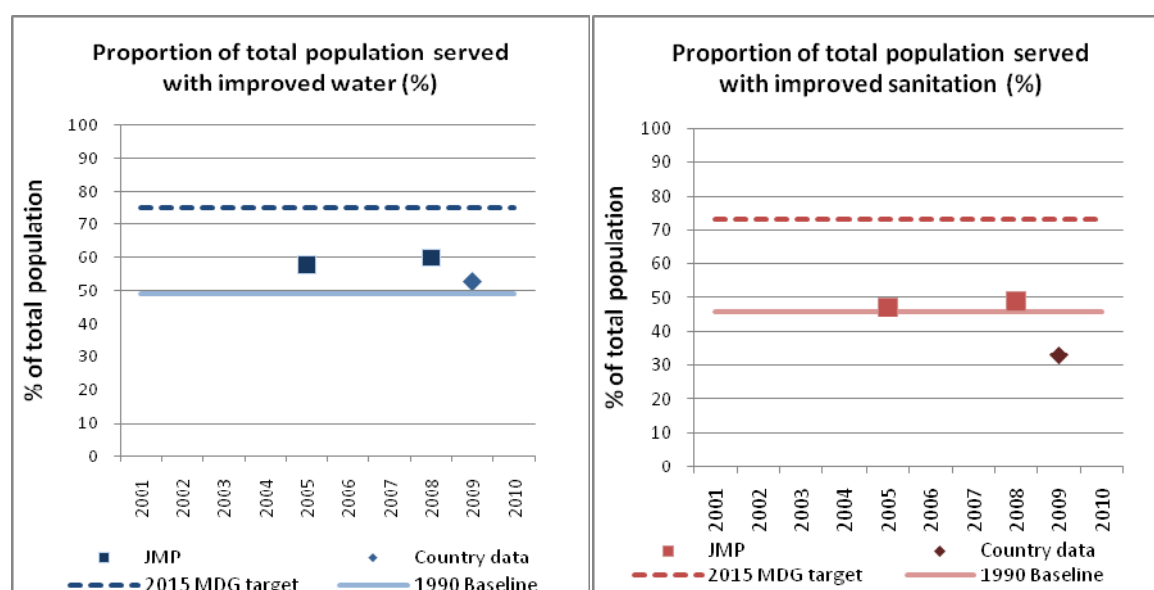
### Headline issues

- Limited institutional leadership, capacity and coordination across all levels are the main bottlenecks to progress in Zambia’s WASH sector, particularly for sanitation where progress is marginal.
- Decentralisation of authority to the district and local levels has not been accompanied by a sufficient increase in financial or technical capacity.
- Urban water coverage is likely to meet its national target, however sector-wide national and MDG targets are unlikely to be met unless investment is significantly increased in coming years.
- Although sanitation is seen by the government as an integral component of WASH, it still needs appropriate budgetary prioritisation.

### Coverage and WASH related health statistics

Coverage data varies significantly depending on the source. According to WHO/UNICEF Joint Monitoring Program (JMP) 2010 data, 60% of Zambia’s population has access to improved water, disaggregated at 46% rural and 87% urban – the latter of which shows the most progress.<sup>1</sup> For improved sanitation, the figure stands at 49% for the overall population with 43% rural and 59% urban coverage.<sup>1</sup> Government data varies significantly from JMP estimates (see Figure 1), in fact different government departments use numerous methodologies and definitions of coverage making monitoring of progress extremely difficult.<sup>2</sup> For both water and sanitation, current rates of progress indicate Zambia is off-track to meet its MDG targets, requiring considerable additional investment to accelerate progress in both the urban and rural subsectors, neither of which have improved significantly over recent years<sup>2</sup> (see Figure 1).

Figure 1: Access to improved water and sanitation



Source: WHO/UNICEF Joint Monitoring Program (JMP) (2010) data for 2008.<sup>1</sup> Country Data from draft Sixth National Development Plan. Source: AMCOW, 2010.<sup>2</sup>

Despite being classified as resource rich, Zambia has one of the lowest rates of access to improved water in Southern Africa.<sup>3</sup> Considerable differences in poverty are seen in the urban rural divide in Zambia, with urban poverty standing at 34% and rural at 80% of the population.<sup>4</sup> The National Rural Water Supply and Sanitation Program (NRWSSP) 2006-2010 was developed to overcome this disparity, and although some progress has been made, reaching MDG targets will require rapid acceleration in progress. In rural areas, access to improved water has progressed marginally since 1990, while rural sanitation is reported to have decreased in coverage,<sup>4</sup> illustrating the need for a clear policy for rural sanitation, which is currently lacking. Sanitation coverage overall is lagging significantly behind the 2015 MDG target (Figure 1) and despite the Government of the Republic of Zambia (GoRZ) recognising the integral nature of sanitation in the WASH sector, additional budget investment is needed.<sup>2</sup>

Growing urbanisation in Zambia is resulting in the need to address access to water and sanitation in peri-urban areas to address these areas undergoing rapid change.<sup>4</sup> UN-Habitat reports that a significant proportion of the urban population live in slums (57%)<sup>5</sup>, and insufficient sanitation infrastructure in urban areas cannot keep pace with growing demand, with prioritisation of peri-urban and low income areas particularly needed.<sup>4</sup> Strategies for solid waste management including ecological sanitation solutions are also needed in the urban subsector.<sup>2</sup> Despite these urban challenges, both government and JMP data reflect a higher level of coverage in urban areas compared to that of rural areas.<sup>1</sup>

WASH related health statistics are shown in Table 1. Zambia's infant mortality rate ranks 4<sup>th</sup> in the Southern African Development Community (SADC) and is mid-range compared to other SADC countries for total WASH deaths per year and WASH related DALYs.<sup>7</sup>

**Table 1: Summary health statistics**

Infant mortality (deaths per 1000 births) <sup>6</sup>	141
WASH-related DALYs (% of all DALYs) <sup>7</sup>	13%
Total WASH related DALYs (Years) <sup>8</sup>	914,967
Total WASH related deaths per year <sup>8</sup>	24,112
WASH related proportion of deaths (%) <sup>8</sup>	11%

Sources: World Bank and WHO as shown in endnotes

## Finance trends

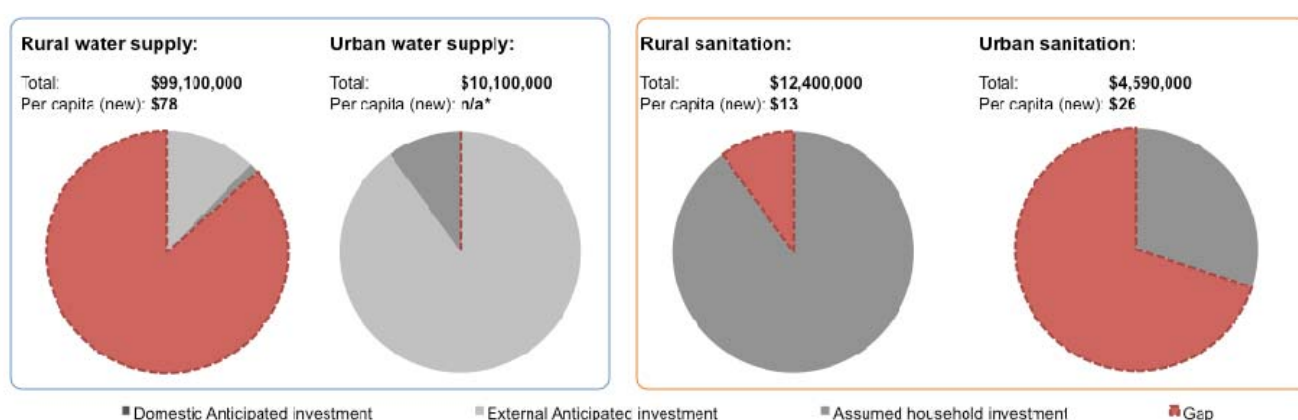
Donor allocations account for 90% of WASH sector spending with government and non governmental organisations (NGOs) each accounting for 5%.<sup>2</sup> A recent costing analysis reports that to reach national targets for water \$US109M/year is required, with \$US76M/year estimated from public funds.<sup>2</sup> However, the same costing analysis notes the difficulty in disaggregating sanitation allocations from drinking water,<sup>2</sup> thus these amounts need to be viewed with caution. The Fifth National Development Plan (2006-10) reported unsatisfactory budget performance and failure to meet planned programs, with the outcome being donors stepping in to fill the gap which is much needed, particularly in urban areas which is underfunded.<sup>3</sup> Cost recovery from consumers forms part of Zambia's national water policy (see below), with user contributions varying for rural and urban populations, together contributing a further \$US8M/year in household finance.<sup>2</sup> For national sanitation targets, required investment is \$US17M/year for infrastructure only.<sup>2</sup> Commercial utilities typically charge 30% below operation and maintenance costs meaning full cost recovery is still not a reality, especially in rural areas where according to UNDP, communities rarely pay anything for water and sanitation services.<sup>9</sup> In addition, Commercial utilities are typically owed large sums of money from

outstanding government utility bills, which undermines their capacity to operate profitably and deliver adequate coverage of services.<sup>2</sup>

Fragmentation of water supply and sanitation responsibility currently exists across various government ministries, making tracing sector-wide financing difficult.<sup>2</sup> Coordination of the water sector, including financing at the national level, is performed by the Water Sector Advisory Group (WSAG), who aims to consolidate links between government ministries and streamline sector development across all ministries, thus enabling adequate monitoring of WASH spending.<sup>2</sup>

The main gaps in financing are seen in Figure 2 (drawing on the recent AMCOW Country Status Overview), highlighting rural water supply and urban sanitation as the subsectors suffering the greatest deficits.<sup>2</sup> Figure 2 also highlights the fact that domestic (government) financing is negligible. With current levels of financing, the MDGs will not be met for either water or sanitation.<sup>4</sup>

**Figure 2: Overall annual and per capita investment requirements and anticipated financing by source (all figures in USD)**



Source: AMCOW Country Status Overview as shown in endnote. \* Per capita investment requirement figures are for new facilities only; not applicable to urban water supply as, according to JMP coverage data, the national target has already been achieved – total investment requirements of US\$10.1m/year are for rehabilitation only.

## Sector governance

After two decades of deterioration of water and sanitation infrastructure, the early 1990s saw an acceleration of reform in the water sector.<sup>2</sup> The National Water Policy of 1994 (revised in 2010) symbolised a culmination of reform efforts. Zambia’s water sector reform was based on seven principles which include: 1) Separation of water resources management (WRM) from water supply and sanitation (WSS); 2) Separation of regulatory and executive functions; 3) Devolution of authority [from central government] to local authorities (LAs) and private enterprises; 4) Achievement of full cost recovery for the water supply and sanitation services through user charges in the long run; 5) Human resources development leading to more effective institutions; 6) The use of technologies more appropriate to local conditions; and 7) Increased Government priority and budget spending to the sector.<sup>2</sup> Progress against each principle varies widely.

The National Water Supply and Sanitation Council (NWASCO) perform the role of national regulator of water and sanitation provision.<sup>2</sup> The Ministry of Energy and Water Development (MEWD) are responsible for water resource management and overall responsibility for the water sector while the Ministry of Local Government and Housing (MLGH) and commercial utilities are responsible for water supply and sanitation.<sup>2</sup> MEWD also undertake some water supply activities including borehole drilling.<sup>2</sup> The Department of Infrastructure and Support Services (DISS) also provides technical support to water and sanitation service providers and oversees infrastructure development and rehabilitation.<sup>10</sup>

Private sector entities and local authorities have the ability to implement water sector programs and strategies with the devolution of authority from the central government to the local level, which is mandated under the Water Supply and Sanitation Act of 1997.<sup>2</sup> Some confusion and competition exists between MEWD and MLGH regarding roles and responsibilities which has negative impacts on service delivery.<sup>2,3</sup>

Efforts to move to a Sector Wide Approach (SWAp) for WASH are underway, which along with the sector advisory group function (WSAG), aims to achieve a greater level of coordination and harmonisation of funding.<sup>4</sup> The need for a SWAp is pertinent particularly in the rural subsector with sanitation highlighted as especially urgent.<sup>9</sup> At the district and local level, District Water, Sanitation and Health Education (D-WASHE) Committees were formed in 2000 across 62 districts to support the local authorities, however in urban areas, commercial water utilities provide water and sanitation services.<sup>2</sup>

Key constraints in WASH sector governance generally relate to limited human and institutional capacity, however the GoRZ has made attempts to overcome this acknowledged bottleneck to progress by establishing 10 urban commercial water utilities, rural water supply and sanitation Provincial Support Teams and Units.<sup>2</sup> In addition, WASH related courses at the University of Zambia have been established to boost longer term human resource capacity, with efforts needed to maintain their long term sustainability.<sup>2</sup>

## Subsector governance

### Urban sanitation

Urban sanitation has been neglected in Zambia and outbreaks of cholera have resulted from contaminated groundwater and insufficient drainage often from poorly sited pit latrines which lack adequate maintenance.<sup>10</sup> In the capital, the Lusaka Water Company has begun a sanitation surcharge to fund the extension of a piped wastewater collection system.<sup>10</sup>

Commercial utilities (CUs) are established by local authorities to provide water and sanitation services in urban areas, however their financial viability is weakened by their inability to recover costs from governments, or charge enough to be self-sufficient.<sup>10</sup> Financial support is being offered to CUs via the Devolution Trust Fund (DTF, which is targeted at peri-urban areas)<sup>9</sup> and the Zambia Social Investment Fund (ZamSIF) to enable the growing peri-urban population access to sanitation.<sup>10</sup> The NWASCO is also assisting CUs in improving urban sanitation services.<sup>10</sup> CUs are also reported as being low performers, forcing the GoRZ to maintain subsidising tariffs to a high degree and consequently, constraining increased investment in the sector.<sup>9</sup> An additional challenge in the urban sanitation subsector is the physical nature of the ground in the capital, Lusaka, which is rocky, thus difficult (and expensive) to deliver sanitation infrastructure.<sup>4</sup>

Community participation in WASH planning is outlined in the Peri-Urban Strategy of 1998.<sup>9</sup> The extent to which this is officially implemented is questionable, however UNDP notes that NGOs and key donors practice its principles as a matter of course.<sup>9</sup> Community engagement and networking amongst community based organisations are acknowledged as enhancing the outcomes of sanitation initiatives, particularly in speeding up community awareness of improved sanitation and hygiene.<sup>4</sup>

### Urban water

The National Urban Water Supply and Sanitation Program (NUWSSP) adopted in 2007/08 provides the path to meeting the urban sector targets for the MDGs.<sup>9</sup> Despite being on track to meet national targets, the

urban water subsector suffers the same challenges as its urban sanitation counterpart regarding the financial viability of CUs, as outstanding government bills detract from their ability to operate self-sufficiently.<sup>2</sup>

A key success of the urban water subsector is the pro-poor policy adopted by utilities, which allocate specific funds to poor peri-urban communities.<sup>2</sup> Although there has certainly been progress in the urban water subsector, a specific area still requiring attention is that of sustained service delivery, which lags behind Zambia's peer group average.<sup>2</sup> Low levels of budget utilisation have led to low expenditure for urban water, while deteriorating infrastructure restricts CUs from making progress.<sup>2</sup> As noted above, growing urbanisation will only increase the need to address the urban subsector's needs.

### Rural sanitation

In 2003, Rural Water Supply and Sanitation Units were established through the MLGH to enhance coordination of rural water supply and sanitation, however progress in the subsector still lags behind that of its urban counterpart.<sup>4</sup> Since then, the National Rural Water Supply and Sanitation Program (NRWSSP) which was launched in 2007, was established to provide a consolidated approach an essentially the means to move towards a SWAp.<sup>9</sup> Aligned to national reform principles, the NRWSSP devolves responsibility to local authorities, specifically the Rural Water Supply and Sanitation Units which are specified in the Decentralisation Implementation Plan.<sup>4</sup> Local authorities are supported by D-WASHE Committees, who provide technical support in implementing rural sanitation initiatives.<sup>4</sup>

### Rural water

Responsibility for rural water supply falls under the Department of Housing and Infrastructure Development (DHID) in the MLGH.<sup>4</sup> The objectives of the Decentralisation Implementation Plan recommend funds are directed to the local authority, with minimal input required from the MLGH other than general oversight and advice.<sup>2</sup> As for rural sanitation, the NRWSSP provides a framework for rural water supply, and requires capital contributions from communities to access boreholes, and a WaterAid analysis reports that this results in the exclusion of people unable to raise the funds.<sup>4</sup> As of December 2010, the NGO WASH Forum have advocated for the removal of this provision to ensure better equity in access.<sup>4</sup>

D-WASHE Committees assist local authorities in a technical capacity to maintain water points, as outlined in the NRWSSP.<sup>2</sup> Capacity building on operations and maintenance is also undertaken by D-WASHE Committees, with attention also paid to ensuring provision of spare parts.<sup>2</sup> Sustainability of this initiative at the national scale, outlined in the Sustainable Operation and Maintenance Project (SOMAP), will be an ongoing challenge.<sup>2</sup>

### Health and hygiene

Health, sanitation and hygiene promotion is a responsibility of the Ministry of Health (MoH), with the Ministry of Education (MoE) responsible for sanitation in schools.<sup>2,3</sup> The Ministry of Community Development and Social Services (MCDSS) also undertake development activities, some of which fall under the sanitation and hygiene banner.<sup>2</sup> Past national surveys have not focused on hygiene, thus little is known about hygiene behaviour across the board.<sup>2</sup> Hygiene is covered in the National Sanitation and Hygiene Strategy, currently under development,<sup>2</sup> however it is unclear to what degree of detail hygiene will be covered.

Donors such as UNICEF, WaterAid and the Netherlands Development Corporation have also conducted hygiene activities in schools.<sup>4,10</sup>

## Climate change and water resources

Zambia has historically been exposed to weather extremes such as droughts and floods and in recent years, these events have become more frequent and severe, with droughts in 2000/01, 2001/02, and 2004/05 and floods in 2005/06 and 2006/07.<sup>4</sup> Zambia is affected by the movement of the Inter-Tropical Convergence Zone (ITCZ) and El Niño Southern Oscillation<sup>11</sup>, both of which can influence patterns of rainfall and subsequently water recharge and the drying of water tables, boreholes and rivers, as well as potentially inundating water points and destroying sanitation facilities.<sup>4</sup> Southern Zambia has shown to be particularly vulnerable, suffering drought disproportionately compared to the rest of the country.<sup>11</sup> Zambia's rainfall over the December / January / February period has decreased 3.5% per decade since 1960, indicating a possible climate change driven drying trend.<sup>11</sup>

With a renewable water value of 8ML/population, Zambia ranks mid-range, however as noted above, Zambia is prone to weather extremes which are not reflected in the averages. While its environmental vulnerability status is rated 'resilient', Zambia has a high climate vulnerability factor for 2010 and a severe vulnerability factor for 2030 as shown in Table 2.

Table 2: Summary status of water resources and vulnerability

Renewable water (ML/population) <sup>12</sup>	8
Overall Climate Vulnerability factor 2010 <sup>13</sup> (on scale of <i>Acute, Severe, High, Moderate, Low</i> )	High
Overall Climate Vulnerability Factor 2030 <sup>13</sup> (on scale of <i>Acute, Severe, High, Moderate, Low</i> )	Severe
Environmental Vulnerability Status <sup>14</sup> (on scale of <i>Extremely vulnerable, Highly vulnerable, Vulnerable, At risk, Resilient</i> )	Resilient

## Donor environment

Key donors in Zambia include Denmark, Germany, the Netherlands, Japan, Ireland, the World Bank/Water and Sanitation Program, UNICEF and the African Development Bank.<sup>10</sup> In 2009, moves were underway to formalise the Informal Donor Group, which acts to harmonise and coordinate donors working in Zambia.<sup>10</sup> Development of an official aid policy was also underway in 2009 to standardise approaches and procedures across the board,<sup>10</sup> however it is not clear how things have progressed since then. The Devolution Trust Fund (DTF) is another coordinating mechanism which is supported by WASH cooperating partners including donors, and focuses on poor community's access to services particularly in peri-urban areas.<sup>4</sup> Key government agencies and donors have also come together in the past for a rural water supply and sanitation forum.<sup>10</sup> Furthermore, UNICEF coordinates the NGO WASH Forum during emergencies.<sup>15</sup> Although the abovementioned approaches aim to harmonise and coordinate aid and investment in the WASH sector, fragmentation and weak sector harmonisation is still being reported.<sup>4</sup>

Donors follow one of four modes to support the WASH sector in Zambia and depending on the capacity and expertise of the recipient, funds can be transferred directly to the local authority, MLGH or the Ministry of Finance and National Planning (via two mechanisms).<sup>2</sup> Each mode varies in its level of bureaucracy and has its pros and cons, and it appears various modes are used by different projects and different donors.<sup>2</sup>

AusAID is collaborating with the German Development Cooperation in budgetary support and efforts to improve efficiency of Commercial Utilities.<sup>3</sup>

## Sector monitoring

Annual Joint Sector Reviews have been undertaken for Zambia's WASH sector since 2007, with the 2010 Review highlighting the need for improvement in human and institutional capacity at central government



and district levels.<sup>2</sup> Zambia's monitoring and evaluation (M&E) rates relatively well compared to similar countries for all WASH sectors, owing to the existence of a Water Sector Advisory Group, an M&E Policy as well as a framework at the national and ministry levels.<sup>2</sup> It should be noted, however, that different ministries use different methodologies and definitions for WASH coverage, meaning that actual monitoring of progress in the WASH sector still has significant barriers to overcome. WaterAid is aiming to assist the GoRZ to overcome these challenges by supporting an Information Management System (IMS) to assist in facility planning and monitoring.<sup>4</sup>

An additional challenge is ensuring information captured via the M&E Framework is drawn upon for policy, planning and performance management.<sup>2</sup> The numerous monitoring tools exist across a number of plans, including Vision2030 (Zambia's over-arching development framework), Five Year National Plans, National Development Plans, District Annual Work Plans and Annual Sector Performance Reviews.<sup>2</sup>

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<sup>1</sup> WHO/UNICEF (2010) Progress on Sanitation and Drinking Water 2010 Update, available at [www.wssinfo.org](http://www.wssinfo.org).

<sup>2</sup> AMCOW (2010) Draft Water Supply and Sanitation in Zambia: turning finance into services for 2015 and beyond. AMCOW Country Status Overview 2010. Note: this is a draft and content is subject to change upon further in-country consultation and finalisation.

<sup>3</sup> AusAID (2011) Sector Analysis for Africa –Water & Sanitation. Draft. May 2011.

<sup>4</sup> WaterAid (2010) Draft WaterAid Zambia Country Strategy - 2011-2015.

<sup>5</sup> Population estimated to be living in slums 4,678,000. UN-HABITAT (2005) Urban Indicators Database available at <http://www.unhabitat.org/stats/Default.aspx>.

<sup>6</sup> The probability per 1,000 that a newborn baby will die before reaching age five (2009). Source: World Bank Open Data from the Inter-agency Group for Child Mortality Estimation.

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<sup>7</sup> Disability-adjusted life year (DALY) measures the years of life lost to premature mortality and the years lost to disability. Source: 2004 update of the Table 1 and Annex of the publication 'Safer water, better health', by Prüss-Ustün et al, WHO, Geneva, 2008. Accessed 28 June 2011. Available at [http://www.who.int/quantifying\\_ehimpacts/publications/saferwater/en/index.html](http://www.who.int/quantifying_ehimpacts/publications/saferwater/en/index.html).

<sup>8</sup> Source: 2004 update of the Table 1 and Annex of the publication 'Safer water, better health', by Prüss-Ustün et al., WHO, Geneva, 2008 as above.

<sup>9</sup> UNDP (2009) Country Sector Assessments: UNDP GoAL WASH Programme – Volume 1 – Zambia.

<sup>10</sup> USAID (2009) Zambia Water and Sanitation Profile.

<sup>11</sup> McSweeney, M. New and G. Lizcano (2008) UNDP Climate Change Country Profiles: Zambia. Accessed 12 July 2011, available at <http://ncsp.undp.org/document/undp-climate-change-country-profile-3>.

<sup>12</sup> Renewable Freshwater Supply estimates (km<sup>3</sup>/yr) (2006) from Pacific Institute ([www.worldwater.org](http://www.worldwater.org)), converted to ML per head of population using JMP population estimates. Data should be used with caution and treated as 'order of magnitude'. Freshwater estimates (2006 updates) were made at different periods from different sources. 2008 JMP population data used for consistency with other calculations.

<sup>13</sup> Source: Climate Vulnerability Monitor 2010 <http://daraint.org/climate-vulnerability-monitor/climate-vulnerability-monitor-2010>. Countries are classified according to: ACUTE+, ACUTE, ACUTE-, SEVERE+, SEVERE, SEVERE-, HIGH+, HIGH, HIGH-, MODERATE, LOW. For information on included datasets and methodology for aggregation and categorising, see [http://daraint.org/wp-content/uploads/2010/12/CVM\\_Methodology.pdf](http://daraint.org/wp-content/uploads/2010/12/CVM_Methodology.pdf).

<sup>14</sup> Source: Environmental Vulnerability Index 2004 developed by SOPAC, UNEP and partners <http://www.vulnerabilityindex.net/>. Countries are classified according to: Extremely vulnerable, Highly vulnerable, Vulnerable, At risk, Resilient.

<sup>15</sup> UNICEF (2008) UNICEF Humanitarian Action in Zambia, 2008. Accessed 21 July 2011, available at [http://www.unicef.org/har08/files/har08\\_Zambia\\_countrychapter.pdf](http://www.unicef.org/har08/files/har08_Zambia_countrychapter.pdf).