

**The 2009 Climate Change Response Policy Development Summit**  
**Government's Vision on Climate Change Adaptation**  
**Address by Mrs L B Hendricks, Minister of Water Affairs and Forestry**  
**Gallagher Convention Centre, Midrand**  
**3 March 2009, 16:25 To 16:35**

Ministers

Members of Executive Councils

Mayors

Ambassadors

Directors General

Honoured Guests

International observers

Ladies and Gentleman

**Introduction**

Chairperson, the overwhelming scientific consensus is that we must continue to prevent the emission of green house gasses that cause climate change. The longer we delay taking action, the greater the mitigation and adaptation costs will be. These costs are not only measured in percentages of GDP or loss of habitat or species, but most importantly in terms of the millions of human lives that are at risk.

**Background**

Just as important as mitigation is, adapting to climate change must now become a priority. Although mitigation reduces the future cost of adaptation, it will never be an either/or situation and our adaptation response is critical. Developing countries will be the most vulnerable to the impacts of climate change and the immediate mitigation actions will influence the amount of spending required in the future for adaptation.

The dual challenge is therefore to avoid the unmanageable through mitigation; and manage the unavoidable through adaptation. We must move from the era of identifying problems to the era of implementing solutions. Developed nations such as the USA, which have historically contributed most to this problem, should start to accept their responsibilities to lead in combating climate change and to assist vulnerable developing countries to adapt to, and deal with, the devastating impacts.

Africa is one of the most vulnerable continents to climate variability and change because of multiple stresses and low adaptive capacity. Certain regions, especially in southern Africa, are at risk from increasing water stress which will have significant impacts on livelihoods of people in all sectors of society but more particularly the poor. The number of people exposed to water stress will multiply and it is projected that by 2020, between 75 million and 250 million people will be exposed to increased water stress due to climate change. Infrastructure, industrial production, income-generating activities and human livelihood strategies will be significantly affected. Furthermore, the productive land area will decrease and agricultural production, including access to food, in many African countries and regions is projected to be severely compromised. The area of arable land suitable for agriculture, the length of growing seasons and yield potential, particularly along the margins of semi-arid and arid areas are expected to decrease. This would further adversely affect food security and exacerbate malnutrition on the continent. In some countries, yields from rain-fed agriculture could be reduced by up to 50% by 2020. Local food supplies are projected to be negatively affected including decreasing fisheries resources. Towards the end of the 21st century, the projected sea level rise will affect low-lying coastal areas with large populations and, according to the Intergovernmental Panel on Climate Change (IPCC), the cost of adaptation in Africa could amount to at least 5 to 10% of GDP.

South Africa's ecosystems seem particularly vulnerable to this risk, with many endemic species at risk in the Fynbos, Succulent Karoo and other ecosystems. Up to 55% of our current biomass in South Africa will be detrimentally affected in the next 50 years with unmitigated climate change. Biodiversity assets directly underpin economic activity and human livelihoods and the ecosystem services they provide nurture environmental quality.

In terms of food security, we face a significant decrease in agricultural productivity with staple crops such as maize declining by as much as 20% in the drier western regions. Heat stress is already having impacts on productivity and quality within the deciduous export fruit sector. The livestock sector is also becoming increasingly vulnerable.

While we have much to learn of our vulnerability and adaptive capacity, in the face of these risks, the debate on climate change in our country is one on national, economic and environmental security. Those least able to adapt are likely to be the poor, and thus an emerging theme of climate change is that this is also a poverty issue. We have therefore decided to take decisive action. We are simply refusing to place our long term development, competitiveness and survival at risk by not taking action in the short and medium term. We also understand that all nations would have to do more, albeit in a differentiated way.

I am therefore confident that this Summit will lead to an action plan that will assist with our joint efforts to integrate adaptation policies and measures with our national, provincial and local sustainable development strategies. We must find innovative ways of adapting to the inevitable impacts of climate change. We must ask how we deal with the risks and threats to existing infrastructure and current economic and development activities. We must also ask how climate resilient development could be promoted in various sectors such as water, agriculture, food security, health, disaster management and coastal management. The emphasis should be on “balance”. Those who see a choice between mitigation and adaptation present false alternatives. We must pursue both. In developing countries, actions for mitigation and adaptation to climate change are best addressed within the overall framework of ‘sustainable development’.

In the international negotiations, moving to the implementation of high-priority adaptation activities is very urgent. The global response must move from planning to implementation. The challenge is to mobilise adequate funding at the scale required as the current levels of funding are too low. Without adequate and predictable international streams of finance for adaptation activities, Africa will have little chance to adapt to the devastating impacts. On the basis of the principles of “equity”, “polluter pays” and “common but differentiated responsibilities”, developed countries should take the lead in providing new and additional funding for adaptation activities. The scale of the climate change challenge is enormous and the 2008 UNFCCC report confirmed that the currently available multilateral funding to address the challenge of climate change falls dramatically short of what is required, just for developing countries it is estimated that between 28 to 67 billion USD will be required annually.

### **Disaster Management**

Although the presentations and discussions tomorrow will go into the detail about current and projected climate change impacts, we already know that Africa is likely to be severely impacted and that South Africa will not escape these impacts. The increase in the frequency, range and ferocity of extreme weather events has obvious implications as we have witnessed over the last 10

days in KwaZulu-Natal, the Western Cape and here in Gauteng. With regard to these extreme weather events like storms, ocean storm surges and floods, in the short term, we must continue to strengthen our emergency response and disaster management capacity. Thankfully many of the building blocks for this increased reactive capacity are already in place with the National Disaster Management Act setting a solid regulatory basis for efficient and effective responses. While our National Disaster Management Centre and many provincial and municipal disaster management centers are in full operation, there remains a need to improve these facilities to be able to provide life-saving services improving early warning systems and the capacity for disaster management. Our development plans must also take into account the implications of climate change, for example, the Department of Water Affairs in Forestry is undertaking a reassessment of our flood lines to assist planners in ensuring that new and existing infrastructure takes the impacts of new flood potential into account.

In order to assist and focus these efforts, the Department of Science and Technology is also developing the National Climate Change Vulnerability Atlas that will provide accurate and up-to-date information on what impacts can be expected and which areas of the country are most vulnerable to these impacts. This Atlas will become a key planning reference document for planners and developers.

### **Water Affairs**

But adaptation in the built environment is only one area of our adaptive focus. Within my own portfolio, climate change has serious implications for our water resources and as a water stressed country, any threat to our water resources must be considered to be serious. We will need to adapt to changes in rainfall patterns in the way we store, transfer and use water. As the department committed to during the 2005 National Climate Change Conference, we will continue to:

- Consider climate change impacts in our water conservation and demand management initiatives;
- Review and reassess the ways in which South Africa operates its dams and quantifies the ecological reserve to account for a changing climate;
- Review the details of water-sharing agreements in the light of new physical realities;
- Examine the design and implementation of the water allocation reform process to ensure that climate change considerations are taken into account; and
- Design and implement an outreach strategy to create awareness of the implications of climate change among stakeholders and customers in the

## water sector

Yesterday I launched the *Water for Growth and Development Framework*, this framework represents our commitment to water security for our people, the economy, and the environment and considers the critical role of climate change in relation to our planning processes in terms of adaptation.

Our water resource management systems have provided the foundation for the country's socio- economic growth for years, supporting the provision of water supply, sanitation, electricity, recreation and protecting us against floods. These limited water resources are however already stressed and additional stress from climate change will only intensify the competition for water.

As understanding of climate change improves, the challenge for our water sector is to develop and implement strategies that improve resilience, reduce risk, and increase sustainability for water and flood management systems and the ecosystems upon which they depend. Water is an absolute necessity for sustainable development. We need to consider these likelihoods by assessing the development impact of climate change on water resources.

Reduced availability and quality of water will impact adversely on measures to secure food for our people, safeguard the environment, grow the economy, ensure human health and develop suitable infrastructure. While our country's water resources management system has some capacity to cope with climate variability, extreme weather events resulting in increased droughts and floods will strain that capacity to meet future needs.

Responding to climate change is basically an attempt to manage an uncertain future. Whilst we know the causes, we are not able to accurately predict the effects. This limits our ability to put measures to mitigate and adapt. We do however recognise that solutions are interlinked and should therefore be coordinated. We also know that some of these solutions will be costly, but doing nothing will cost us our lives! A multi-faceted problem requires a multi-faceted response. Therefore, as a Department, we have proposing an array of adaptive measures to deal with hydrological risks attributed to climate change.

**Firstly**, we understand the need for a cooperative government programme led by the Department of Environmental Affairs and Tourism. We will therefore continue to participate actively in cooperative engagements to develop measures to respond to what is essentially a difficult natural phenomenon. At this stage we are collating our input into the development of the national climate change response policy. We will also use this policy to guide our own future actions, especially related to mitigation.

**Secondly**, we have taken a leadership role and acknowledge the need to respond as a very significant challenge. We now have a dedicated team of specialists who are developing a comprehensive response strategy for the water sector. The development of the strategy is necessitated by a strong call for our

sector to adapt to potential effects of climate change. Proposals from this strategy will be integrated into the revision of our National Water Resources Strategy and will form part of a broader plan to ensure that we protect, develop and conserve our water resources to meet future needs.

Amongst others, the strategy will look at the following:

- Developing tools for data-modelling to track emerging hydrological patterns and the impact on our water resources. These instruments will provide us with information to plan confidently.
- Developing mechanisms for early warning systems including predicting floods and timeously responding to potential risks
- Developing adaptation initiatives that target those catchments that are most vulnerable to climate risks based on current predictions
- Developing reconciliation strategies to manage demand in urban centres, where increased urbanisation and industrial development is putting pressure on the water resources
- Develop investment strategies to develop the necessary infrastructure for water storage and flood management.
- Develop new technologies for water treatment to respond to chemical changes caused by the high temperatures
- Develop aggressive water conservation and demand strategies to ensure efficient water use
- Develop measures to assess carbon footprints from our infrastructure and propose ways of reducing these

## **Agriculture**

On agriculture and water in a climate change context, important water related legislation and policy which revolves explicitly and implicitly around agricultural land already exists in many countries, e.g. legislation on streamflow reduction activities, on water use licensing for irrigation, water allocation and soil conservation. This confirms that the dynamic interrelationship between water and agriculture under present climatic conditions is already a highly symbiotic one. Climatic driven changes will therefore have an impact on water availability in the soil as well as agricultural practices and production, while any impacts of climate on agricultural practices and production will have an affect on water availability simultaneously.

The Agricultural sector is another important area where we must concentrate our climate change adaptation efforts and specific actions could focus on modifying tilling practices, employment for displaced workers, integration of catchment areas, adopting appropriate technology and strengthening agricultural extension services. In this sector, key challenges are developing more drought and flood resistant crops and considering crop switching strategies. It will also be critically important to find ways of communicating information about climate scenarios and adaptation options to subsistence farmers and rural communities.

Here again, the Department of Agriculture and the Agricultural Research Centre, among others, are actively implementing their commitments made during the 2005 National Climate Change Conference, including:

- Ensuring that climate change considerations are included in the evaluation of new agricultural research and development projects;
- Reviewing and revising agricultural policy to ensure climate change resilience; and
- Ensuring that climate change is fully considered and reflected in the four elements of agricultural early warning systems, including: prior risk knowledge; monitoring and warning services; dissemination of warnings/information; and response capacity.

## **Health**

Another area requiring attention is health. According to the IPCC's 4<sup>th</sup> Assessment Report, at a global scale, climate change impacts are likely to affect the health status of millions of people through:

- Increases in malnutrition and consequent disorders, and implications for child growth and development;
- Increased deaths, disease and injury due to heat-waves, floods, storms, fires and droughts;
- Increased burden of diarrhoeal disease;
- Increased frequency of cardio-respiratory diseases due to higher concentrations of ground-level ozone related to climate change; and
- The altered spatial distribution of some infectious disease vectors.

In respect of vulnerable people living in urban communities, urban slums and squatter settlements are often located in areas subject to landslides, floods and other natural hazards. Lack of water and sanitation in these settlements are not only problems in themselves, but also increase the difficulty of controlling disease reservoirs and vectors, facilitating the emergence and re-emergence of water-borne and other diseases. The potential for climate change to intensify or

alter flood patterns may also become a major additional driver of future health risks from flooding. Combined with declining economies, unplanned urbanisation may affect the burden and control of malaria, with the disease burden increasing among urban dwellers. Currently, approximately 200 million people in Africa (24.6% of the total population) live in urban settings where they are at risk of malaria. In respect to Africa specifically, the IPCC notes that in mapping the malaria risk in Africa, they have noted a possible expansion and contraction, depending on location, of climatically suitable areas for malaria. If no action is taken, vector borne diseases such as malaria will spread into disease-free areas in South Africa with considerable associated costs.

As early as 2000, the South African Country Study on the possible impacts of climate change predicted that possible health impacts are likely to include increased infectious diseases as well as weather related mortality such as heat stress. It is clear that something must be done to build up our resilience to the impacts of climate change. From a health perspective, government is committed to accelerating our advance towards the achievement of the goal of health for all. In this regard, the IPCC makes it clear that the impacts of climate change in Africa are likely to be greatest where they co-occur with a range of other stresses, including unequal access to resources, enhanced food insecurity and poor health management systems. Thus, it is imperative that we accelerate all our activities to improve our health management systems and the health profiles of all South Africans.

The “Midrand Plan of Action” that emerged from government’s 2005 National Conference on Climate Change noted, among others, that the health sector urgently requires an updated assessment of its vulnerability to climate change. To this end, the Department of Health will be an active participant in the compilation of South Africa’s 2<sup>nd</sup> National Communication to the United Nations Framework Convention on Climate Change which will, among others, assess and evaluate all potential health-related climate change impacts. Furthermore, and in line with South Africa’s 2004 National Climate Change Response Strategy, the Department of Health will continue to improve and extend its monitoring and forecasting systems to warn of disease outbreaks to counteract possible climate change health impacts and enable prior planning for effective sustainable interventions. Increased surveillance, monitoring and control of areas that are prone to, and will be affected by, diseases such as malaria and Bilharzia will also be required.

## **Conclusion**

In conclusion, it is clear that climate change will affect us all and that we will all have to work together as a nation to fight its causes and build our resilience to its impacts. In this regard government has a clear role to play, as it is the tragic



irony of climate change that, although the poor have made little contribution to the cause of climate change, it is the poor who are the most vulnerable to its impacts.

Thank you