



Climate Change and Trade: The Challenges for Southern Africa

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Mozambique and Climate Change

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About the author

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Abbreviations and acronyms

CDM	Clean Development Mechanism
FDI	foreign direct investment
GDP	gross domestic product
GHG	greenhouse gas
MDG	Millennium Development Goal
NAPA	National Adaptation Programme of Action
ODA	official development assistance

Background

Compared to other regions in the world, Africa's contribution to green house gas emissions is low — about 3.5% of the global total.¹ Nonetheless, the continent is one of the most vulnerable to the impacts of climate change due to widespread poverty and the lack of resources to deal with disasters. Predictions indicate that the main consequences of climate change will include rises in temperatures and sea levels; decreases in rainfall and water resources; and more frequent and severe droughts, floods and cyclones. It is predicted that coastal areas will experience more frequent and severe cyclones. It is further predicted that in the coming decades climate change in Africa will affect many sectors of the economy, including water resources, agriculture, food security, human settlements, fisheries, coastal zones and public health.²

Mozambique is one of the countries that, according to predictions, are likely to be severely affected by climate change in the next few decades. As temperatures rise, natural disasters and epidemics will increasingly affect the country. In fact, the effects of climate change are already being felt. The ten most serious disasters that the country has experienced have occurred during the last two decades, and four of these have occurred since 2000 (see table 1).³ It is estimated that the losses due to the floods in 2000 amounted to about \$600 million.⁴ Anecdotal evidence also suggests that the frequency and severity of natural disasters are increasing. Moreover, seasons are becoming shorter and rainfall more erratic,⁵ affecting agricultural production and food security.

¹ Shongwe SV, *The Impact of Climate Change on Health in the East, Central and Southern Africa (ECSA) Region: Regional Case Study*. London: Commonwealth Secretariat, 2009, p. 40, <http://www.thecommonwealth.org/files/190384/FileName/ECSA_2009.pdf>.

² *Ibid.*

³ Sietz D *et al.*, 'Mainstreaming climate adaptation into development assistance in Mozambique: Institutional barriers and opportunities', Policy Research Working Paper, 4711. Washington, DC: World Bank, p. 2.

⁴ Manguela A, 'Maputo municipal council climate change challenges and need for action', paper presented at the international conference on Cities and Climate Change, Oslo, 2009.

⁵ Structured interviews conducted with relevant stakeholders in Maputo, Mozambique.

Table 1: Mozambique’s natural disasters, 1950–2009

Year	Tropical cyclones	Share ^a	Droughts	Share ^a	Floods	Share ^a
1950–79	3	17%	1	9%	6	23%
1980–89	3	17%	2	18%	3	12%
1990–99	3	17%	2	18%	2	8%
2000–09	9	50%	6	55%	15	58%
Total	18		11		26	

^a Share (frequency) of each disaster per period.

Source: SAIIA’s calculations from Emergency Events Database (EM-DAT), 2009, <<http://www.emdat.be/Database/terms.html>>

Mozambique’s geographic position makes it prone to tropical cyclones, floods and droughts. The country is situated along the inter-tropic convergence zone that is responsible for rainfall patterns in Southern Africa. The long low-lying stretches of coastal areas (about 2 700 kilometres in length) make Mozambique one of Africa’s most vulnerable countries to climate change. This is further worsened by the fact that several major international rivers (the Zambezi, Limpopo, Rovuma, Inkomati, Save, etc.) enter the Indian Ocean through Mozambique. After very heavy rains in the region, the riverbanks in Mozambique usually burst, causing flooding in most parts of the country. Populations living along coastal areas are increasingly becoming vulnerable to sea-level rise and coastal erosion. It is predicted that along coastal areas climate change will result in the destruction of houses and the depletion of fish stocks that are crucial for the livelihoods of coastal communities.

Natural disasters across the country vary depending on the geographical position of the provinces. Floods and droughts occur in most parts of the country. However droughts are more frequent in the south, while floods are more frequent in central and southern Mozambique. Cyclones affect all the coastal regions of the country. Climate change through its heightened frequency of natural disasters has brought considerable socio-economic problems to the country. Lack of capacity and financial resources to respond quickly to natural disasters have worsened the impacts of climate change.

Moreover, more than 60% of Mozambique’s population live below the common international poverty line (i.e. \$1 per day) and do not have the capacity to cope with the impacts of natural disasters. Hence, the most vulnerable and poorest sections of the population have been mostly affected by the impacts of climate change. They have lost their dwellings, farm production (resulting

in food insecurity) and livestock. Displacements of populations are common when natural disasters occur. Hence, financial resources for critical development projects are diverted to post-disaster rehabilitation reconstruction programmes when disasters happen. This slows down the country's efforts to eradicate poverty and foster development. Most importantly, it undermines years of development efforts.

Agriculture, tourism and health are the main sectors that have been affected by climate change related disasters. Apart from these sectors, major critical types of infrastructure such as roads, bridges, clinics, hospitals and schools are destroyed by floods and cyclones, making a major dent in gains made in achieving the UN's Millennium Development Goals (MDGs). Natural disasters also retard the pace of economic growth. Fernandes estimates that the real annual gross domestic product (GDP) growth rate after the 2001 floods decreased from 7.0% to 5.4%.⁶ Inflation increased from 6.6% to 9.4%, reflecting the shortages caused by the disruption of agricultural production.⁷ More recently, the deceleration of GDP growth to 6.2% in 2008 is partly attributed to natural disasters such as cyclones and floods.⁸ Hence, climate change poses a major challenge to development in Mozambique.

The objective of this paper is to assess the likely impact of climate on major sectors of Mozambique's economy. The paper also attempts to highlight government initiatives currently in place to minimise the impacts of climate change. The remainder of the paper is structured as follows. The next section discusses the impacts of climate change on major sectors of Mozambique's economy and their social implications. The following section highlights how climate change is undermining Mozambique's ability to achieve its MDGs. The national response to climate change is given in the following section. The next section gives a discussion on the opportunities presented by climate change and the conclusion is given in the final section.

⁶ Fernandes E, *Preparing for Climate Change*. Washington, DC: World Bank, 2008.

⁷ *Ibid.*

⁸ OECD (Organisation for Economic Co-operation and Development), *African Economic Outlook: Mozambique*. Geneva: OECD, 2009, <<http://www.africaneconomicoutlook.org/en/countries/southern-africa/mozambique/>>.

Sectoral impacts

Agriculture

Agriculture is a very important sector in Mozambique and central to the country's poverty reduction strategy. More than 70% of the country's population live in rural areas and more than half of the rural population live below the poverty line.⁹ Rural Mozambique has limited employment opportunities and people who live there rely on agriculture for their livelihood, i.e. food security, income and employment.

Although the sector has not reached its full potential because of underinvestment over the years, it is still very important to the country's economy. It accounts for about 25.2% of Mozambique's GDP and employs about 78.5% of the country's workforce.¹⁰ The sector also features in Mozambique's exports and is a very important foreign exchange earner. In 2007 the sector accounted for about 11.4% of total exports.¹¹ This underpins the sector's importance in Mozambique's socio-economic development.

However, climate change is a threat to Mozambique's agricultural sector and may curtail the sector's ability to realise its socio-economic benefits. Droughts (erratic rainfall), cyclones and floods are already having a negative impact on crop yields and productivity. This, coupled with the fact that Mozambique is a net food importer, affects the food security of the country. Food insecurity is particularly prevalent in southern Mozambique, which is a food-deficit area. The recent global food crisis also had a very devastating impact on poor households, who could not afford basic food commodities.

Recent studies indicate that some productive regions of Mozambique may become warmer and others drier as a result of climate change. Studies further predict that because of climate change, rains would be more erratic. This poses a threat to food security, since Mozambique's agriculture is predominantly subsistence and relies on rainfall. Ludi *et al.* predict that Mozambique will be one of

⁹ Arndt C *et al.*, 'Biofuels, poverty and growth: A computable general equilibrium analysis for Mozambique', IFPRI Discussion Paper, 00803. Washington, DC: IFPRI, 2008, p. 2.

¹⁰ Nathan Associates, *Private Investment in the Agriculture Sector in Mozambique*. Maputo: USAID, Mozambique, 2008, p. 4.

¹¹ *Ibid.*, p. 5.

the African countries that would lose cereal production potential by 2080.¹² This would further dampen the realisation of Mozambique's poverty reduction goals, given that in the country cereals (mainly maize) are very important poverty-related food commodities.

In the last few years, agriculture has played a significant role in Mozambique's economic recovery and growth. As a result, the sector attracted foreign investment (FDI) in the horticulture and sugar industries. These subsectors created employment for surplus unskilled labour in rural areas with very limited employment opportunities. For example, FDI in four sugar mills by South African and Mauritian investors in the last few years is estimated to have created about 26 000 jobs.¹³ Moreover, investments in agriculture also stimulated investments in ancillary services, which created further employment opportunities. Given the current predictions about future impacts of climate change on agriculture, investments in the sector may decline in the future. This would clearly have a negative impact on employment and the amount of taxes collected by government. Foreign exchange earnings from horticultural and sugar exports may decline as well.

The preceding discussion indicates that the decline in agriculture would have negative impacts on Mozambique's social and economic conditions. On the social front, poverty and unemployment would increase, while economically, agriculture's contribution to Mozambique's GDP and export earnings would also decrease. Equally important is the threat that climate change (i.e. a rise in temperatures) poses to fishery stocks that are important for coastal communities.

Tourism

Mozambique has a huge tourism potential, and its comparative advantage lies in its marine and wildlife resources and cultural heritage. In the last few years, the tourism sector has seen a tremendous recovery, which has seen it attracting new FDI. In recognition of the importance of tourism, in 2000 Mozambique created the Ministry of Tourism. The importance of tourism in Mozambique lies in its poverty reduction potential. Tourism services are labour intensive in nature and have the potential to create employment for low-skilled labour. Most tourism attractions are located in rural areas where formal employment opportunities are almost non-existent. Employment opportunities in the tourism sector therefore have positive social benefits for the rural poor.

¹² Ludi E *et al.*, *Climate Change and Agriculture: Agricultural Trade, Markets and Investment*, draft report. London: Overseas Development Institute, 2007, p. 14.

¹³ OECD (Organisation for Economic Co-operation and Development), *African Economic Outlook: Mozambique*. Geneva: OECD, 2008, p. 462.

Moreover, tourism has the potential to increase revenues and exports, and also to diversify the country's export base. In 2003 the sector accounted for 2.3% of GDP and about 12% of total foreign earnings.¹⁴ Tourism linkages to the rest of the economy through other industries can also be significant. However, such linkages depend on how well integrated tourism is with the rest of the economy.

Further, these benefits are increasingly under threat because of climate change. Global warming is resulting in sea-level and temperature rises. Sea-level rise causes coastal erosion (e.g. the Maputo coastline), which in turn destroys key tourism infrastructure along the coast and also reconfigures existing beaches that attract tourists. As illustrated in box 1, tourism infrastructure in coastal areas is also destroyed by severe weather conditions such as floods and cyclones induced by climate change. Temperature rises cause coral bleaching and deplete fishery stocks, thus posing a threat to tourism operators. This results in a loss of earnings by tourism operators and loss of employment by the rural poor.

Mozambique is a long-haul destination especially for the high-spending tourists from North America and Europe. The prospects of climate change regulation of the air travel and shipping sectors (cruise trips) and the shifting consumer preferences in the markets in favour of short-haul destinations pose a threat to the long-term development of tourism in Mozambique.¹⁵ This would decrease total tourist arrivals in the country.

¹⁴ IFC (International Finance Corporation), *The Tourism Sector in Mozambique: A Value Chain Analysis*, vol. 1. Washington, DC: World Bank Group, 2006, p. 8.

¹⁵ This argument is also true for agricultural exports, where consumers in North America and Europe are increasingly worried about 'food miles' (i.e. the GHG emissions caused by transporting food over long distances). This concern may decrease the demand for Mozambique's agricultural exports to developed countries' markets.

Box 1: Cyclone Flavio

In 22 February 2007 Cyclone Flavio, which was classified as a category 4 cyclone (with wind speeds reaching 270 kilometres per hour) hit the tourist town of Vilanculos. The cyclone disrupted key infrastructure, including power and water supplies, roads, buildings, and telecommunications. Cyclone Flavio also caused the destruction of infrastructure and public facilities such as schools and health centres. Tourism facilities had roofs blown off by strong winds and torrential rain. The island resorts off the Vilanculos coast were also affected. Operations were suspended for a considerable period, resulting in losses in tourism arrivals and earnings. The real cost of Cyclone Flavio was the loss of houses by the local population, who, unlike the resorts, did not have the money to rebuild their homes. The cyclone destroyed about 700 houses, affecting about 134 000 people. An estimated 20 800 hectares of crops were also destroyed.

Source: International Federation of the Red Cross, <<http://www.ifrc.org/>>

Public health

The public health effects of climate change are related to rising temperatures, severe water shortages and extreme events such as frequent and severe droughts, floods and cyclones. Apart from the spread of infectious disease as a result of higher temperatures and floods, climate change-induced disasters such as floods and cyclones destroy key public health infrastructure.

In Mozambique, floods and cyclones usually have a negative impact on the already weak health system. Floods and cyclones damage or destroy hospitals and clinics. This, coupled with poor sanitary conditions, triggers the outbreak of endemic waterborne diseases such as malaria and cholera and other diseases such as meningitis and skin infections. Cholera and malaria epidemics occur as a result of higher temperatures and changes in rainfall patterns induced by climate change. The incidence of these diseases usually increases after floods and cyclones. For example, after the floods in 2000, the number of cholera cases increased throughout Mozambique, putting pressure on the already inadequate health facilities. The last cholera epidemic in southern Africa was in 2008/09 and Mozambique was one of the worst-affected countries. Moreover, during floods and cyclones, sectors with a direct impact on human health such as sanitation and water are disrupted.

The increase of climate change-induced diseases presents a threat to Mozambique's ambitions of achieving its health-related MDGs by 2014. A report by the National Institute of Disaster Management predicts that, with increased temperatures, malaria epidemics will be more frequent, a situation that may increase child mortality rates. However, ongoing investments in basic health infrastructure supported by multilateral donors can be expected to improve the health situation in Mozambique. But in urban and settled areas, the incidence of cholera could be reduced by increased investments in basic sanitation infrastructure. This point is worth highlighting for two reasons: (i) Mozambique's current vulnerability is partly due to the lack of investments in basic infrastructure; and (ii) today's vulnerability will be a factor in future vulnerability.

International trade

Climate change presents both supply-side and demand-side threats to Mozambique. The country's exports comprise mainly agricultural commodities, most of which are exported to the US and EU. Agricultural production relies heavily on the right climatic conditions, and the variability of climatic conditions is expected to affect total agricultural output. If this happens as predicted, Mozambique could export less and foreign exchange earnings could decrease, resulting in trade balance problems.

World trade relies on the transport sector, which uses 95% of petroleum supplies.¹⁶ Hence, the transport sector is a significant source of greenhouse gas (GHG) emissions. There is an ongoing debate in industrialised countries about GHG emissions contributed by agricultural exports (especially horticultural exports that are air freighted) from sub-Saharan Africa — the so called 'food miles'. The food mile debate has led to the introduction of labelling schemes by supermarkets in the EU. Thus, concerns over 'food miles' can lead to the reduction of demand (or the imposition of government control) in exports markets for most developing countries, including Mozambique. If the food mile debate continues, it could lead to increased costs of production as producers are required to meet certain standards. So far, there have been no reports of protectionist activity as a result of the food mile debate. On the other hand, this debate could bring new opportunities for niche markets to develop in the EU for Mozambique's products. Manica Province is already exporting organic and baby vegetables to the EU.

¹⁶ WTO (World Trade Organisation)/UNEP (UN Environment Fund), *Trade and Climate Change: A Report by the United Nations Environment Programme and the World Trade Organization*. Geneva: WTO/UNEP, 2009, p. 60.

Climate change and MDGs

Mozambique's impressive economic growth, which averaged 8% in the last few years, reduced poverty from 69.4% in 1997 to 54.1% in 2003 (see table 2). Despite the decline in poverty levels, Mozambique still faces serious socio-economic challenges. As table 3 illustrates, poverty incidence levels are still relatively high, despite the gains from the last few years. It is estimated that about 10 million people still live in extreme poverty, and most of them are in rural areas.¹⁷

Table 2: Recovery costs following climate impacts (\$ millions), 2002–05

Province	Recovery costs								
	Droughts			Floods			Cyclones		
	2002/3	2003/4	2004/5	2002/3	2003/4	2004/5	2002/3	2003/4	2004/5
Cabo Delgado	2.32	0.11	0.05	0.23	2.39	0.08	0.59	0.59	0.08
Gaza	2.22	0.01	0.21	0.90	2.76	0.71	0.42	1.55	0.37
Inhambane	8.20	0.18	0.03	0.89	0.33	0.87	1.50	0.08	0.01
Manica	1.72	0.25	0.07	0.23	1.30	0.15	-	0.09	0.08
Maputo	4.52	9.10	0.29	0.58	4.87	0.28	0.38	0.06	0.31
Nampula	4.03	0.12	0.44	0.53	1.17	0.09	5.00	2.84	0.74
Niassa	1.59	0.09	0.04	0.45	-	-	-	-	-
Sofala	1.19	0.97	0.25	0.19	0.81	1.03	0.43	1.30	0.71
Tete	2.28	2.08	2.19	0.09	0.08	3.16	-	-	-
Zambezia	4.70	0.52	0.82	0.99	0.84	1.79	0.67	0.44	1.02
Total	32.77	13.43	4.39	5.08	14.55	8.16	8.99	6.94	3.32
Grand total	50.59			27.79			19.25		

Source: Sietz D *et al.*, *op. cit.*

Table 3: Poverty incidence in Mozambique, 1997 & 2003

Poverty incidence	1997	2003	Decrease
National	69.4%	54.1%	15.3%
Urban	71.3%	55.3%	16.0%
Rural	62.0%	51.5%	10.5%

Source: 1996/97 and 2002/03 Household Surveys

¹⁷ GoM (Government of Mozambique), *Pobreza e o ambiente*. Maputo: Ministério para Coordenação da Acção Ambiental, 2006, p. 11.

Mozambique, along with other 188 countries, adopted the Millennium Declaration in September 2000 and committed itself to an ambitious agenda to meet the MDGs by 2015. A progress review conducted in 2005 showed that Mozambique was unlikely to achieve this. The review concluded that progress had been slow in the areas of hunger eradication, gender equality, HIV/AIDS reversal, extension of primary education and environmental sustainability. The impacts of climate change will constrain still further Mozambique's ability to meet the MDGs. As Sietz *et al.* point out, the overarching goal of reducing extreme poverty and hunger is undermined as climate change impacts reduce people's livelihood assets such as health, water and infrastructure, and impinge on food production.¹⁸

National response to climate change

Government

The government of Mozambique recognises that climate change has an impact on poverty alleviation programmes and sustainable development. However, so far, focus has been on adaptation and not on mitigation. This is in part due to the fact that the country's carbon emissions are almost negligible. However, the impacts of climate change in the last few years have been severe.

In 2004 the government completed the National Adaptation Programme of Action (NAPA);¹⁹ however, it is yet to be implemented. The NAPA identifies droughts, floods and tropical cyclones as major climate change-induced disasters affecting Mozambique. To reduce the negative impacts of climate change, the NAPA identifies the following adaptation measures:

- strengthening early warning systems (on floods and droughts) to reduce the effects resulting from climate change hazards;
- strengthening the capacities of agricultural producers to cope with climate change to reduce food insecurity;
- the reduction of climate change impacts in coastal zones, where about 60% of the population live; and

¹⁸ Sietz D *et al.*, *op. cit.*, p. 5.

¹⁹ In addition to the NAPA, two other programmes seek to mitigate the effects of climate change: the Plan to Combat Desertification and the Strategic Plan to Conserve Biodiversity.

- the management of water resources affected by climate change impacts such as droughts and floods.

The government, through the Ministry for Co-ordination of Environmental Affairs, is establishing environmental units in all government departments to make sure that planning in other departments takes into account climate change considerations.

Donors

Donors play a very important role in Mozambique's development; official development assistance (ODA) accounts for 24% of Mozambique's gross national product.²⁰ The World Bank, the EU, the US, Denmark and the UK are the main five donor agencies and bilateral partners.²¹ Donors currently focus on all major developmental sectors, including agriculture, water, health, the environment, energy and education. These projects are climate sensitive and when climate change-induced disasters occur, the recovery costs are very high. As illustrated in table 4, between 2002 and 2004 recovery costs for climate-sensitive ODA stood at \$97.6 million.

Table 4: Project recovery costs following climate impacts (\$ millions), 2002–04

Provinces	Climate-sensitive ODA	Recovery costs
Cabo Delgado	15.2	6.4
Gaza	14.4	9.1
Inhambane	16.0	12.1
Manica	18.8	3.9
Maputo	27.1	20.4
Nampula	20.0	14.9
Niassa	14.1	2.2
Sofala	46.8	6.9
Tete	19.3	9.9
Zambezia	55.9	11.8
Total	247.6	97.6

Source: Sietz D *et al.*, *op. cit.*

²⁰ Sietz D *et al.*, *op. cit.*, p. 7.

²¹ These donors accounted for 50% of the average 2003–04 gross ODA.

Donors are currently involved in targeted short- and long-term interventions in climate-sensitive development areas. Short-term adaptation interventions include early warning systems for floods and droughts. Long-term vulnerability reduction includes improved disaster management, the construction of climate-resistant infrastructure and information dissemination. In addition to these, donors also have targeted projects in local communities that try to reduce their vulnerability to climate change.

It should be noted that climate change proofing is an initiative by donors. The government does not have a clear policy on climate change-sensitive sectors. Such considerations are not even articulated in Mozambique's 'External Aid and Co-operation' policy.²²

Opportunities presented by climate change

Despite the threats that climate change presents to Mozambique, it nonetheless presents some opportunities that can have positive impacts on the socio-economic development of the country. The Clean Development Mechanism (CDM) under the Kyoto Protocol (which runs until 2012) provides an opportunity for developing countries such as Mozambique to access capital to implement projects that are efficient and emit less GHGs. The CDM is one of the arrangements of the UN Framework Convention on Climate Change and allows industrialised country companies to invest in GHG reduction projects in developing countries as an alternative to more expensive emissions reduction in their own countries. This scheme allows them to earn carbon credits called certified emission reduction credits.

The global CDM market is currently worth \$8 billion.²³ The CDM market has the potential to attract FDI to sub-Saharan Africa, yet currently this area only accounts for 2% of registered CDM projects. For examples, India, China, Brazil and South Korea together account for 705 of all CDM projects, yet by January 2009 Mozambique had only one such project. Interviews conducted with the Confederation of Business Associations of Mozambique indicate that the investment climate in Mozambique has not been conducive to attract climate change project investments. However, Mozambique has benefitted from capacity building on CDM rather than actual project investments. Capacity-building programmes in Mozambique are currently run by the UN Development Programme.

²² Sietz D *et al.*, *op. cit.*

²³ Shigwedha A, 'Africa: Continent lagging on climate change projects', AllAfrica Global Media, 9 July 2009, p. 1.

Apart from the CDM, Mozambique stands to benefit from electricity exports, especially to South Africa. Mozambique's electricity is generated through hydropower, and the country is currently building a new \$2.9 billion hydro-electric dam to increase its output. This dam is expected to be operational by 2015. While some of the electricity would be used to power Mozambique, the surplus will be exported to other Southern African Development Community countries that are battling with shortages and scarce capacity. South Africa's power generation relies on coal; as a result, its carbon emissions are high. Should South Africa be required to cap its emissions in the near future, Mozambique's exports of electricity to South Africa can be expected to increase.

Conclusions

Climate change will have serious developmental implications for Mozambique. As the analysis shows, it will increasingly become difficult for the country to meet its MDGs. Agricultural productivity and exports would be disrupted by adverse weather conditions such as droughts, floods and cyclones.

However, the government and donors have started taking climate change adaptation seriously. The government already has the NAPA in place and donors consider climate change impacts when designing projects. Nonetheless, the unfavourable investment climate in Mozambique seems to be constraining climate change mitigation projects under the CDM initiative. Under the CDM, the institutional framework is in place and the Ministry for Co-ordination of Environmental Affairs is the Designated National Authority for climate change projects. The general consensus from stakeholders is that the institutional policy framework on climate change is in place; however, implementation is lacking. Implementation is constrained by the availability of human resources, data availability, and management and financial resources. This situation is further compounded by the fact that Mozambique has a large number of developmental challenges to deal with. However, this is a crucial area where donors can support the country in terms of technical skills and financially.

Appendix: List of institutions interviewed

Ministry for Co-ordination of Environmental Affairs
National Institute of Meteorology
UN Development Programme Mozambique
Confederation of Business Associations of Mozambique
Centro Terra Viva
National Institute of Disaster Management
Famine Early Warning Systems Network
Ministry of Trade and Industry