



Exploring the Impact of Climate Change on Children in South Africa

Summary of Findings



women, children & people with disabilities

Department:
Women, Children and People with Disabilities
REPUBLIC OF SOUTH AFRICA



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA



unicef 

unite for children

Exploring the Impact of Climate Change on Children in South Africa. Summary of Findings

November 2011

Acknowledgements

- This study was commissioned and funded by the UNICEF South Africa in partnership with the Department for Women, Children and People with Disabilities and the Department of Environmental Affairs.
- The principle authors of the report were Lindsey Jones, Patricia Martin, Paola Perezniето and Sarah Standley from the Overseas Development Institute (ODI). Hanna Alder, Karen Kallman, Tom Mitchell, David Walker, and Emily Wilkinson provided insightful research support.
- The study was coordinated by a team from UNICEF South Africa including Bjorn Gelders, George Laryea-Adjei and Andries Viviers.
- The study steering committee provided much needed technical direction. Members of the steering committee included Sinah Moruane, Rose September, Nchedi Maphokga-Moripe and Mary Mononela (Department for Women, Children and People with Disabilities); Sylvester Mpandeli, Tsepho Moremi, Puzani Lodi (Department of Environmental Affairs); Whynie Adams (Department of Social Development); George Laryea-Adjei, Andries Viviers, Bjorn Gelders, Geetanjali Narayan (UNICEF South Africa); Michele Ferenz, Kerry Constabile, Caroline Howe (UNICEF New York); Antony Spalton (UNICEF Geneva).
- Contributions from key informants, including children, government officials, and staff from civil society, research organisations and private firms are very much acknowledged.

© UNICEF

All care has been taken to ensure that the information is correct and original sources have been indicated for reference and verification. With an identification of UNICEF as source, the document may be freely quoted, reviewed, abstracted, reproduced and translated, in part or in whole, but not for sale nor for use in conjunction with commercial purposes. Original sources should be acknowledged where indicated in the publication.

Suggested citation: UNICEF. 2011. *Exploring the Impact of Climate Change on Children in South Africa. Summary of Findings*. Pretoria: UNICEF South Africa

Obtainable free of charge from:

UNICEF

Website: <http://www.unicef.org/southafrica>

Cover, opposite and back page photographs: © UNICEF/Schermbrucker

Layout: Handmade Communications (viv@handmadecom.co.za)



**Exploring the Impact of Climate
Change on Children in South Africa
Summary of Findings**



© UNICEF/Schermbrucker

Summary of Findings

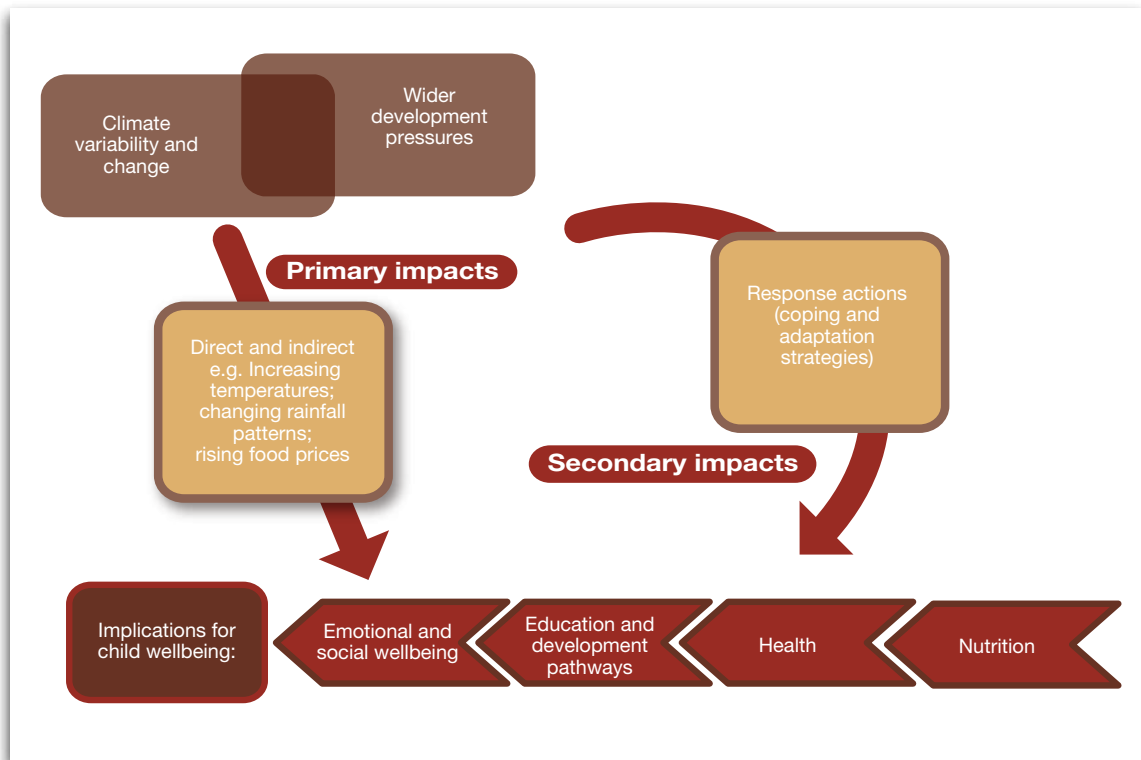
Children are disproportionately vulnerable to the impacts of climate change. The specific nature of their vulnerability is multidimensional, shaped largely by the physical, social, and emotional changes that take place over the course of childhood. These changes are intensified by children's heightened sensitivity to negative or high-impact events during the early stages of development and by their general lack of agency and voice.

In the case of South Africa, the impacts of climate change on children need to be considered in relation to wider development pressures affecting the country. Challenges such as international economic shocks and stresses, high levels of poverty and inequality, population changes, effects of HIV and AIDS, management of scarce natural resources and rapid urbanisation will each interact with climate change. The results of those interactions will affect how far the effects of climate change are transmitted to children and households at the local level. With this in mind, an effective response to changing climate and development pressures requires efforts from all stakeholders as well as good coordination across multiple levels of governance, from household and community, through municipal and provincial, to national and international levels.

There is an important international legal framework that underpins the need to focus on how children's well-being can be affected by climate change. It particularly points out the duty of the State to enable children's rights to be met. The United Nations Convention on the Rights of the Child (UNCRC) commits all signatory states to protecting the right of every child to a safe, healthy environment in which to develop and grow. The African Charter on the Rights and Welfare of the Child (ACRWC) recognises that the development of a child requires particular care with regard to health, physical, mental, moral and social development. It recognises that the child's development also requires legal protection in conditions of freedom, dignity and security. In particular, it recognises the role of the State in protecting and reuniting children who have been displaced as a result of natural disasters. The World Fit for Children declaration, which is a consensus outcome from the UN General Assembly Special Session on Children held in 1992, articulates the commitment of states to protect children and to minimise the impact on them of natural disasters and environmental degradation.

South Africa has already taken steps to understand, recognise and address the challenges that climate change poses. This is evident in its National Climate Change Response strategies and other examples of environmental and developmental policy response actions. Yet, within these strategies, the ability to recognise and address the needs of the country's children is not well established.

Figure 1: Analytical framework used in the study



Understanding the impacts of climate change on children in South Africa

Despite the particular vulnerability of children, few studies have investigated how climate change will affect child development and well-being across South Africa, in the short, medium and long term. This study seeks to redress this deficiency by exploring the key challenges that relate to children and climate change in South Africa. In addition to synthesising relevant international and South African literature about impacts, vulnerability and adaptation, the study is complemented by data collected via a series of international and national key informant interviews. Further to this, two case studies were undertaken, involving an urban coastal region and rural agricultural zone.

The analysis of the impacts of climate change on child well-being is divided into primary and secondary impacts. Substantial changes in South Africa's climate are likely to be caused by such variables as rising temperatures, changing patterns of precipitation and differences in the frequency and intensity of extreme events. Each of these changes will have a significantly direct, physical impact on children. Examples of direct, primary impacts may include injury suffered during unusually heavy rainfall events or increases in infectious, vector and water-borne diseases in areas subject to higher annual average temperatures and rainfall intensity. These impacts can also be felt indirectly when climate change interacts with other development pressures. This results in challenges such as rising food prices or issues of local conflict over scarce natural resources where children and households are forced to cope accordingly.

Secondary impacts on children are associated with the coping and adaptation strategies adopted in response to climate change. At the local level, examples of adaptation strategies would be: changing lifestyle and behaviour; seeking other forms of temporary employment to supplement income; permanently migrating to exploit new opportunities; or adopting a new livelihood practice. Though these strategies might be undertaken over longer timescales, they have significant and profound implications for child development and well-being. Typically, heads of households and caregivers

decide these strategies. However, children may have some degree of agency and, when living on their own or in child-headed households, children will often influence the nature of adaptation strategies themselves.

The ability to carry out these adaptation strategies is known as the ‘adaptive capacity’. Levels of adaptive capacity vary tremendously from person to person, based on a range of socio-economic characteristics¹. Those from poor households and marginalised groups (including women and girls) are generally considered to have lower adaptive capacity. This study seeks to give value by complementing the analysis of primary impacts with an exploration of how household coping and adaptation strategies will affect children over the short and long term.

How is South Africa’s climate changing?

Understanding how the climate is changing is an extremely difficult process because of the complex interactions between land, oceans and the atmosphere, and uncertainties in trying to model and predict the outcome of these interactions, particularly at the local level. The study has relied on observed records of past temperature and on simulated projections of future climate as its two main sources of information. Broadly speaking, observation records show that South Africa’s climate has experienced trends of increasing average annual temperatures and slight decreases in average annual precipitation from 1970 to 1990 (McSweeney et al. 2010)². However, significant variation, particularly in patterns of precipitation, exists across the country and across different seasons. For example, records point towards positive trends (i.e. more rainfall) over the southwest winter rainfall region and negative trends (less rainfall) over the north-east summer rainfall region. South Africans notice an increasing trend in daily temperature extremes and the number of annual ‘hot’³ days and nights.

‘One minute it’s hot, the next minute it’s raining and there is hail,
and then it’s hot again’
(From national focus group discussion [FGD] with children
aged 14 to 17 years)⁴.

Future-climate projections are arrived at by using climate models to simulate the characteristics of the earth’s systems. This technique is particularly complicated and projections need to be understood in the context of large uncertainties. To some extent, at the global and the regional scale, climate change projections are fairly well established. Yet there remain many uncertainties about projecting changes at the local level. However, reliable information is available and is good enough to inform adaptation policy across various scales. For South Africa, there are key climate variables that relate to changes in temperature and rainfall patterns (see Table 1).

Sharp increases in temperature are expected, with rates of increase higher in the interior of the country than along the coast. With regards to projections of rainfall, an imaginary line divides the country in two. Significant increases in the average annual rainfall are projected for the central and eastern regions. Contrasting sharp decreases are expected for the west. More importantly, significant changes in rainfall variability and intensity are projected throughout the country, with consequences for the incidence of floods and droughts. These changes are likely to have considerable implications for the water and sanitation, health, agriculture, residential, transportation and industry sectors.

1 For further information about the characteristics of adaptive capacity at the local level, see the Africa Climate Change Resilience Alliance (ACCRA).

2 See main report for more detailed analysis of climate trends.

3 A ‘hot’ day or ‘hot’ night is defined by those in which the temperature exceeds 10% as compared to that of days or nights in current climate of that region and season.

4 UNICEF South Africa carried out a series of focus group discussions with children at the national level and in the Limpopo and KwaZulu-Natal provinces. The selection of quotes presented in this summary illustrates some of the responses from participants.

Table 1: Summary of projections in changes to key regional climate variables for the distant future across South Africa

	Average annual temperature & number of 'hot' days and nights	Total annual average rainfall	Rainfall intensity, and number of heavy rainfall events annually	Total days with no rainfall (p.a.)
North-East (Limpopo, Mpumalanga, Gauteng)	Moderate increase	High increase	High increase	Moderate decrease
Interior (Free State, North West)	High increase	Moderate increase	High variation (increase in some areas, decrease in others)	Little/no apparent change
West (Western Cape, Northern Cape)	Slight increase	High decrease	Moderate/high decrease	Moderate increase
South-East (Eastern Cape, KwaZulu-Natal)	Slight increase	High increase	High increase	Moderate decrease

Distant future is defined as 2081–2100. Degrees of impact are given as broad qualitative summaries of outputs from Schultze et al. (2010), Lumsden et al. (2009), DoEA (2010) and McSweeney (2010). Relative qualifications are not bracketed into quantitative categories but reflect a general summary of available climate data. The table seeks to summarise a wealth of regional data. For a more specific description of regional impacts, refer to the source documents.

Box 1: Summary of projected climate change for South Africa

The projections discussed are based on a synthesis of different climate models, with varying ranges of spatial resolution and accuracy.

Temperature

- Mean annual temperature is projected to increase by 1.1–2.4°C by the 2060s and 1.6–4.3°C by the 2090s.
- All regions are likely to be warmer in the future, although warming is expected to be greater inland than in the coastal regions.
- There will be a substantial increase in the frequency of 'hot' days and nights.

Precipitation

- Projected changes in precipitation show wide variations across the country.
- Generally, more rainfall is projected in the east, in terms of both mean annual rainfall and number of heavy rainfall events. In some cases, there will be very large increases in mean annual precipitation (up to 80% for areas such as Limpopo province in some models).
- Less rainfall is projected for the west and the interior (60-80% for western areas of the Northern Cape, Westersveld and Richtersveld in some models).

Extreme events

- Generally, there will be increases in rainfall variability countrywide, with consequences for the incidence of flood and drought events.
- There are wide disagreements among models about the impacts of future El Niño events.

For further detail and sources see main report.

‘The consequences of climate change are widespread: poverty, inequitable land distribution, and agriculture. This will mainly depend on how the rain falls’
(From national FGD with children aged 14 to 17 years).

South Africa’s development challenges and their impacts on children

In order to understand how children are affected by climate change at the local level, it is important to recognise the interactions and overlaps between climate change and wider development pressures. In many senses, climate change and development have a symbiotic relationship. Climate change is a threat to sustainable development and the achievement of many key development targets, such as the Millennium Development Goals. Furthermore, the impacts of climate change are often mediated through interacting development pressures. For example, individuals seldom respond to climate change directly. At the household level, climate change typically is felt indirectly through other processes resulting from development pressures, such as rising food prices, the spread of disease and conflicts over natural resource management.

‘As a result of the rise in sea level there will be flooding.
Then when floods occur there will be losses in part of the city.
There will also be a reduction in the crop production.
This will result in goods being expensive in the stores and there will also be the increase in disease’
(FGD with children, KwaZulu-Natal).

South Africa’s children suffer high rates of poverty, inequality and climate change vulnerability, particularly those situated in rural areas, because they lack access to adequate sanitation and water, housing, food, education and health care. This has important implications for childhood development. In nearly all aspects of socio-economic comparison, Black African children are disadvantaged significantly more than children of other racial origins.

Half of all children live in rural areas. KwaZulu-Natal, Limpopo and the Eastern Cape (the locations of the former Homelands) contain 76% of all rural-dwelling children. In urban areas too, children face different development pressures caused by over population, poor urban planning and inadequate infrastructure. This makes them particularly vulnerable to the impacts of climate change.

‘So I come from a poor community and everything, what am I going to worry about? Feeding my children with the food that I can afford, or saving the environment?’
(From national FGD with children aged 14 to 17 years).

Table 2: Main primary impacts of climate change on children in South Africa

	Areas with increased likelihood of a higher concentration of affected children	Type of impact
Health	Limpopo, Mpumalanga and Gauteng	Incidence of malaria could increase resulting from a moderate rise in temperature and an increase in the number of 'hot' days per annum, combined with increased intensity of rainfall and insufficient sanitation infrastructure, which can lead to an accumulation of stagnant water. Those farthest away from health facilities and with poorer access to water and sanitation will be most affected.
	Free State, North West	Malaria outbreaks. Although malaria cases are currently very few, a steep increase in temperature and number of 'hot' days per annum could increase the spread of the disease. Health infrastructure in these regions is currently unprepared to deal with malaria outbreaks, given the historically low prevalence in the area.
	KwaZulu-Natal, Limpopo and Mpumalanga, particularly common in informal urban settlements	Vulnerability to infectious diseases such as diarrhoea and cholera could increase, resulting from higher intensity rain episodes where water and sanitation facilities are inadequate, in both rural and urban localities, although potentially worse in informal urban settlements where there are greater concentrations of poor people.
	Free State and North West and some larger inland urban areas such as Johannesburg, Pretoria and Polokwane	Incidence of respiratory diseases and heat stroke may increase. Higher temperatures and a greater number of 'hot' days over the annual cycle are particularly linked to reduced air quality. Higher levels of pollution can lead to asthma and tuberculosis, which are particularly problematic given the reduction in resilience incurred by a higher prevalence of HIV/AIDS in these areas. Incidents of heatstroke are likely to be exacerbated by deteriorating levels of water, owing to evapo-transpiration.
	Limpopo, Mpumalanga, Gauteng, Eastern Cape, KwaZulu-Natal – particularly for those living in informal housing	Risk of drowning or injury resulting from damage to infrastructure. Increases in rain intensity, particularly with insufficient water management systems and high population density, can lead to flooding.
Nutrition	Eastern Cape, Free State, North West	Risk of food shortages, linked to child hunger and malnutrition. In rural areas where subsistence agriculture is prevalent, there is greater likelihood of drought linked to higher temperatures and unpredictable rainfall. This is likely to have more acute effects where child hunger is already significant.
Education	Limpopo, Mpumalanga and Gauteng, Eastern Cape, KwaZulu-Natal	Potential floods and heavy rainfall could damage school infrastructure and roads or bridges that reach schools. Flooding is already a cause of school absenteeism and this could be aggravated by heavier rainfall patterns. Possible increase in disease and malnutrition could affect school attendance and student performance across the country.
Emotional and social well-being	In the various localities where disasters occur and are likely to become more prominent, increased variability is likely nationwide, notably across much of the north-east (flood), and southwest (drought).	Children can be distressed emotionally by the occurrence of disasters such as floods or droughts, especially in the absence of counselling, official support mechanisms or a stable, supportive home environment.
Other areas	Free State, North West, Limpopo, Western Cape, Northern Cape	Greater time burden for children (particularly girls) because of having to travel greater distances to fetch water in those areas where water availability is reduced – particularly where households already experience inadequate access to water sources. In localities with dense forests, forest fires could result in injury or fatality.

Based on generalised information; assumes that no adaptation responses are being made.
Source: Authors' compilation; see main report.



© UNICEF/Schermbrucker

What are the primary impacts of climate change on children in South Africa?

As South Africa's changing climate is likely to vary considerably between provinces, so will the primary impacts on children vary. However, we can expect changing climate and development pressures to have profound implications for health, nutrition, education, emotional and social well-being across different parts of the country. A summary of the likely main primary impacts on children and the regional variations in the types of impact is shown in Table 2.

Changes in rainfall patterns will have multiple primary impacts on children in South Africa. For example, the incidence of malaria may rise where higher rainfall is combined with higher temperatures, particularly in the North West and Free States provinces. Similarly, the prevalence of such water-, air- and vector-borne diseases as diarrhoea, cholera and bilharzia may be expected to increase in areas where higher levels of rainfall (in terms of intensity, distribution and annual average) are projected, principally where this coincides with poor levels of and inadequate access to sanitation. These impacts will be particularly detrimental if few response and adaptation policy actions are taken.

‘In my community a lot of people tend to defecate in the local grounds,
landfill sites. I can encourage my community to have
better sanitation, use of toilets, because most of them they
just defecate everywhere they go’
(FGD with children, Limpopo).

Where levels of rainfall are projected to decrease (notably in the west of the country), issues of land degradation, soil erosion and lowered agricultural food production are of particular concern to both children and households. In these contexts, young children are most vulnerable to such threats as



an inadequate supply of safe drinking water and malnutrition because of their physical vulnerability and their nutritional needs. Where households face high levels of stress from loss of livelihoods or are displaced to find alternative livelihoods, evidence from other countries shows that children are more exposed to emotional or physical abuse and neglect⁵. Since children, particularly girls, are often responsible for fetching the household supply of water, they will have to travel greater distances as sources become scarcer. As a result, they will have less time to spend on school-work and leisure, both of which are vital for children's social and intellectual development.

Young children are at higher risk of increasing temperatures, especially heatstroke. Projections of increasing temperatures and the number of 'hot' days and nights per year, particularly for the interior of South Africa, are of notable concern. Urban areas could experience pronounced warming effects owing to the 'urban heat island effect'⁶. Those children already experiencing disproportionate levels of exclusion and underdevelopment will be more severely affected by the impacts of climate change. Children may also be affected by negative changes in intra-household dynamics, the emotional distress linked to reduced access to basic services, illness, displacement or damage to housing from flooding.

‘[Climate change] causes children to drop out of school when there is flooding, which floods away the houses and all that stuff. It causes them to drop out of school and come and look after their families, which will make them suffer, especially educationally or academically so and then another thing is that [...] there will be problems in terms of the infrastructure. So children won't be able to go to school [...]’
(FGD with children, Limpopo).

5 See Bartlett (2008) for more.

6 See Bartlett (2008).

What are the secondary impacts of climate change on children in South Africa?

In addition to primary impacts, coping and adaptation strategies in response to a changing climate will have considerable secondary implications for South Africa's children. Common adaptation strategies at the local level (undertaken by households or by children themselves) include: changes in lifestyle and behaviour; supplementation of livelihood activities and adaptation of current livelihood practices; and seeking of alternative livelihoods. These strategies generally operate over a longer timescale yet have significant and profound implications for child development and well-being.

Table 3: Secondary impacts on children through different adaptation strategies

Adaptation strategy	Indirect impacts on children
Lifestyle changes	<p>Households may resort to reducing expenditure on basic goods and services, including those that are particularly important for children.</p> <p>Similarly, children living on their own, or in child headed households, will need to adjust spending on basic goods and services, which will further exacerbate their already precarious situation.</p>
Supplementing livelihoods, adopting improved and appropriate technology	<p>Increasing the amount of time that caregivers (usually mothers) spend on income generating activities outside of the household reduces the level of time spent on caring for children, leading to vital nurture deficits.</p> <p>The gender division of labour in the domestic sphere implies that girls may be compelled to fulfil the role of caregiver in the absence of an adult, thereby spending more time on domestic and care work, and less on schooling and leisure.</p> <p>Children may also be required to participate in income generating activities, which may, though not necessarily, interfere with schooling. However, given the systemic nature of climate shocks, the types of work available may be limited or even in some cases harmful, either physically or psychologically.</p> <p>On the other hand, additional economic contributions made by children can go some way toward mitigating impacts on other siblings.</p>
Alternative livelihoods and migration	<p>Migration has mixed impacts on children. When one or both parents leave the household, children can face increased levels of emotional distress and instability. However, remittances from parents can contribute to a better quality of life if children are adequately cared for (usually by members of the extended family).</p> <p>Children can also migrate. However, this may render them particularly vulnerable to a range of risks associated with losing the support structure of a familiar home environment. These risks include engaging in harmful work, living in inadequate housing with poor services (particularly if further climate disasters are sustained) and a higher possibility of being trafficked for sex work or child labour. Exposure to these risks may result in detrimental impacts on the social and emotional well-being of the child.</p>

In areas where effective adaptation responses are lacking, changes in the climate may result in a lowering of household income and livelihood security. Inevitably, the consequences for children would be negative. Small changes made in lifestyle behaviour for the sake of adapting, such as adjustments in the management of resources and in the methods and mix of inputs used in producing goods and services, can have important implications for children. For example, household surveys

of rural communities in KwaZulu-Natal, Limpopo and North West provinces show that individuals have reprioritised elements of their production, consumption and ecological systems in response to changing climate and development pressures⁷. Similarly, a drop in income in households is more likely to cause cuts in food expenditure, substituting less nutritious food or consuming less, with profoundly detrimental effects on child development.

Similarly, adjustments in consumption could result in a reduction in spending on health care and school related costs. A shock to incomes often means lower school attendance, performance or even dropout. With that, some children, particularly the older ones, would take up paid work to help support the household. The work can sometimes be exploitative or harmful for girls or boys. Changes in climate may require individuals to modify their existing livelihood practices, either to minimise the consequences of negative impacts or to take advantage of new opportunities. This can often take the form of supplementing livelihoods (seeking other forms of temporary employment to supplement income) or of adapting current practices (changing practices to accommodate the impacts of changing climate and development pressures). For farmers in Limpopo, this can be seen in efforts to modify their planting dates, to increase their irrigation potential and change the amount of land that they cultivate or use for grazing.

These adaptation strategies have profound implications for the division and distribution of reproductive labour. The entry of the primary caregiver (mother or other) into the labour force can result in the intensification of overall domestic workload. This may reduce the time spent on caring for children. Alternatively, domestic duties may be redistributed to children, generally girls, who will then dedicate less vital time to school and leisure. However, it is important to note that there are possible positive benefits to be had as, in some cases, children can access an income in this way to help buffer some of the cuts in spending and even learn new skills.

Finally, seeking alternative livelihoods (moving permanently from one livelihood practice to another or switching from one context to another on a permanent basis) is and will continue to be an increasingly important strategy as climate change forces people to adapt the ways in which they sustain themselves and make a living. Households may need to abandon current livelihood practices completely, in favour of opportunities that are more sustainable in the changing climate. For example, in certain areas of North West province, adolescents are moving away from farm work. This redirection is because of doubts over the long-term viability and dominance of rain-fed farming as a livelihood strategy. It is a considerable challenge for them in the context of lower employment and work opportunities⁸. Continued and intensified climate shock and stress is likely to influence patterns of rural to urban migration, within South Africa and without, across the Southern African region. Migration (both temporary and permanent) can have important impacts on children's well-being. The migration of a carer can help to stabilise or improve household economic status but extended absences of carers can also cause emotional distress for children. Depending on the level of their care, children risk being exposed to violence or neglect. These transformational responses are likely to have the largest impact on children's development and well-being.

National policy responses to climate change

At the national and local levels, the South African government has been active in generating strategies, policies and plans that respond to a growing awareness of the impacts of climate change. The National Climate Change Response White Paper (2011), principally, identifies different vulnerable groups, including children and recognises the need to respond to a changing disease profile, particularly adverse to children as a result of climate change.

⁷ See main report for more detail, or refer to Osbhar et al 2010

⁸ See Osbhar et al. (2010) for further details.

In general, however, children remain invisible because the majority of South Africa's climate change policies and programmes, whether they be at national, provincial or district levels, do not yet adequately recognise children's vulnerabilities, specific needs and the role children can play as agents of change at the grassroots level. In policy documents there appears to be a prevailing assumption that children are not individual bearers of rights. Instead, their rights are regarded as being subsumed within households and communities. In this way children are expected to benefit automatically from measures that target vulnerable and poor families as well as from the economic and social development of communities *per se*. While children certainly can benefit from these community and household level measures, owing to their particular vulnerabilities and household dynamics, they are likely to be affected differently from other members of the household. Children may require additional supportive measures or the creation of spaces in which they can become more active agents of change.

For example, children are not targeted as a priority group currently in national disaster management laws. The heightened risk of children to injury, abuse and neglect in the wake of disasters, linked to climate change, requires that corresponding laws and policies be more child-focused. Similarly, the possible transmission pathways of climate change to children are not yet recognised in such key sectors most relevant to children as food and nutrition; water, sanitation and waste removal; education; and social protection. One notable exception is South Africa's malaria control programme. While the Department of Health acknowledges that there is still much to learn about the impact of climate change on malaria, it has put preparatory measures in place already, to deal with the possible consequences of climate change.

At the local level, there are some positive entry points for child-sensitive planning. These relate to the mandate of local governments to plan in key child-focused sectors, such as school and health.⁹ However, there are important knowledge and capacity gaps to be addressed so that local level planners can better be able to consider children's specific vulnerabilities in their plans. They could allow spaces for children's participation to inform this process.

‘What I can say is not only am I the future, I am a human being now.
So the things, like climate change as it affects you,
it affects me. If not more. So that's why I think I
should have a voice in this’
(From national FGD with children aged 14 to 17 years).

Children's participation in policy processes

Although children are often considered in terms of their inherent vulnerability, it is a mistake to think of them entirely as victims. There is growing global evidence of the positive role children can play in relation to climate change. They can transfer knowledge to their households and communities, can promote positive change and inform local level planners about how to reduce risks they face with the increased likelihood of disasters. Children not only have an interest in being part of decisions that affect their future, it is also their right to be involved.

In South Africa, spaces are starting to be made for children to participate and become more actively engaged in issues related to climate change. However, they are still limited in scope and scale. Some initiatives, supported by schools, have already inspired children and adolescents to become more active voices about climate change and the protection of the environment. The next step is to

⁹ This study also presents case studies from the Limpopo Province and the city of Durban to illustrate some of the dynamics between national and local level policy making, planning and implementation of climate change actions, including identifying how children's issues can be made more visible. For more information see the main report.

incorporate these initiatives in local policy spaces, where the voices of children can be heard. There they can better inform planning and ensure a better focus on children's adaptive capacity.

Hand-in-hand with any call for greater child participation goes the need to ensure that issues of climate change are communicated effectively to children. Studies show that the basic principles of climate change are not well understood by many children and, indeed, by the adult population in South Africa in general. A national survey conducted in 2007 found that 22 percent of the youth (aged 16–24 years) had never heard about climate change or global warming before. Twenty-three percent had heard about it but knew nothing or hardly anything about climate change.¹⁰ The need for more effective and integrated education and public outreach programmes is imperative. Extensive and successful awareness and communication programmes that are targeted specifically at children are required, to enhance child participation in decision-making.

‘I will ask the President to start a campaign himself to go to the schools and almost the whole country, to educate the children in the schools about climate change. Maybe they will try and do something about it’
(FGD with children, Limpopo).

Recommendations for policy

While there is a great deal of uncertainty surrounding climate change in South Africa, two things are known: that change is a certainty and that action is required now, in order for policy decisions to support children and households in adapting to these changes successfully and sustainably.

The projected effects of climate change in South Africa, as well as the global literature on the impacts of climate change on children, indicate the need for focused planning for preventive and responsive measures to enhance child well-being. Shortfalls in basic service provisions, inequities in service access, household poverty, poor housing, protection risks and income vulnerabilities are some of the challenges that millions of children in South Africa face on a daily basis. These challenges undermine their capacity to adapt to possible environmental shocks. Better planning and resourcing within national, provincial and local governments could enable children and their families to cope better with climate change impacts as they arise in the short and medium run.

At the national level, institutional changes are needed. Effective representation and meaningful participation of children is a good starting point. Then representation has to move from passive referencing in development plans to active integration and mainstreaming within all relevant decision making processes. Children must be recognised formally as a unique social group and be formally represented in the climate change policy development process and in processes to advance South Africa's commitment to Disaster Risk Reduction. For example, coordinating structures such as the Intergovernmental Committee on Climate Change (IGCCC) and the National Climate Change Committee (NCCC) could be expanded to include all departments with a child-relevant mandate. Similarly, continuing processes to develop sectoral plans and a National Adaptation Plan by 2013 present an opportunity to better integrate children's issues. Lead agencies of climate change planning (such as the Ministry of Environmental Affairs) should promote the interest and engagement of other sector ministries in this regard. These should be promoted in close collaboration with the Ministry of Women, Children and Persons with Disabilities (MWCPD) and other actors whose work is improving child well-being. Departments' specific capacity for climate change and disaster risk reduction as it relates to children will be required to be strengthened.

¹⁰ Seager, J. (2008)

Social protection policies should consider any additional rising needs in the context of climate change economic pressures. The National Health Insurance, National Environmental Health Policy and Sanitation Task Team processes offer unique spaces in which to increase the link between climate change and children and to advocate child-focused solutions. Medium term adjustments to social grants should be ready to be made, to respond to environmental shocks. Many opportunities do exist that allow children and youth to take advantage of a potential future green economy. However, ensuring they do so will require significant policy attention.

At the provincial and local levels, options to integrate children's issues related to climate change into development policy processes include:

- The facilitation of participation by children in the development of conventional provincial plans, integrated development plans and adaptation plans;
- Water, sanitation and waste removal policies prioritising the provision of services to households where children are found, ensuring that the quantity provided in terms of free basic water and sanitation programmes is sufficient to meet the water requirements of children with their attendant risks of high temperatures, overcrowding, water-borne diseases and dehydration (Plans should make provisions for higher demand pressures on basic social services in the medium term in line with climate related risks for children, as identified in this study);
- Social development services becoming an integral part of any provincial and local government adaptation plan, with a clear identification of the protection risks children face in the case of climatic events (This would require, for example, establishing child-safe central gathering points in the case of an emergency where social workers, health workers and other support services can have easy access to children and children can be protected. Additional measures should include



raising awareness of risk through campaigns, develop drills and evacuation procedures as well as promote early warning mechanisms);

- Education for parents and children by the different sectors, to ensure that both are aware of the risks of climate change, such as the heightened risk of abuse and harm, heat stress and others and providing them with clear guidance on how to best avoid these eventualities (this might include, for example, guidance on how to keep children cool in informal settlements and what to do if parent and child get separated during an event. Building codes and policies on school construction should also factor in the physical safety of schools and other places of learning);
- Participatory assessments on disaster risk to which children and adults can contribute, identifying hazards and challenges for children in schools, their households and the community.

As part of these efforts, provincial and local government should be supported so that officials understand their roles and responsibilities to children. How these can best be fulfilled, to maximise the adaptive capacity of children and their families through local development plans and other local programmes, should also be understood. There are numerous training programmes and manuals being developed about building climate change capacity at local government level. It is critical that these integrate child-related issues.

Access to information is a particular challenge. It inhibits participation by children and even by adults because of the scientific level of the dialogue and the publication in English of documents. Extensive, successful awareness and communication programmes, targeted specifically at children, are required to enhance child participation in decision-making. Furthermore, relevant non-governmental organisations (NOGs) and government departments can support current awareness-raising initiatives. These initiatives would ensure that children's voices become the catalysts for change on household, community, local, provincial and national levels. For example, very practical measures include developing child-friendly policy briefs in different languages on core issues, to be disseminated by schools; or using inputs from the school-based State of the Environment competition in the development of policies as well as the awareness-raising material and other advocacy tools of NGOs and government departments.

Overall, given the dynamic context within which South Africa's climate change policy is developing, there is a great opportunity to further understand the impacts of climate change and to deliver positive benefits to vulnerable groups, particularly the children. Change will be driven not only by national government but, rather, provincial and local governments. Other development actors will play an important role in developing and implementing plans that are relevant for children. In responding to climate change, actions are needed across all scales to address the multidimensional needs of children. Importantly, children themselves can play significant roles in relation to climate change, transferring knowledge to their households and communities, promoting positive change and informing local level planners on how to reduce the risks they face in relation to the increased likelihood of disasters.

References

- Bartlett, S. (2008) *Climate Change and Urban Children: Impacts and Implications for Adaptation in Low- and Middle-Income Countries*. London: IIED.
- Jones, L., Ludi, E. and Levine, S. (2010) 'Towards a Characterisation of Adaptive Capacity: A Framework for Analysing Adaptive Capacity at the Local Level'. *Background Note*. London: ODI.
- Lawson, D., (2007) *A Gendered Analysis of Time Poverty – The Importance of Infrastructure*. Manchester: Institute for Development Policy & Management, University of Manchester.
- Lumsden, T., Schulze, R. and Hewitson, B. (2009) 'Evaluation of Potential Changes in Hydrologically Relevant Statistics of Rainfall in Southern Africa under Conditions of Climate Change'. *Water SA* 35(5): 646-656.
- McSweeney, C., New, M. and Lizanco, G. (2007) 'Climate Change Country Profiles'. Oxford: UNDP.
- Osbahr, H., Twyman, C., Adger, W.N. and Thomas, D.S.G. (2010) 'Evaluating Successful Livelihood Adaptation to Climate Variability and Change in Southern Africa'. *Ecology and Society* 15(27).
- Seager, J. (2008) 'Blowing hot or cold: South African attitudes to climate change.' *HSRC Review* 6(3).
- Schulze, R.E., Hewitson, B.C., Barichievy, K.R., Tadross, M.A., Kunz, R.P., Horan, M.J.C. and Lumsden, T.G. (2010) 'Methodological Approaches to Assessing Eco-Hydrological Responses to Climate Change in South Africa'. Pretoria: Water Research Commission.
- UNICEF (2011) *Exploring the Impact of Climate Change on Children in South Africa*. Pretoria: UNICEF South Africa.



United Nations Children's Fund
6th Floor, Metro Park Building
351 Schoeman Street
PO Box 4884, Pretoria
Republic of South Africa
Telephone: +27 12 3548201
<http://www.unicef.org/southafrica>