

CLIMATE CHANGE BREAKFAST BRIEFING

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DEPARTMENT OF AGRICULTURE, FORESTRY &
FISHERIES



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REPUBLIC OF SOUTH AFRICA

Outline

1. THE IMPACTS OF CLIMATE CHANGE ON THE SECTOR (AGRIC, FORESTRY & FISHERIES)
2. PLANS TO REDUCE AND MANAGE VULNERABILITY IN A CHANGING CLIMATE
3. THE ROLE OF THE SECTOR IN REDUCING EXPOSURE AND VUNERABILITY, AND IMPROVE RESILIENCE TO ADAPTING TO CLIMATE CHANGE
4. THE IMPLICATIONS OF LTAS SECTOR REPORT IN DAFF AND PLANS FOR FURTHER ENGAGEMENTS ON ADAPTAION STRATEGIES AND IMPLEMENTATION



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THE IMPACTS OF CLIMATE CHANGE ON THE SECTOR (AGRIC, FORESTRY & FISHERIES)

Agriculture:

- Most of South Africa, especially the drier part, is used for grazing by cattle, sheep and wildlife.
- Higher carbon dioxide will lead to less protein in the grass, which will reduce any benefit resulting from increased plant growth.
- Less rainfall would lead to proportionately less animal production.
- Increased droughts and floods in combination with higher temperatures could have a serious impact on the availability of food.
- The impact of hazards extends beyond food shortages and negatively affects national economies and reduces the country's ability to produce export crops and generate foreign currency.
- Marginal lands will be more prone to reduced yields owing to increased frequency of crop failure and land degradation (Frequencies of hazards are currently being observed).
- Annual crop production might be negatively affected by regular dry and/or wet seasons.



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Forestry:

- The forestry industry could probably tolerate a small increase in temperature.
- Decrease in rainfall would reduce the area which can support plantations, and the growth rate of the trees.
- A positive point is that rising carbon dioxide could help reduce water use by plantations.

Fisheries:

- The main challenge to the Fish industry in general is overall decline in catches.
- Temperature changes are likely to affect fish species and result in changes in their natural distribution patterns.
- Variations in the timing of flooding events may affect fish migration and spawning patterns.
- Climate change impacts on inland ecosystems are associated mainly with water quantity and quality.



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PLANS TO REDUCE AND MANAGE VULNERABILITY IN A CHANGING CLIMATE

Development of sector programmes: Research, Capacity building and Awareness

- Timeous and effective dissemination of early warning information on adverse climatic conditions can result in preparedness which will lead to minimized disaster losses.
- The annual crop yield can be considerably higher if crop losses due to low and irregular rainfall can be minimized.
- Drought tolerant crops will have the potential to enhance the efficiency of crop production by increasing cultivation and yields in marginal areas.
- The principle of “more crop per drop” needs to be maximized and all forms of increasing rainfall efficiency, such as by water harvesting, need to be adopted.
- Possible negative effects on veld cover and composition, and the influence that this could have on carrying capacity for livestock and game also need to be kept in mind.



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PLANS TO REDUCE AND MANAGE VULNERABILITY IN A CHANGING CLIMATE

DAFF Research projects:

Published reports: Atlas of climate change (Adaptation) & Agric GHG inventory (Mitigation);

Current projects: Sensitivity to crop suitability (mapping) and Biogas production(crop & animal wastes)

Sector programmes: sustainable landbased livelihoods

- CASP (Comprehensive Agricultural Support Programme)
- LandCare – Conservation Agriculture (CA)
- Greening – Organic Agriculture
- Fresh Water Farming
- Working on Forestry
- Organised Agriculture

THE ROLE OF THE SECTOR IN REDUCING EXPOSURE AND VUNERABILITY, AND IMPROVE RESILIENCE TO ADAPTING TO CLIMATE CHANGE

Possible roles:- CC policies, plans, strategies, awareness & capacity building:

- Development and implementation of policies, strategies, action plans and / or regulations to mitigate GHG emissions and adapt to climate change;
- Ensuring sector policy and strategy alignment with the National Climate Change Response White Paper (NCCRWP);
- Monitoring and reporting agricultural GHG emission reduction interventions;
- Mainstreaming climate change adaptation with integrative disaster risk reduction.
- Early Warning Systems (EWS): Capacitating and improving awareness of climate change issues by ordinary people – extension services, indigenous knowledge systems, etc
- Contributions towards reducing the levels of anthropogenic greenhouse gas production need to be actively encouraged.



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- Development of management strategies that include sound ecosystem-based management practices and focus on rebuilding over-exploited fish resources and impacted ecosystems and improving marine habitat quality.
- This will result in positive gains for society and the fishing industry through more productive fish stocks, higher biodiversity and improved resilience and adaptive capacity to climate change.
- Adaptation strategies need to be developed and applied simultaneously, in order to deal with the vagaries of climatic variation and any negative impacts of severe weather events on both first and second economies.
- These need to be informed by vulnerability assessments and a comprehensive vulnerability audit for the sector.
- Climate resilience needs to address issues of strategic national importance, e.g. to food security and its links to water, health (human, livestock and plant) and land reform.

THE IMPLICATIONS OF LTAS SECTOR REPORT IN DAFF AND PLANS FOR FURTHER ENGAGEMENTS ON ADAPTAION STRATEGIES AND IMPLEMENTATION

- Focused research is needed to contribute to the development of plausible broad forecasts and appropriate adaptation measures
- There is a need to translate what is already known regarding climate change (impacts, vulnerabilities, etc) into knowledge that informs policy making
- Impacts of climate change on food production, agricultural livelihoods and food security in South Africa is a serious national concern
- Climate-resilient sectoral plans have the potential to directly address the plight of those most impacted by climate change, e.g. the rural poor.

Funding will be needed to effectively implement the plans



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