Assessing progress on climate change policy and practice:

Observations from South Africa and SADC

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Policy: issues & actors

Vol 21 no 1

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Johannesburg

South Africa

October 2008

DANIDA

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1. Introduction

This paper investigates climate change policy responses and strategies adopted by the South African government on one hand, and those adopted by SADC as a collective entity on the other. It seeks to assess the level of progress made in terms of tackling climate change as a policy issue, and examines some of the key initiatives and challenges facing South Africa and SADC. The central task is to identify some of the common experiences and lessons arising from South Africa's experience as the most advanced and economically developed country in the region. These lessons and experiences offer useful benchmarks and insights to reflect on the level of progress made by SADC and the likely challenges to be overcome by the region.

2. Climate change policy and practice in South Africa

South Africa has the largest economy within the SADC region and enjoys the highest level of economic development compared to any country in the region. In fact, its economy is larger than the economies of all the members states of the SADC region combined. Given South Africa's level of economic development, and its relatively advanced and sophisticated internal system of policy making, it would be reasonable to expect the country to have made greater progress than many other SADC countries, including the SADC region as a whole, in formulating policy on climate change and the natural environment.

In fact, South Africa has been developing policy and legislation on the environment and energy efficiency since the late1990's[1]. It is therefore important to draw lessons from its environmental and climate change policy initiatives and practice to deal with the challenges of climate change. The level of progress made in South Africa and the challenges that the country faces in terms of policy making and implementation is likely to offer valuable lessons not only for our general understanding of the likely challenges, but also for some of the countries in the SADC region that are facing the same policy issues and challenges.

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[1] For example the White Paper on Environmental Management Policy (July 1997) and the White Paper on Energy Policy (December 1998).

2.1. National policy frameworks and context for climate change responses

The Intergovernmental Panel on Climate Change defines climate change as "any change in climate over time whether due to natural variability or as a result of human activity".[2] South Africa has therefore put in place a complex framework of national policies and processes underpinned by commitments to international protocols and declarations to tackle the challenge of climate change and related environmental threats. This appears to suggest a high level of political commitment by the national leadership to dealing with the challenges of climate change and related policy issues. Even at the level of political rhetoric the government, through Minister of Environmental Affairs and Tourism, Martinus van Schalkwyk, usually adopts a vocally strident stance at international summits on these issues. For instance, over the past year or so, Minister van Schalkwyk has been warning the continent of the dire consequences of inaction on climate change, while challenging the Group of 8 (G8) countries to slash carbon emissions by 80-90 per cent below 1990 emissions levels by 2050.[3] The country has enthusiastically signed and ratified many important international, continental and SADC protocols, declarations and agreements in this regard.

In 1997, the government ratified the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, which came into force in 2005. This convention commits the country to stabilising the concentrations of greenhouse gases in the atmosphere to prevent damage to the climatic system. The country also issued a policy document in 2000 that set out a range of specific policy actions to be carried out in dealing with climate change challenges.[4] Furthermore, it established the National Committee on Climate Change to advise the Minister of Environmental Affairs and Tourism (DEAT), which has been made the lead institution in the co-ordination of climate change policy and implementation processes in the country.[5] South Africa also has a Country Studies Programme that has conducted a range of sectoral studies (eg water, energy, agriculture, forestry, etc)[6] to assess the vulnerability and adaptation capacity of the country to climate change challenges.

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[2].Cited in Pielke, R. A. (2004), What is climate change? *Energy & Environment* 15:33, 515-520.. See also the South African Weather Service, Climate Change: What, When and
where?',(www.weathersa.co.za/References/Climatechange.jsp).

[3]. See Martinus van Schalkwyk,Opening Statement, on behalf of the G77 & China at the at the Nairobi Climate Change Conference, *Climate Change News,* 15 November 2006 & SABC News,Climate Change May Cut SA Corn Crop Sharply', 06/07/2008 (www.sabcnews.com)

[4]. RSA (2000), Initial National Communication under the UNFCCC (www.unfcc.com)

[5]. Ibid.

[6]. See for instance the South African Country Study on Climate Change: Vulnerability and Adaptation Assessment of Plantation Forestry (1999); Sustainable Development and Climate Change in South Africa: Two case studies – energy futures and freshwater resources (2003) & G.A. Kiker, (Date unknown), 'South African Country Study on Climate Change: Synthesis report for the vulnerability and adaptation assessment tion, (School of Bio-resources Engineering and Environmental Hydrology, University of Natal).

In addition to the above DEAT has conducted a Long-Term Mitigation Scenario exercise which aims to inform future policy directions in respect of responding to the challenges of climate change.[7] The country also released a National Climate Response Strategy in 2004, which sets out a number of policy objectives and provides a framework for the development of policy. Among the objectives are:

- creating synergy between national sustainable development objectives and climate change

- enabling different national government departments to address climate change challenges

- addressing the country's vulnerability to climate change

- establishing a national greenhouse gas mitigation plan

- ensuring intergovernmental co-operation on climate change responses.

It is important to note also that the government's approach to dealing with climate change issues, including its policy frameworks, do seem to recognise the need to integrate climate change response strategies within a national sustainable development strategy. For instance, DEAT released a strategic framework for sustainable development in South Africa[8] for discussion in 2006. The strategy identifies climate change as a key policy challenge, and calls for increasing use of appropriate technologies, as well as sustainable production and consumption processes to underpin the country's attempts to protect the environment while meeting its socio-economic developmental challenges of poverty alleviation and job creation. Other specific policy documents include the National Biodiversity Strategy and Action Plan, the National Waste Management Strategy, and the National Strategy for Sustainable Development. Therefore, in terms of a suitable policy framework for dealing   with the challenges of climate change and related environmental issues, the country seems fairly advanced.

However, despite this plethora of policy frameworks, strategies, policy documents and action plans, the country does not have a coherent policy on climate change, notwithstanding the recent widespread media reports[9] dramatically announcing the release of new climate change policy by the government, reportedly set to impact radically on the country's energy sector. This was, rather, a release of the findings of DEAT's Long Term Mitigation Scenario Study referred to above, which apparently seeks to shift the focus of future policy on climate change from coal-based energy (on which the country's economy currently relies heavily) to include renewable energy sources and nuclear power. The LTMS

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[7]. *Engineering News*, One step to formal climate change policy for South Africa, (www.engineeringnews.co.za)
[8]. RSA (2006). People-Planet-Prosperity: A strategic framework for sustainable development in South Africa'.
[9]. SABC News, SA Climate change policy seeks to replace coal, 28/07/2008 (www.sabcnews.com).

also recommends further research on the viability of emerging technologies such as carbon capture and clean coal technologies that could be used in the future[10].

What the government does have by way of policy is a range of sectoral policy documents, strategies and action plans on many different aspects of the subject. DEAT is still working on a coherent national policy framework, which has not yet been finalised. It is expected that this will only be released in 2009. This means that all the different existing policies and strategies are therefore not informed by a coherent national policy, thus amplifying the chances of all these disparate documents failing to address the challenges posed by climate change and its environmental impacts in a coherent and systematic manner consistent with other national policy frameworks.

Also, the existence of this impressive array of policies, frameworks and strategies does not necessarily imply effective implementation and co-ordination. In fact, the implementation of the various programmes and strategies appears daunting and might actually be compromised by a bewildering multiplicity of strategies, policies and plans. There is also an array of advisory committees and government structures dealing with climate change. The number and functions of these committees may slow down government's ability to formulate climate change policy and to implement it. Therefore at the institutional/organisational design level there may be fragmentation and weakness.

For instance, while the National Climate Change Response Strategy calls for synergy and co-ordination between sustainable development and climate change policy planning, in practice there appear to be two separate but equally important and strategic national focal points for dealing with these matters. Issues of sustainable development are managed and co-ordinated within the International Relations Peace and Security Cabinet Cluster (an inter-ministerial cabinet committee).[11] With regard to climate change policy planning, DEAT takes the lead, but, again, has many committees and structures feeding into its policy making. At Cabinet level, climate change is reportedly dealt with within the Economic Affairs Cluster. Adding to the complexity in the policy-making organisational structure is the National Committee on Climate Change (NCCC) whose purpose is to advise and consult the Minister of Environmental Affairs and Tourism on matters relating to national responsibilities dealing with climate change – with particular reference to government's commitments to the Framework Convention on Climate Change and the Kyoto Protocol[12]. The Government Committee on Climate Change (GCCC) is another advisory body whose purpose is to advise

[10] Department of Environmental Affairs and Tourism (2007) Long Term Mitigation Scenarios Strategic Options for South Africa.
[11]. Mutangadura, G.B. (2005). Sustainable Development in Southern Africa: progress in addressing challenges, *Journal of Sustainable Development,* Volume 5, No. 1, 56-73.
[12] www.environment.gov.za/documents/documents/2003may26/climate_change_sa_responsibility_26052003.html

the Directorate Climate Change and Ozone Layer Protection on the same matters as the NCCC does[13]. The GCCC is meant to advise the NCCC on the formulation of national climate change strategy and policy[14].

It is not clear how all of these structures and DEAT interlink and co-ordinate their policy and programming processes for efficiency purposes.

But more importantly, many of the policies, frameworks and strategies do not seem to make clear provisions for regular monitoring and evaluation mechanisms. Monitoring and evaluation presuppose effective planning of implementation, which is still a major weakness that needs to be dealt with. However a mitigating scenario would result if the government succeeded in mainstreaming climate change as a cross-cutting policy challenge across all relevant national ministries, as well as across the three spheres of government. It also needs to subject the implementation of climate change policy initiatives to routine monitoring and reporting processes of government departments and other institutions.

It is critical that greater provisions are made within climate change response initiatives and programmes for more citizen and community involvement, and for better accountability mechanisms between implementing agencies and local communities.

2.2.   Progress and challenges for climate change policy implementation

Many official policy documents in South Africa openly acknowledge that a large number of sectors in the country are extremely vulnerable to the effects and impacts of climate change. For example the health, maize production, plant and animal biodiversity, rangelands and water resource sectors have been identified as the most vulnerable, and are thus earmarked for special mitigation and adaptation interventions.[15]

The problems relating to water resource management are particularly serious. Most freshwater reserves in South Africa are on average 60 per cent accounted for.[16] Studies of the Gariep Basin (the South African component includes Lesotho but excludes Swaziland, Limpopo and Western Cape) indicate that limits of supply may be reached by 2025, and that

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[13] Ibid.

[14] Both of these structures comprise different stakeholders and government departments.

[15]. RSA (2004). The National Climate Change Response Strategy, 8.

[16] *Ecosystem Services in the Gariep Basin: A Basin-Scale Component of the Southern African Millennium Ecosystem Assessment*. E. Bohensky, B. Reyers, A.S. van Jaarsveld and C. Fabricius (eds). 2004. University of Stellenbosch Press. www.sun-e-shop.co.za.

climate change could exacerbate water scarcity. While supply and demand are unevenly spread throughout the Basin, in some areas surface and groundwater resources are already fully utilised[17].

Much of the water used for irrigation is underground water, which is not replaceable in the short term. It is also predicted that the eastern seaboard of South and southern Africa will become wetter, but the western side drier and hotter[18]. This will place great stress on fragile ecosystems, which already face pressure from human development and agricultural production. While poor planning in the water resource management sector in South Africa seems to have placed the country in a position where it could face serious difficulties in the near future, the country already has major concerns in the energy sector, also due to poor planning and policy implementation. With a growing economy, South Africa is currently experiencing an increased demand for electricity that exceeds the available supply. Evidence of this is shown in the recent spate of energy rationing, power cuts, and rapidly escalating costs in the supply of energy to end-users to enable the national electricity supply commission (Eskom) to pay for the development of new power stations.

While indications of inadequate co-ordination and implementation of existing policy frameworks appear to be the problem at national level, at sub-national levels, especially in the smaller and poorer municipalities, the impacts of climate change are likely to be less well understood, despite the plethora of policy frameworks and country sectoral studies exposing the dire consequences of inaction. With the exception of some of the larger metropolitan areas, municipalities in general make little, if any, reference to climate change or local strategies to deal with and monitor the state of the environment. Yet there has been no national push for local government to begin planning in this regard. It is only the better resourced municipalities that have been able to do this, mostly by using external specialist consultants.

In many smaller and poorer municipalities the problem is basic – the shortage of skills for effective service delivery to communities. This is likely to extend to the shortage of basic skills for effective planning and management of climate change response strategies, policies and plans designed either at national or provincial levels. For instance, all municipal Integrated Development Plans (IDPs) are required under the National Environment Management: Air Quality Management Act of 2004 to include a chapter on air quality management. A requirement is that this chapter must contain an air quality management

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[17] Bohensky, E., B. Reyers, A. van Jaarsveld and C. Fabricius (eds). 2004. Chapter 2: Condition and trends of ecosystems services and human well-being. In *Ecosystem Services in the Gariep Basin: A Basin-Scale Component* of the Southern African Millennium Ecosystem Assessment. University of Stellenbosch Press. www.sun-e-shop.co.za

[18] Joubert . L. 2007. *Scorched: South Africa's Changing Climate.* Wits University Press.

plan to improve air quality and to address the effects of emissions from industrial sources (a climate change mitigation requirement). However, a review of some of the current Integrated Development Plans in Gauteng and the Eastern Cape indicates that this requirement is not being met[19]. In many of the IDPs there is inadequate planning to educate local citizens on the impacts of climate change and what to do to mitigate its effects. There is some evidence of initiatives at the local level, such as the Disaster Mitigation for Sustainable Livelihoods Programme (DiMP[20]) that aims to educate communities, but such initiatives appear to be somewhat fragmented and not integrated into broader municipal development programmes and initiatives throughout South Africa.

In the large metropolitan municipalities (such as eThekwini, Johannesburg, Tshwane and Ekurhuleni) with better resources and skills, climate change and energy-efficiency strategies have already been formulated. In addition, the South African Local Government Association (SALGA) has prepared a climate change compact, which was adopted recently, for local government to co-operate in solving problems associated with mitigating and adapting climate change. However, the implementation of these strategies remains a constraint, even though there does seem to be enough political will to push the issues of tackling the problems associated with climate change at municipal level in South Africa.

There is likely to be similarly uneven policy developments at provincial level, reflecting the uneven nature of the distribution of capacity and resources for effective planning. For instance, the Gauteng province is developing a climate change response strategy, while the Western Cape has already gone through this process. There is no evidence that other poorer provinces have already undertaken similar initiatives.

3.   Climate change policy and practice in SADC

SADC structures and the political leadership of countries in the region are increasingly paying attention to issues of climate change and environmental issues, as this has become an urgent threat for the whole region and the continent. The devastation in some parts of the region that has arisen out of the consequences of climate change, including the increasing costs of food and energy, the declining levels of rainfall in parts of the region, and the increasing

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[19] For example the Mogale City Integrated Development plan of 2008 contains no such chapter.
[20] http://www.egs.uct.ac.za/dimp/

vulnerability of the region to climate variability, are some of the factors accounting for the increased willingness of the SADC political leadership to deal with climate change.[21]

In April this year, SADC political leadership held an international conference on poverty and development in Mauritius. This addressed a number of issues of concern for the region, including poverty, increasing prices of food and energy, the environment, and climate change. According to the United National Economic Commission for Africa (UNECA), these challenges are likely to pose serious constraints on Africa's economic development in the 21st century.[22] These constraints have also hampered progress in many SADC countries towards meeting the UN's Millennium Development Goals (MDGs).

It is generally acknowledged by environmental scientists that the southern Africa region is extremely vulnerable to climate change problems and its impacts on the environment. It is also expected that these impacts will slow down the rate of economic development in the region considerably, with potentially severe consequences for all the sectors critical to economic development.[23] The impact will be felt in areas such as water, agriculture, food security, forestry, wildlife, and energy and health. In addition, the unmitigated consequences of climate change may ultimately also affect eco-systems – reducing biodiversity – with alarming consequences for fisheries and tourism, and thus for the economy of the region. Moreover, many SADC countries also face the daunting challenge of economic development under conditions of widespread poverty[24] and pandemics such as HIV/AIDS.

For many countries in the region, dealing with the effects of climate change and environmental degradation is often seen as a trade-off with other critical challenges such as poverty and development. Yet it is acknowledged by environmental experts and activists that some of the effects of climate change have a severe impact on patterns of poverty and, in turn, are reinforced by poverty. For instance the majority of the populations in the SADC region depend on rainfall for agriculture and livelihoods, but at the same time must contend with some of the effects of climate change, particularly the reduction in rainfall. It has been predicted that a reduction in rainfall of between 5 and 15 per cent during the cultivation

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[21]. Robert T. Watson et al. (1998). *Regional Impacts of Climate Change: An Assessment of Vulnerability*, (Chapter 2: Africa), IPCC Special Report, Cambridge University Press.

[22]. AllAfrica.com News Service, SADC Conference A Success- Pohamba' (www.allafrica.com/stories).

[23]. See Mike Hulme (1996). Climate Change and Southern Africa: an exploration of some of the potential impacts and implications in the SADC region (Climatic Research Unit, University of East Anglia & WWF International).

[24]. Between 30 and 40 per cent of the population in sub-Saharan Africa are estimated to be chronically poor. See Martins, J.H. (2007). Household budgets as a Social Indicator of Poverty and Inequality in South Africa, in Moller, V. *Quality of Life in South Africa Ten Years into Democracy*, Social Indicators Research, (Springer), Volume 81, No. 2.

season will occur over the next 50 years.[25] As a result of an expanding population, urbanisation and industrial growth, the natural environment upon which the poor depend for their livelihood is being degraded at an alarming rate. The incidents of drought in some of the countries in the SADC region has had an impact on the availability of arable land in the region (only 7.6 per cent of the land is viable for farming in the SADC region), which in turn impacts negatively on agriculture and food security, including the socio-economic vulnerability of the region.

3.1.   Regional policy frameworks and context for climate change responses

The policy context within which the SADC region carries out its climate change and environmental policy work collectively is the same as that which applies in South Africa and other countries on the continent. It is made up of a range of international, continental and regional policy frameworks, protocols and declarations.

Since the release of the fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) in 2007 the need for adaptation measures has been articulated with added urgency, particularly in Africa.[26] A broad policy framework was adopted in Rio de Janeiro, at the Agenda 21 Earth Summit convened by the United Nations in 1992. The policy framework seeks to address the challenge of dealing with climate change within the context of sustainable development policies that recognise three interdependent pillars of development: social development, economic development, and environmental protection. At this conference, governments were asked to produce national strategies for sustainable Development by 2002.

The World Summit on Sustainable Development (WSSD) held in Johannesburg in 2002 also identified specific sub-sectors and key issues that needed to be addressed by nations, and it set targets to be met by governments[27]. These included the provision of basic services such as water, sanitation and energy. Concern for the protection of the environment and

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[25]. United Nations Development Programme, 2007 Human Development Report 2007/2008. Fighting Climate Change: Human Solidarity in a Divided World.

[26]. Stern Review on the Economics of Climate Change (2006). HM Treasury. British Government.

[27] The targets set by the WSSD (2002) were vague. Targets specified in the plan of implementation included: cutting in half by 2015 the number of people who lack clean drinking water and basic sanitation; cutting in half by 2015 the proportion of the world's population living on less than a dollar a day; halving the number of people suffering from hunger (Sibley A. 2007 World Summit on Sustainable Development (WSSD), Johannesburg, South Africa).

biodiversity was re-emphasised as a requirement for sustainable development.[28] As indicated above, the UNFPCC and its related Kyoto Protocol also provide a framework within which governments (including SADC countries) have to tackle climate change and related environmental policy problems.

As a collective entity, one of SADC's key goals is to promote sustainable and equitable economic growth and socio-economic development in the region.[29] The implementation of many of SADC's objectives takes place via a series of protocols, treaties, agreements and memoranda of understanding. However there are more protocols than the other instruments. These protocols specify areas/issues for co-operation, as well as the institutional mechanisms through which regional co-operation is to be effected; many of them are binding but only on the signatory member states.[30] There are some 20 SADC protocols, roughly seven of which deal directly with environmental issues. Among these are protocols on fisheries, forestry, energy, shared water courses, wildlife conservation and law enforcement. Many of these sectors are acknowledged to be facing enormous impacts and associated environmental risks arising out of climate change. Oversight of the SADC activities and programmes (including its protocols) is through the SADC Secretariat. The Secretariat therefore has enormous responsibilities, in addition to handling other finance and administrative responsibilities for the regional body.

SADC has also developed a Regional Indicative Strategic Development Plan (RISDP) which is a set of strategic priorities meant to guide the region towards realising its development goals and plans for integration. In this regard the RISDP provides guidelines to the Secretariat and other SADC institutions on SADC's social and economic developmental priorities. The report does not identify the environment and sustainable development as a priority intervention area, but does mention climate change response strategies as a specific area requiring intervention.

In terms of progress in policy, programme and strategy design the SADC region has taken some steps to deal with the challenges of climate change. For instance, many of the least developed countries (LDCs) in the region have formulated National Adaptation Programmes of Action (NAPA) documents and submitted them to the UNFCCC, most of them between 2006 and 2008.[31][32] The idea behind NAPAs is for the least developed countries to identify their

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[28]. United Nations Development Programme. 2003, South Africa Human Development Report - The Challenge of Sustainable Development: Unlocking People's Creativity.
[29].The Treaty of the Southern African Development Community (http://www.sadc.int/).
[30]. Ibid.
[31]. See the NAPA documents of several SADC LDCs here:(www.unfcc.int/national_reports/napa/).
[32] South Africa does not fall into the category of being a Least Developed Country and therefore was not required to complete a NAPA .

priority activities and define their needs for responding to the threats posed by climate change. This process aims to assist them in designing adaptation and response strategies that take into account the coping strategies and mechanisms of local communities in defining national adaptation strategies and programmes of action.

As a collective entity though, SADC is lagging behind compared to South Africa with regard to the extent of policy development and legislation in the area of environmental policy governance and climate change. However, many initiatives are underway in various sectors, such as fisheries and water resource management, to enhance regional adaptability to climate change. Like South Africa, SADC does not seem to have a single, coherent overall regional policy on climate change, as evidenced by the various separate policy instruments (mostly protocols) relating to a range of discrete sectors such as fisheries, water resources, agriculture, renewable energy, and so on. A regional climate change policy is critical to guide the activities of the 14 different member states to ensure that the region-wide climate change policy objectives are clearly defined and pursued through commonly agreed strategies.

3.2. Progress and challenges for climate change policy implementation

Regarding achievements in dealing with climate change and implementing related policy frameworks and programmes in the SADC region, there have been notable developments over the years, particularly at the level of individual member states. For example, most SADC countries have established focal points and institutional structures to co-ordinate and implement sustainable development plans.[33] Such national co-ordination structures imply progress in the formulation of polices and programmes; however it is not clear how effective these structures are in practice to drive sustainable development and climate change policy. Furthermore, the enforcement of environmental impact assessment schemes for all developmental sectors, and the introduction of biodiversity programmes and community-based natural resource management strategies (CBNRM) are some of the notable achievements in many individual SADC countries.[34] Another important development is that in some of these countries, climate change and environmental management programmes are gradually being integrated into sustainable development planning processes and, in some cases, making provision for incorporating poverty reduction policies and plans. This bodes well for SADC in that as a collective entity it relies to a large extent on the collective and individual efforts of its member states for the success of many of its protocols, strategies and programmes.

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[33]. Mutangadura G.B. (2005). Sustainable Development in Southern Africa: Progress in addressing challenges, *Journal of Sustainable Development,* Volume 5, No. 1, 56-73.
[34]. Ibid.

At the level of SADC as a regional body, certain structures have also been established to monitor the state of the environment. For instance, a Drought Monitoring Centre (SADC-DMC) was established in 1991 to monitor changing weather patterns to generate long-range climate forecasting abilities. In theory this should enable strategic planners within SADC to adopt developmental plans which take into account anticipated climatic changes. Also, the SADC Regional Early Warning System and the Famine Early Warning System are in place and provide data on the status of the food security situation in the region. However, the further development of these and other regional structures is being hampered by a number of factors: these include inadequate funding, lack of progress in the development of policies and strategies for regional co-operation in science and technology, shortages in scientific and technological resources, and very little co-operation in science and technology between countries in the region.[35] A further impediment, both to the implementation of the SADC RISDP as well as the establishment and proper functioning of environmental monitoring institutions in SADC, is the lack of adequate resources for member countries to generate the necessary statistical information, as well as the absence of a legal instrument to regulate the quality of the statistics produced.[36] This information is vital for planning purposes and for the efficient allocation of resources. Preparations for the development of a SADC Protocol on Statistics are currently underway to remedy this situation.[37]

In spite of some of the positive developments outlined above, a number of difficulties have been identified. One of the basic problems facing SADC in dealing with the challenges of climate change and related environmental problems is its capacity to translate policy intentions, public statements, protocols, and declarations on climate change and related environmental challenges into concrete implementation plans with adequate resource allocations, monitoring and evaluation. In fact, in the wake of the SADC Heads of State Summit on Poverty and Development in Mauritius in April this year, outgoing SADC Chair, President Levy Mwanawasa of Zambia, seemed to admit that one of the problems facing SADC is to move beyond "decisions and towards implementing the national and regional programmes".[38] Mwanawasa added that it was time to switch from "policy dialogue to implementation".[39]

Added to these, are a severe lack of adequate resources and the cost of some of the necessary technologies, which is compounding the problem of turning policy statements,

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[35]. SADC RISDP (http://www.sadc.int/).
[36]. Ibid.
[37]. Interview with Stuart Mangold (Director: Africa Bilaterals Unit), Department of Environmental Affairs and Tourism, 23/06/ 2008.
[38]. AllAfrica.com News Service, 'SADC Sets Up Food Security Task Force', 21/04/2008 (www.allafrica.com)
[39]. Ibid.

protocols and declarations into concrete and implementable programmes and projects. Unlike South Africa, which is endowed with greater resources, many poor developing countries in the SADC region face a critical choice between allocating limited resources to poverty relief policy programmes on the one hand, and climate change and related environmental consequences that threaten the livelihoods of poor communities on the other. Due to limited resources in many countries in the region, there is pressure on political leaders to prioritise poverty relief programmes, economic development and growth, above the immediate need to address the challenges of climate change and environmental degradation. In particular, the impact of rising food prices and implications for combating poverty among the poor is increasingly receiving attention among SADC leaders. In its attempt to respond to the current food price increases, the SADC leadership has set up a Task Force of Ministers of Trade, Agriculture and Finance "to achieve food security in the region".[40]

Another fundamental problem for SADC and many similar entities attempting to implement collective decisions based on protocols is that protocols, by their nature, are usually voluntary. As indicated above, much of the policy framework for addressing climate change and associated environmental impacts at SADC level is driven through protocols. This usually means that enforcement and compliance with the provisions of these protocols tend to be less strictly observed by many countries. In addition, the willingness of political leaders to prioritise such commitments has to be placed against other pressing challenges facing poor and developing countries. Most these countries rely on donor funding to carry out their key social policy and development programmes. Consequently, SADC protocols are generally weak in terms of provisions for monitoring compliance and evaluation, and punitive action in instances of non-compliance. In those protocols, where tribunals have been established for monitoring and enforcement of compliance, such bodies are usually ineffective. Given that the majority of countries in the SADC region are poor and lack the necessary resources to devote to urgent social policy challenges such as addressing HIV/AIDS, poverty, housing, basic education and health problems, compliance with and enforcement of some of the protocols dealing with the environment is likely to be inconsistent.

There are other weaknesses and practical obstacles that are undermining the effective implementation of SADC policies and protocols relating to climate change and its environmental impacts. A number of examples are identified below:

- Many of the SADC protocols fail to establish co-ordination mechanisms to ensure that climate change as a cross-cutting issue is closely interwoven with other

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[40]. AllAfrica.com News Service, SADC sets up food security task force, 21/04/2008 (www.allafrica.com).

regional policy programmes (social, economic, development, etc). This will be critical if climate change and environmental policy issues are to be mainstreamed into routine policy programmes in the region.

- The protocol on energy identifies the need to consider clean coal technologies to mitigate environmental degradation, as well as to promote new and renewable sources of energy, such as windmills and biogas. However, this does not specify concrete objectives and targets for the region. Specifying key objectives and setting targets is critically important in order to allocate resources properly and measure progress on meeting these targets.

- Poor levels of co-operation among SADC member states is affecting the production of bio-fuels (such as the jatropha plant for biodiesel) with potentially negative consequences for the development of the biodiesel industry and the economy of the region. For instance, South Africa classifies the jathropa crop as an alien invasive plant species, and forces companies to test the viability of farming it in other countries, such as Zambia. While some SADC member states may be better positioned to grow this crop, the market for biofuels is in South Africa, which makes it important to seek co-operation in terms of joint programmes and policies for developing the biofuels industry across the region.[41] Some policy experts are arguing for the development of a comprehensive strategy for the production of biofuels in SADC to maximise the region's place in the global energy market.[42]

- Although SADC has various protocols dealing with aspects of the natural environment, there is no protocol on environmental management[43]. Such a protocol could make provision for linking other protocols dealing with natural resource management across the region in respect of sectors (eg water and energy). South Africa is due to take over the SADC Chair in 2008 and will be initiating a process for the development of such a protocol. The protocol will also cover the enforcement and harmonisation of waste management.[44]

- More needs to be done, particularly in the areas of reducing air pollution, the movement towards energy-efficient fuel alternatives, addressing the issue of land degradation, the control of marine pollution, and the unsustainable use of marine resources. Attending to the issue of water quantity and quality, including water

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[41]. Robert Laing, Xenophobia hampers biofuels., *Business Day*, 22.06.08.

[42]. See for example Kornegay (2007). Africa and Climate change: Desertification, Water Resources and Conflict. Centre for Policy Studies, Policy Brief 47.

[43] According to the RISDP, a protocol dealing specifically with environmental management was due to be drafted in 2005.

[44]. Interview with Stuart Mangold, (Director: Africa Bilaterals Unit), Department of Environmental Affairs and Tourism (23/06/2008).

pollution through industry and loss of biodiversity has to be dealt with as an urgent priority.[45]

- Though timelines and milestones for achieving priority projects have been developed within the RISDP, the vesting of responsibility for monitoring climate change and the implementation of environmental policies and programmes in the SADC Secretariat needs to be reviewed. Responsibility for monitoring these programmes appears to rest with SADC committees and stakeholders, and self-evaluation seems to be an approach suggested by the RISDP. However, an independent climate change and environmental policy monitoring body, with the necessary technical skills to monitor and review the implementation of these programmes objectively, might be more effective. However, the effectiveness of such an institutional arrangement might be undermined by the voluntary nature of protocols.

- Finally, many of these regional protocols seem far removed from ordinary citizens and their communities. It is not clear to what extent the formulation or ratification by individual SADC member states of regional protocols, especially those dealing with environmental issues, are subject to citizen involvement and endorsement. It is critical that such efforts aimed at dealing with issues that affect the lives of grass-roots communities are subject to consultative processes. Participation in the development of the protocols through local consultations with local populations in individual member states is necessary to ensure 'ownership' of these protocols by them and therefore successful local and regional implementation.

4. Concluding observations and policy implications

Climate change is a serious policy challenge, not only at global and African continental levels, but also at the regional (SADC) level, as well as individual member states in the SADC region. This paper examined the progress made with tackling climate change as a policy issue, and highlighted some of the key initiatives and challenges facing South Africa. The task was to identify some of South Africa's experiences and lessons learned and possible weakness in its policy formulation dealing with climate change. South Africa has for at least a decade been developing policies on environmental protection and sustainable development, and as the most economically advanced country in the SADC region, can provide useful lessons to other countries in the region and SADC as a whole, who may be behind South Africa in this regard. Such lessons could be utilised as valuable learning tools to reflect on the level of progress made by SADC and the likely challenges to be overcome.

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[45]. De Oliveira T. and Ikiara M.M. (Date unknown), Climate change and sustainable development: General concepts, (http://hqweb.unep.org).

In terms of putting in place an enabling policy environment for tackling issues of climate change and related environmental impacts, it was observed that South Africa has made considerable progress. The country has over the years developed a range of policy instruments to deal with the challenges of climate change. A spectrum of policy frameworks, strategies, legislation and plans of action addressing climate change issues have been produced by different national ministries, led by the Department of Environmental Affairs and Tourism. South Africa's comparatively advanced policy-making architecture and a range of very active environmental pressure groups account for this achievement. Also, its greater level of economic development and resource endowment in the region are additional critical factors that account for the large of output of policy documents, plans, strategies and legislation over the past few years.

Many of the countries in the SADC region have also put in place a substantial number of policy strategies, planning documents and action plans, although not as extensive as is the case with South Africa. In addition, many of them also submitted their national adaptation programmes of action (NAPA) documents to the UNFCC between 2005 and 2007, outlining assessments of their vulnerability to climate change and adaptation programmes of action for the future. At the level of SADC as an entity, it was observed that climate change and environmental policy development is driven by a range of protocols agreed to and signed by member states, and enforced through the SADC Secretariat. However, the voluntary nature of protocols as instruments of policy implementation presents a potential constraint in terms of effective enforcement.

Also, the existence of various climate change policies, legislation, plans and adaptation strategies in individual member states and SADC suggests that there is concern about the environment and climate change, and the necessary political will to treat climate change and its associated environmental impact challenges as urgent policy issues. However, the political will to take action does not guarantee action and should be seen in the context of a range of constraints that affect many countries in the region. Besides a lack of resources, many countries in the region, including South Africa, still face the problem of turning laudable and lofty policy ideals into reality, with effective and co-ordinated mechanisms for implementation. An important issue for climate change and environmental policy governance is that intentions, as expressed in policy documents and strategies, are not a substitute for concrete action accompanied by adequate resources and effective monitoring. For many SADC countries the challenge of moving beyond statements, protocols and agreements towards concrete action and effective policy implementation is even more pronounced. South Africa, with its greater resources and institutional capacity still faces the same

challenge of turning intentions into effective policy implementation, co-ordination and monitoring.

SADC also requires greater co-operation and commitment from member states in supporting the monitoring function through, among others, greater funding to ensure that the necessary technical skills are put in place to track the implementation of climate change policies. Co-operation among SADC members will remain critical in ensuring that existing regional institutions (such as the SADC–DMC) are able to carry out their work effectively.

As an urgent policy issue, climate change needs to be systematically mainstreamed into other broader policy, programming, planning and implementation processes, to avoid tackling it as an isolated policy issue through additional and self-standing mechanisms. The latter usually pose risks of duplicating resources and efforts, and calls for the establishment of additional implementation and co-ordination structures without guarantees of effectiveness. It is also clear from the discussion in this paper that the issue of effective environmental protection and resource management in the region needs greater attention by policy makers, given that many of the economies of the region are founded on harvesting natural resources and agricultural production. The fact that the natural resources of the region are being depleted at an alarming rate is due to poor management practices and inadequate land use planning for high potential agricultural land. This needs urgent action by policy makers in the region.

It is important that collective efforts be made by policy makers to strengthen collective adaptability to the effects of climate change. This would involve not only greater regional co-operation at the political level, but also at the technical level, to strengthen the institutional capacity for co-operative planning, resource allocation, monitoring, and enforcing compliance of SADC's protocols on climate change. Specifically, the production of crops for human consumption, attention to securing both food and water supplies for the region, and dealing with disaster management and climate-proofing, are important environmental policy challenges. Investment in agriculture to promote the climate-proofing of existing crop systems as well as the funding of research into crop diversification strategies, including in the area of bio-fuels, are urgent.

As southern Africa increasingly comes to grips with the effects of climate change, co-operation between member states will become more essential, requiring regional stability. Inter-SADC partnerships in respect of trans-border water management, and shared economic development, including regional agricultural co-operation, are urgently needed, together

with a broader SADC-wide policy framework that will regulate the movement of work seekers and environmental migrants. The importance of regional co-operation to build regional infrastructure for coping with and adapting to the effects of climate change cannot be over-emphasised. This should include infrastructure that enables local communities in many SADC countries to cope with natural disasters such as droughts and flooding.