

# **Disaster Management, Mitigation and Adaptation in relation to the Right to Food and Food Security**

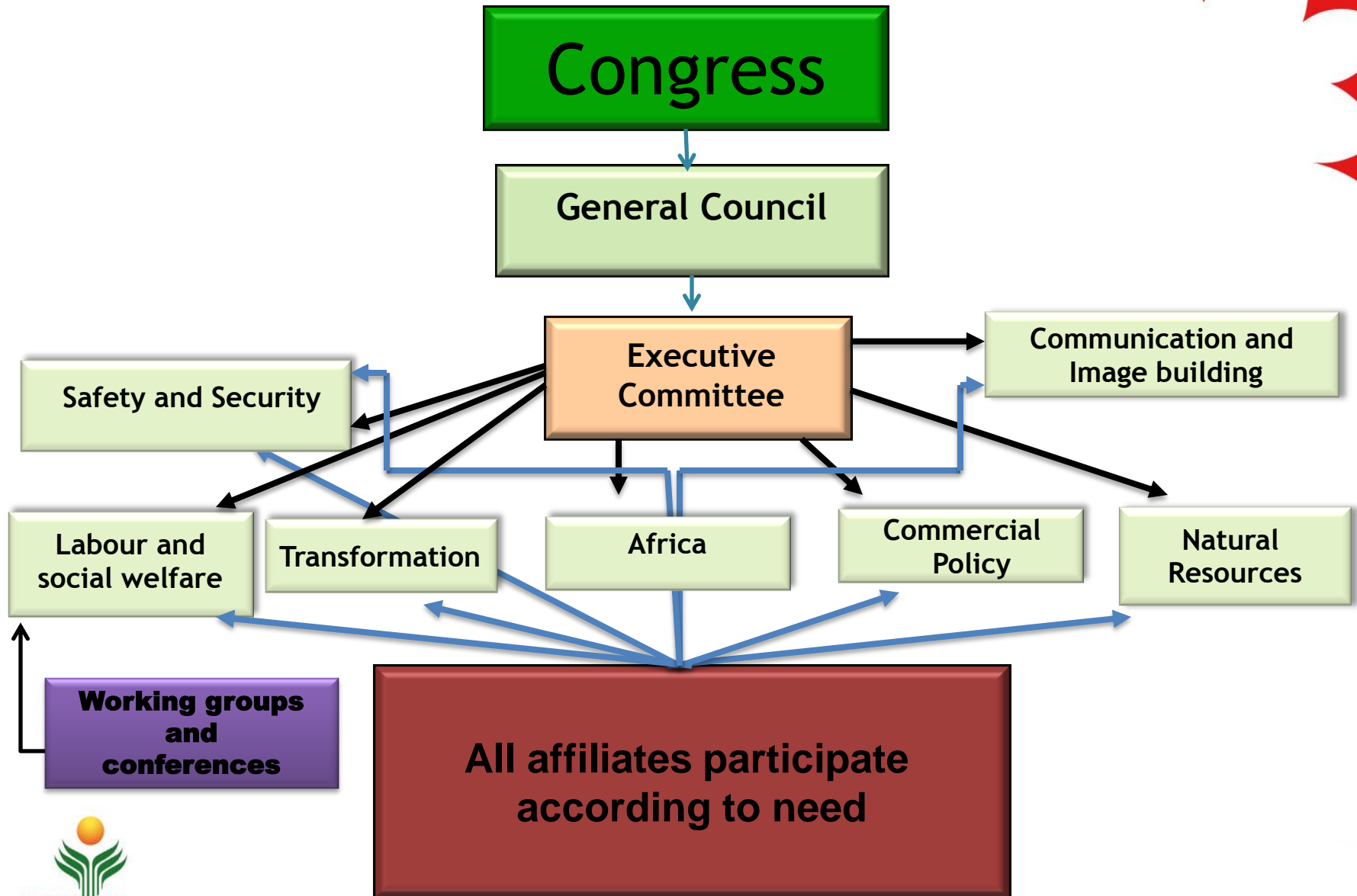
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**Agri SA**

# **The South African Agricultural scene**



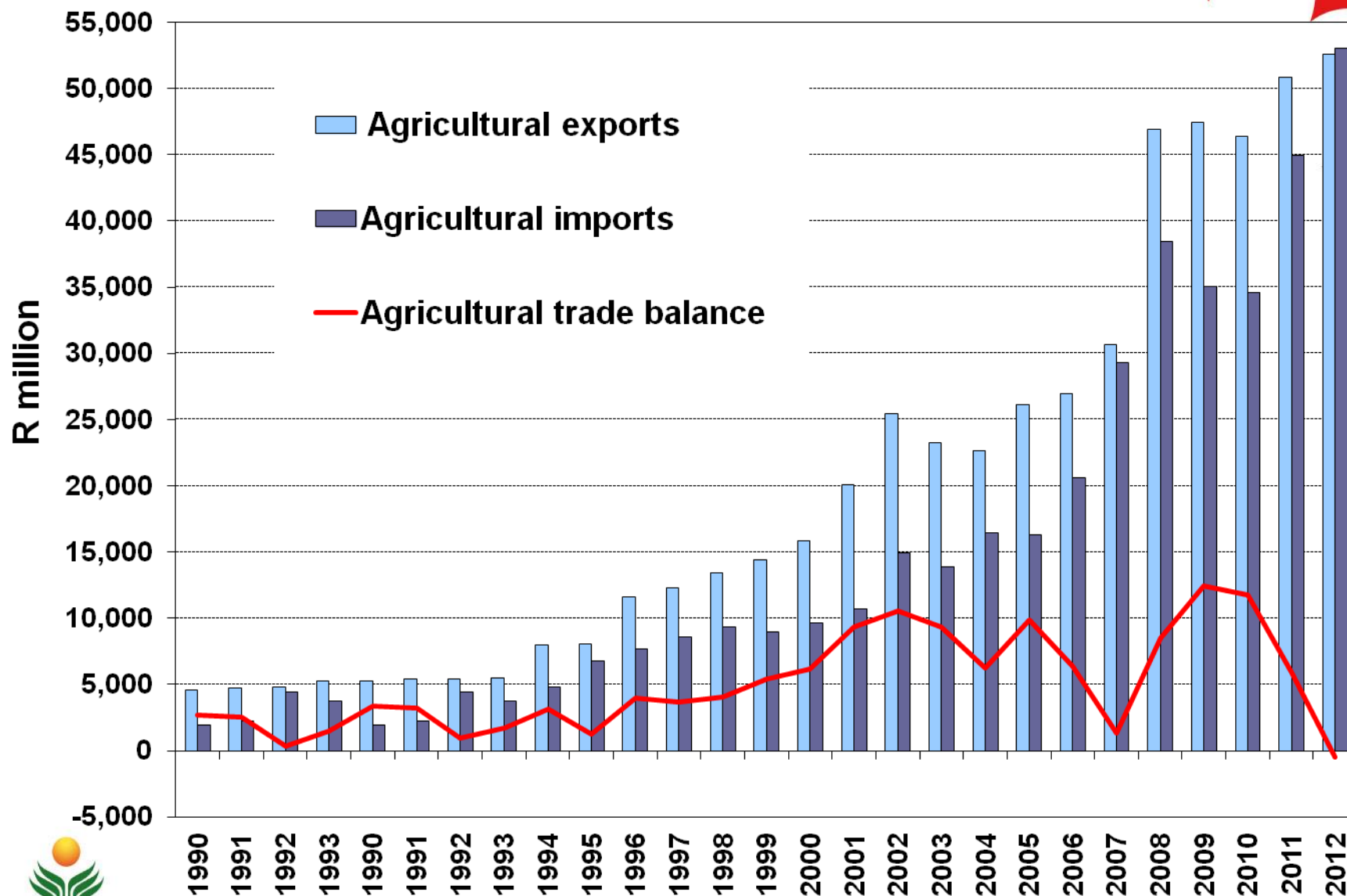
# Agri SA Structure for collective policy



# Contribution to SA's GDP(%)

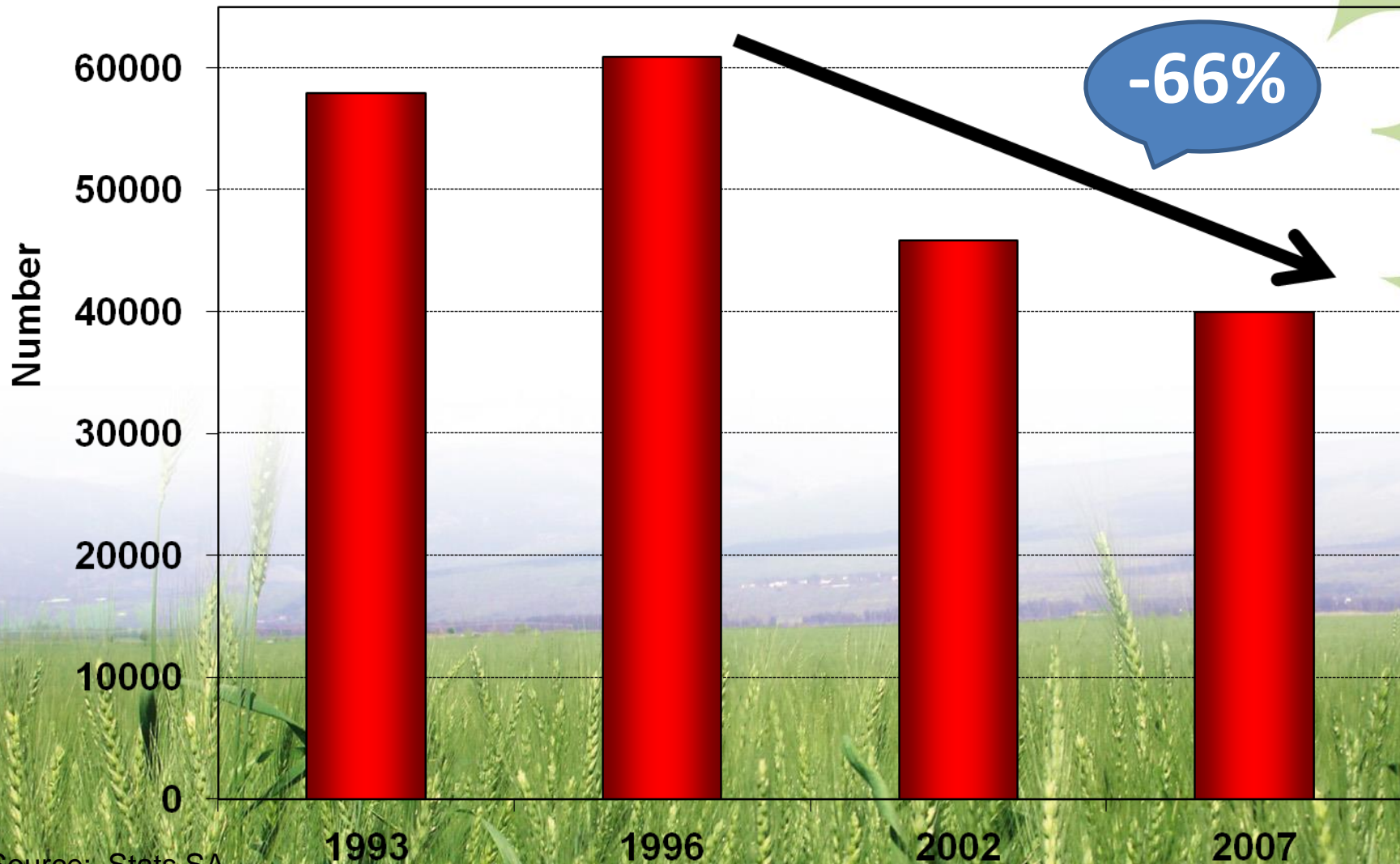
SECTOR	1946	1976	1996	2005	2012
Agriculture, forestry and fishing	10.5	6.1	3.6	2.7	2.6
Mining and quarrying	10.5	10.1	5.9	6.4	9.3
Manufacturing	15.1	20.7	17.2	16.2	12.4
Electricity, gas and water	1.7	2.3	2.8	2.0	2.8
Construction (Contractors)	1.9	4.3	2.7	2.1	4.0
Wholesale and retail trade, catering and accommodation	15.5	11.7	12.0	12.1	16.0
Transport, storage and communication	8.7	8.3	7.8	8.4	9.1
Finance, insurance, real-estate and business services	8.9	11.4	14.2	18.6	21.5
Community, social and personal services	17.3	15.1	19.2	18.6	22.5
General government services	9.9	9.9	14.5	13.3	16.6

# South African Agricultural exports and imports, 1990-2012





# Number of farming units



Source: Stats SA

# The management of risk



- The management of risks is one of the great challenges of the 21st century, the ever-growing population, economic and environmental losses due to natural or man-made disasters, provides the need for a systematic approach to the management of risks. It is shown that a multi-disciplinary understanding of disaster risk management is required.

# The climatic profile of South Africa

- South Africa lies within a **drought belt** with an average annual rainfall of only 464 mm, compared to a world average of 857 mm. 21 % of the country has an **annual rainfall** of less than 200 mm, 48% has between 200 and 600 mm, while only 30% records more than 600 mm.
- In total, 65% of the country has an **annual rainfall of less** than 500 mm.
- Furthermore the rainfall is typically **unreliable and unpredictable** with a low rainfall to have run off ratio.
- The central and eastern parts of the country receive **summer rainfall**, whilst the south western part of the country is a **winter rainfall** region.





# South Africa is a country not unfamiliar with extreme events



- **Drought** is a persistent feature of South Africa and the wider region (IPCC, 2007 Working Group 1, chapter 11).
- Drought, particularly **drought impacts**, is not only a climatic feature.
- Outcomes associated with a drought event, particularly an **extreme event**, are also tightly coupled to other societal elements e.g. economic changes, conservation and land care practices, rural livelihoods, agricultural practice, and most of all on food security.

# Some examples of major impacts

- ... *“de Hemel is koper en die aarde enkel dorheid, wy weten niet waar ons vee van leven ....indien er een regen mogte komen vergezeld van swaarde koude gelyk als het passeerde jaar 1812, dan staan wy te vrezen dat er weer enige honderd duizend schapen en beesten uit het leven gerukt worden, want de beknoptheid van de veeplaatsen veroorzaakt ons dezen rampen ”* (extracts from Van Der Merwe as cited in Republic of South Africa, 1968, 4).



# Some examples of major impacts

- *“In the year 1919 the losses of the Union due to drought amounted to over 16,000,000 pounds a figure approaching the entire contribution of South Africa to the Great War. And a sum of money large enough to construct a 2,000 mile new railway line”*  
**(Letter from the Chairman of the Drought Investigation Commission, H. Du Toit, Appendix A, Union of South Africa, 1922, p. 22).**



# Some examples of major impacts

- Total losses of sheep in the Union of South Africa reported due to the effect of drought and of disease for the period 1926 to 1939 – 34.4 million (Source: -National Provision Against Drought by S J de Swardt and O E Burger, 1941).*



# Some examples of major impacts

- Droughts in the 1980s and 1990s – growing problem, deepening crisis
- The findings were that the summer crops for 1991 were anticipated to be on average only 20% of normal and the physical crop losses would amount to nearly R 2 billion for the 1992/93 marketing season.
- Further more that the balance of the R800 million guarantee left no room for further extension of credit by the Agricultural co-operatives to the members concerned. This would increase the State's liability under this guarantee to R2.14 billion.
- It could also lead to the sequestration of thousands of farmers, including bankruptcy and liquidation of the majority of Agricultural co-operatives in the summer rainfall areas, which could heavily impact on the socio-economic position of the rural areas, where 16000 farmer workers (580 000 dependants) could lose their jobs.



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# Some examples of some major impacts (cont)

- In the light of these findings the Minister of Agriculture on May 7, 1992, announced:
  - *A comprehensive aid package totaling R3.8 billion for farmers and communities within the disaster drought areas. This was the largest single amount in the history of South African agriculture to be allocated from State funds.*

# Some examples of recent major impacts

- **2011:** Flooding Limpopo and Mozambique
- **2011/12:** Flooding along Lower Orange River
- **Sept. 2013:** Frost damage along Lower Orange River
- **Oct. 2013:** Severe drought in North West Province

# MITIGATION

- Mitigation in relation to a disaster means the lessening of the potential adverse impacts or physical hazards, including those that are human – induced, through actions that reduce hazards, exposure and vulnerability
- Mitigation in relation to climate change means a human intervention to reduce the sources of greenhouse gases. (according to the latest amendment to the Disaster Management Act, 2002)
- Disaster aid in financial terms, food aid is the most important humanitarian response of the international community (Leader, 2000). For some Less Developed Countries, food aid has become almost synonymous with drought relief.
- Food aid can be controversial and was described as a 'blunt instrument' by de Waal (1989). This is partly because it is the form of overseas aid most likely to be diverted from the needy and because it is based on the Western view of famine as a mass starvation event.
- Given this interpretation of famine, the large-scale distribution of food appears to be a sensible strategy.

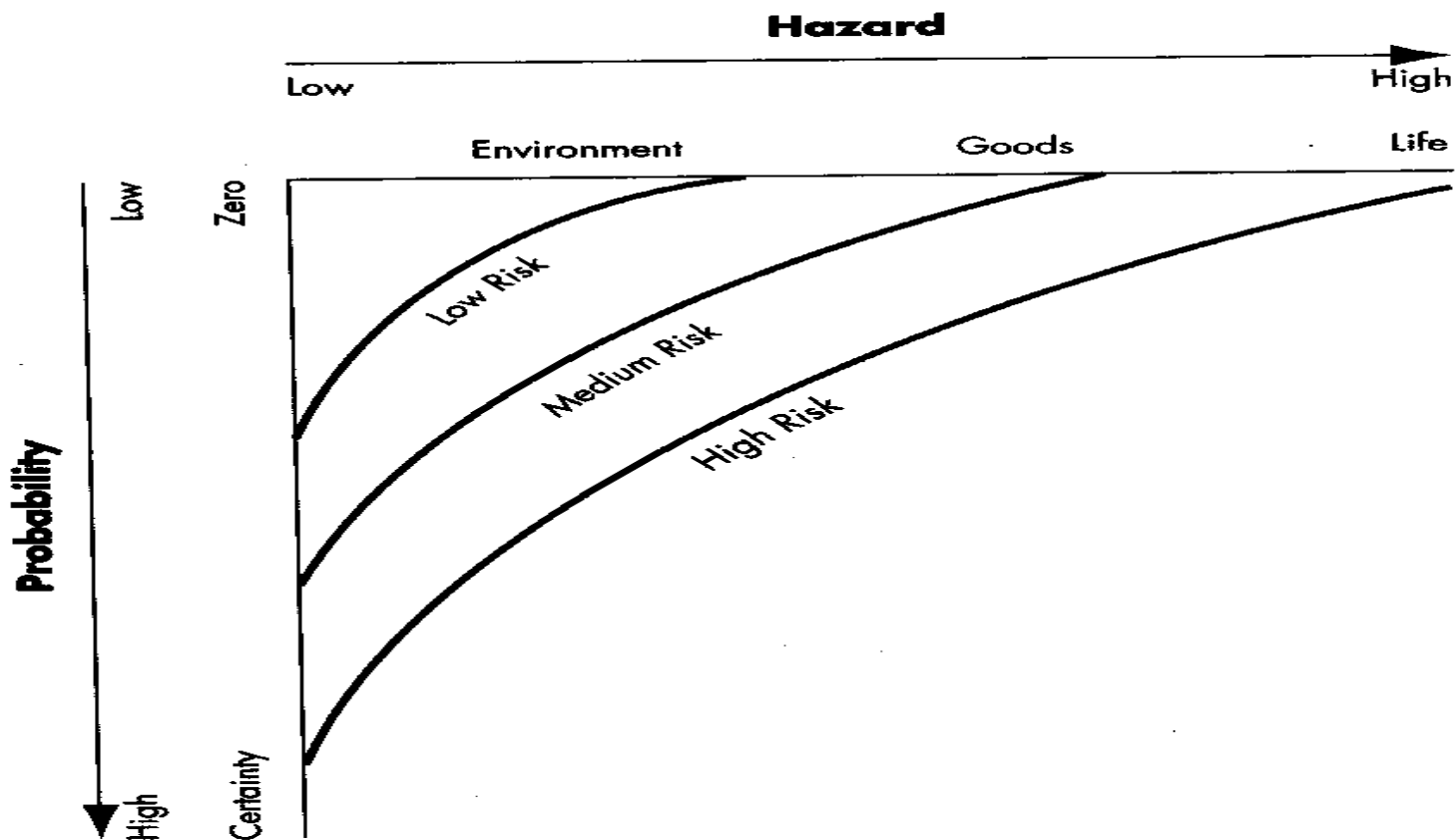
# ADAPTATION

- “Adaptation means the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates or exploits beneficial opportunities” (according to the latest amendment to the Disaster Management Act, 2002).
- Adaptation also refers to the adoption of appropriate coping strategies to minimise the negative effects of climate change and includes a range of activities such as response farming, crop selection and breeding, animal selection, rainfall use efficiency, timing of agricultural activities as well as forestry and fisheries – related issues. (DAFF)



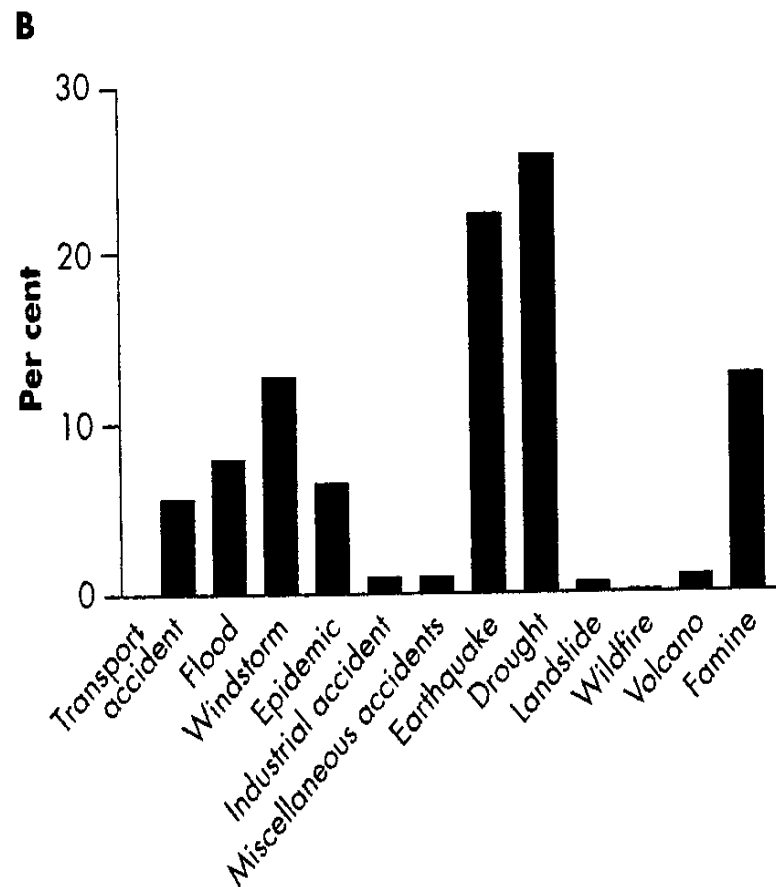
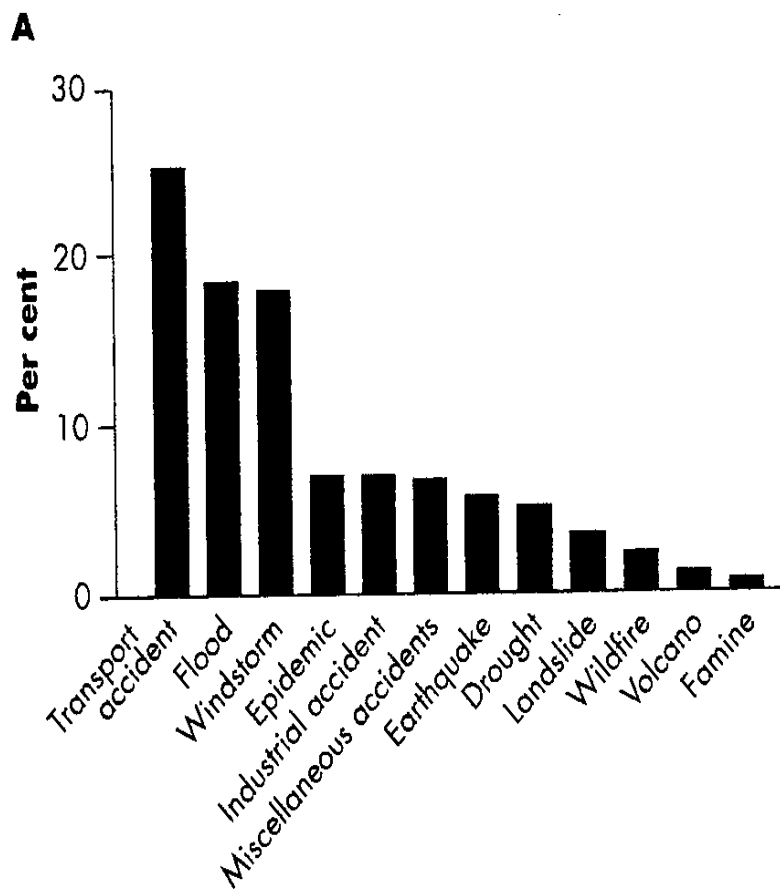
# **Disasters in relation to risk and loss of life**





*Figure 1.6* Theoretical relationships between the severity of environmental hazard, probability and risk. Hazards to human life are rated more highly than damage to economic goods or the environment.

*Source:* After Moore (1983).



*Figure 2.5* Percentage incidence of global disasters and disaster deaths according to disaster type 1975–2001. (A) incidence of main disaster types; (B) associated incidence of disaster deaths. Transport accidents, floods and storms are the most frequent disasters; droughts and earthquakes take the most lives.

*Source:* Adapted from CRED database.

# RELATIONSHIP TO THE RIGHT TO FOOD



- The South African Constitution explicitly enshrines the right to food (art 27.1).
- This is an excellent starting position to promote food security.

# RELATIONSHIP TO FOOD SECURITY

- Is to balance the producing scale of food and cleaner fuels, through regulatory measures i.e. the balance between mitigation and adaptation.





# CHALLENGES

- Protect high potential land
- Caring for natural resources
- Increase in food production
- Invest in research and use of technology in the betterment of farming practices
- Educating people to have smaller families



# CHALLENGES (Cont)

- Implementation of good legislation and strategies
- Dedicated and passionate officials to fulfil the principles of UBUNTU

# CONCLUSION



- The need for food security and disaster management has been over time inextricable from each other.
- The time has come that we stop dealing these important issues in silos, but treat them in a holistic manner because the day might come that there will be no food on the table.
- I thank you for the time to give you a glimpse what happened over many centuries.

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***Home for the South African  
Farmer***