

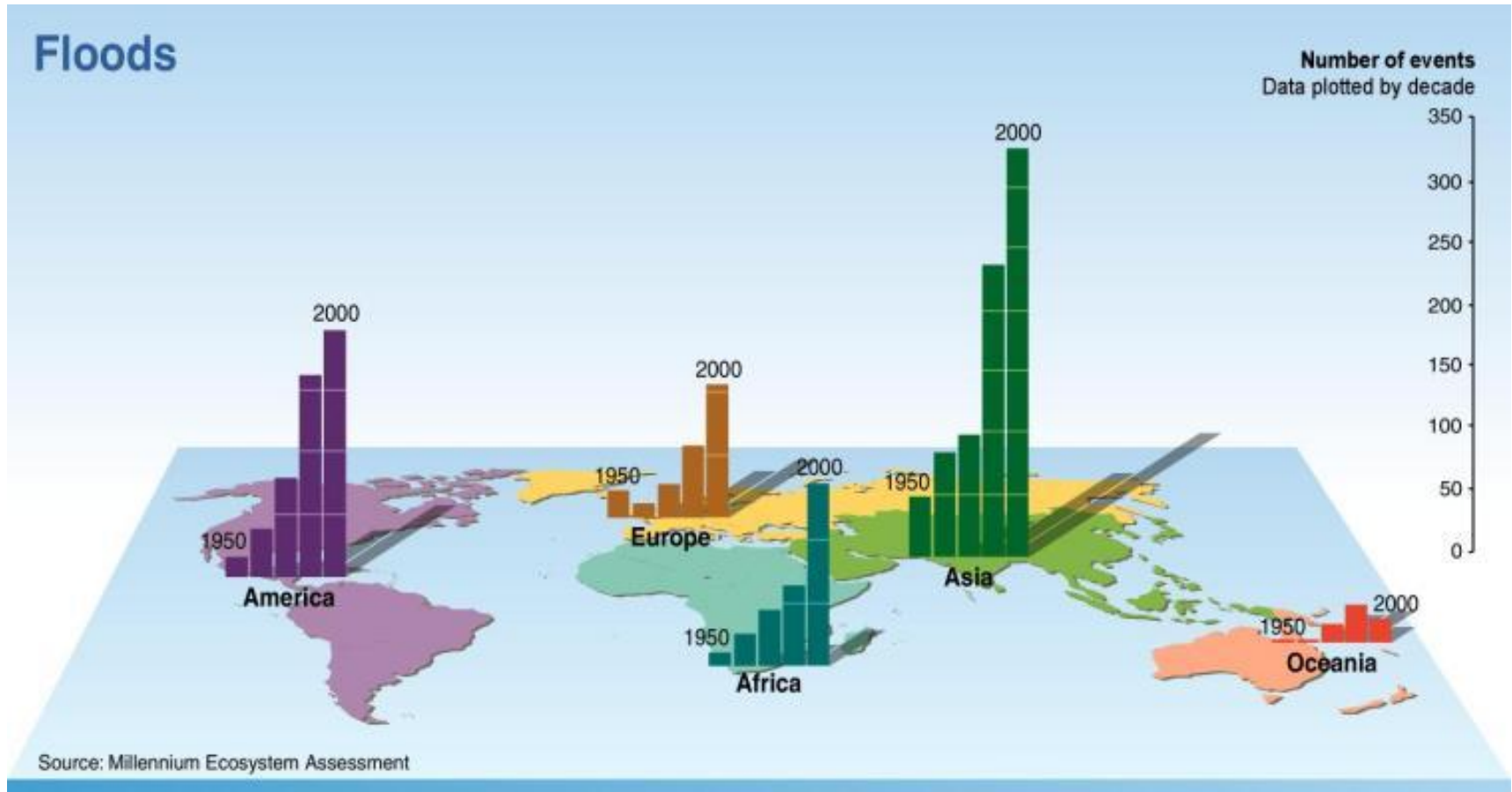


# Risk in a changing world: Lessons from the Insurance Industry



*Deon Nel, Clifford Shearing, Jeanne Nel, Sally Archibald, Andre Theron, Laurie Barwell, Ashton Maherry, Dave Le Maitre, Lara van Niekerk, Greg Forsyth, Kristy Faccor, Tom Herbstein*

# The Risk Society...



# The global ecological buffering capacity.....

Fig. 2: GLOBAL ECOLOGICAL FOOTPRINT, 1961–2003

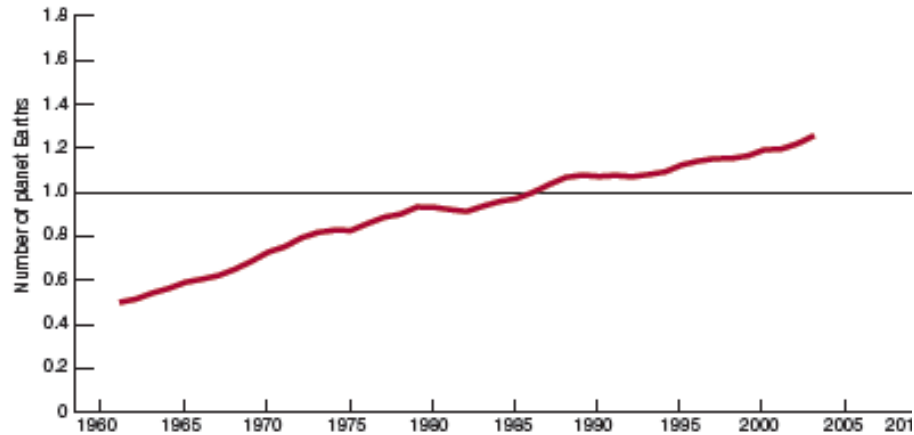
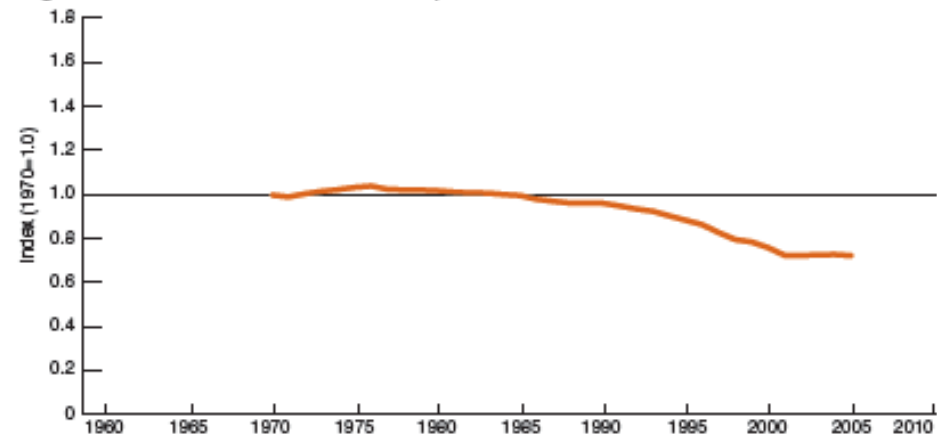
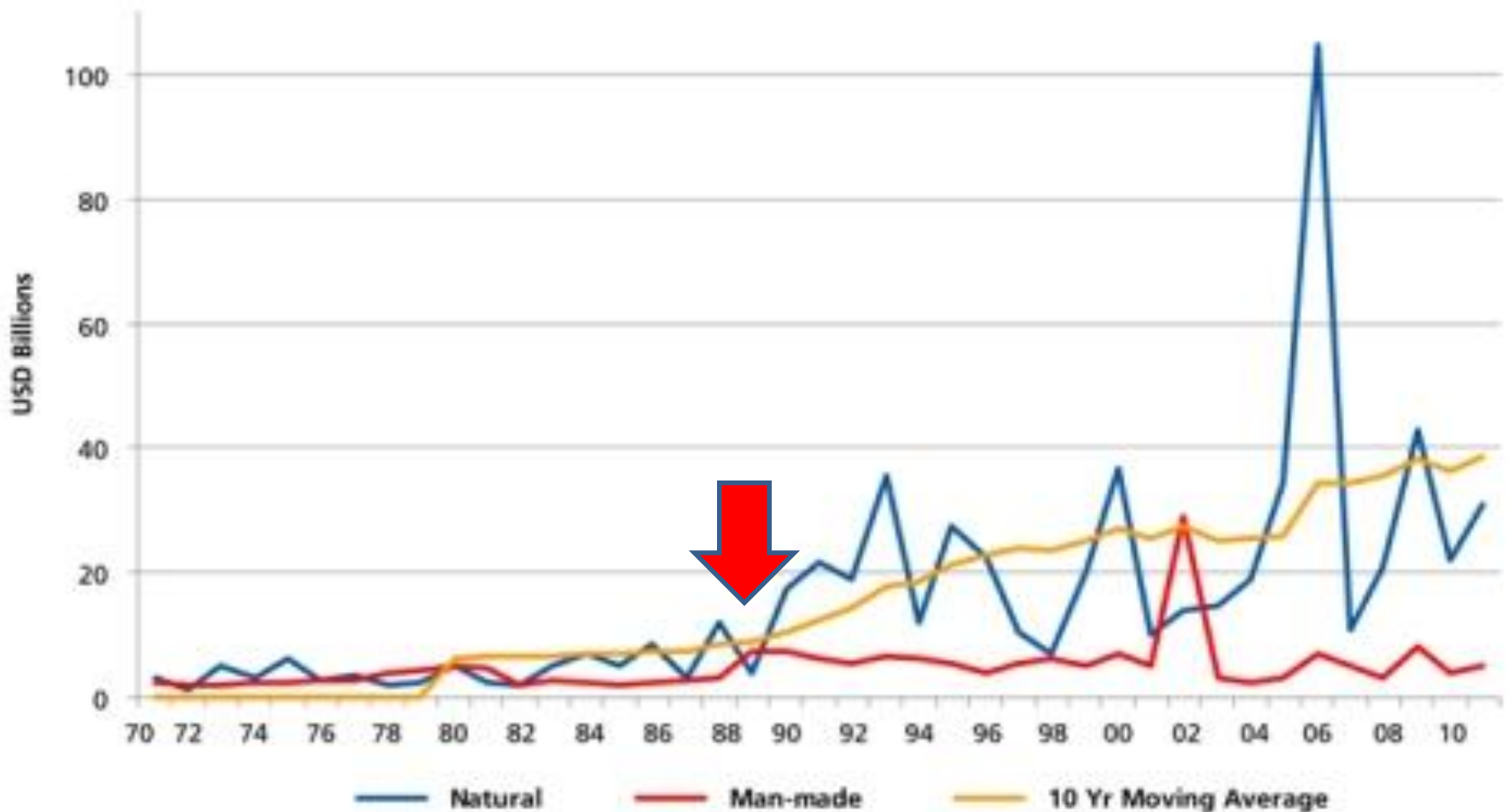


Fig. 1: GLOBAL LIVING PLANET INDEX, 1970–2005



**The WWF Living Planet Report:  
2008**

# Global re-insurance claims due to 'Natural Disasters'



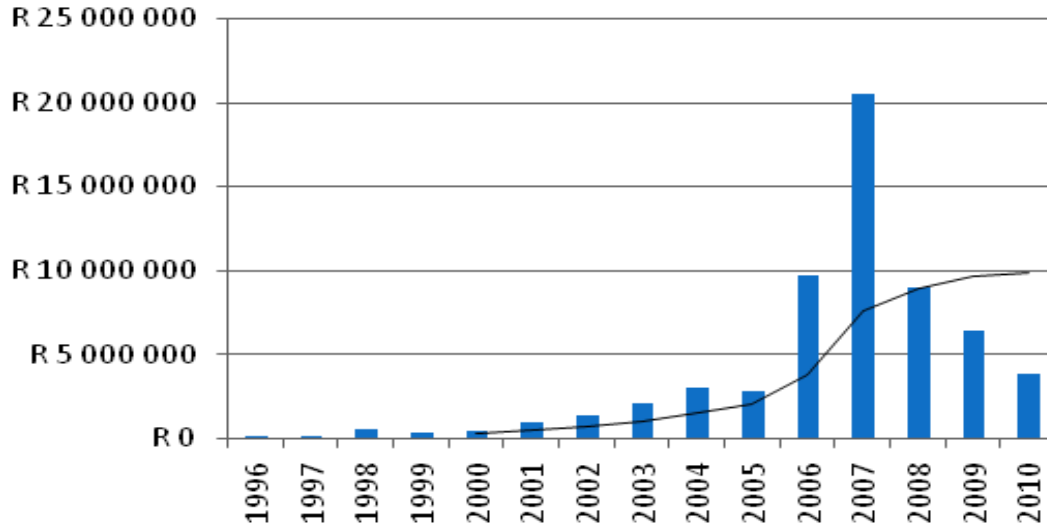
# The Santam Southern Cape Case Study



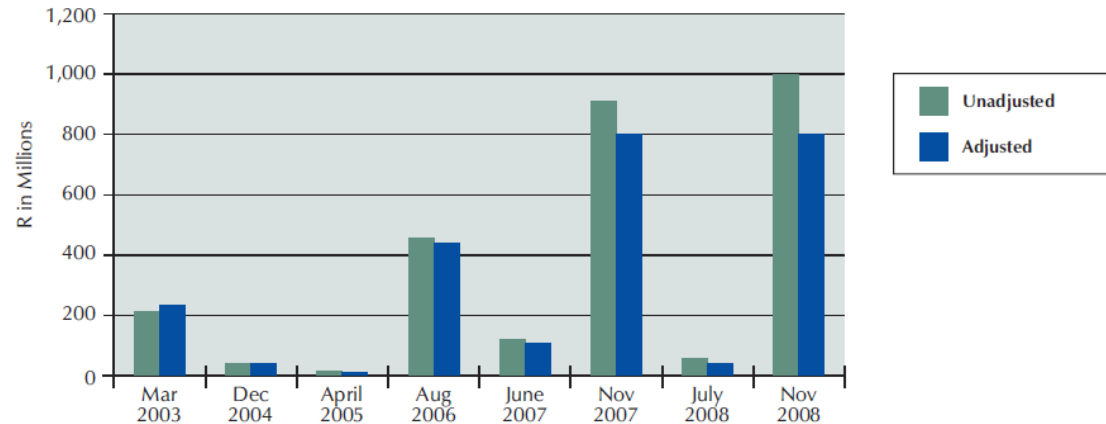
***Risk (Fire, Flood & Sea-storm) and the Role of insurance in building socio-ecological Resilience***

# 1. We live in times of unprecedented risk

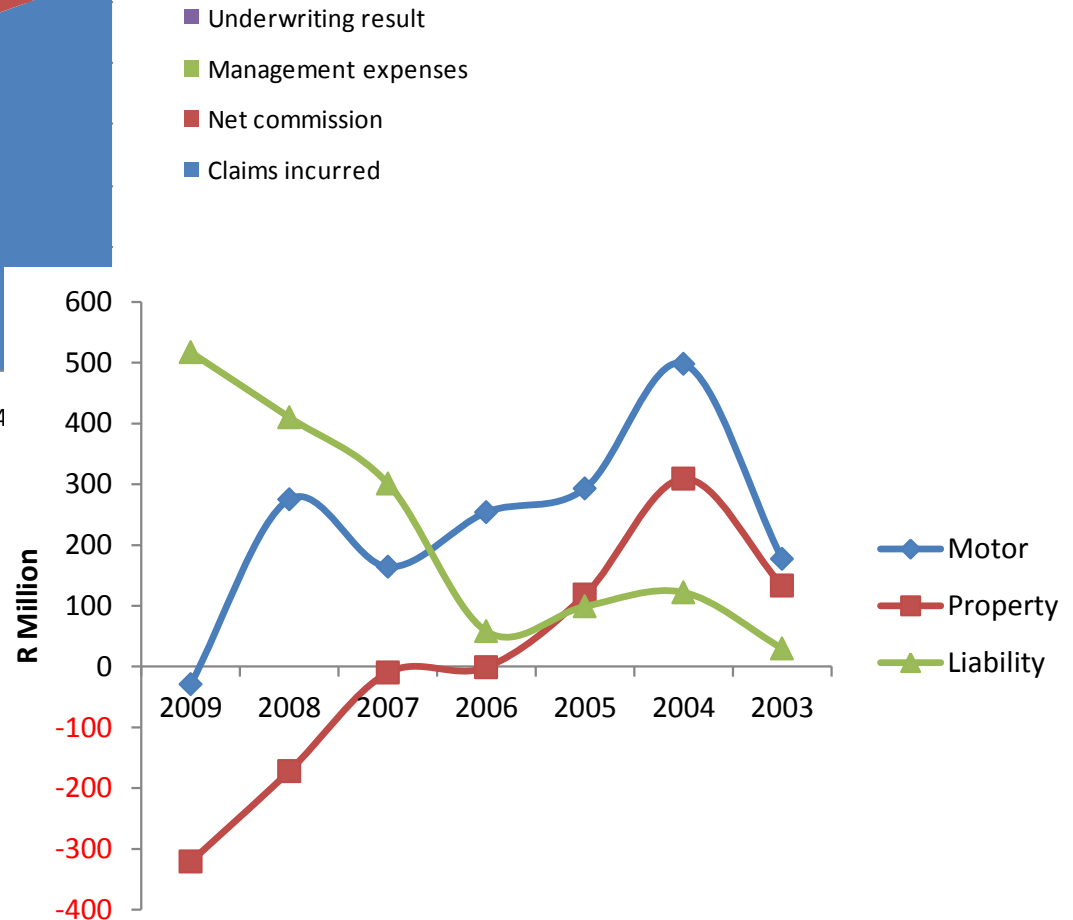
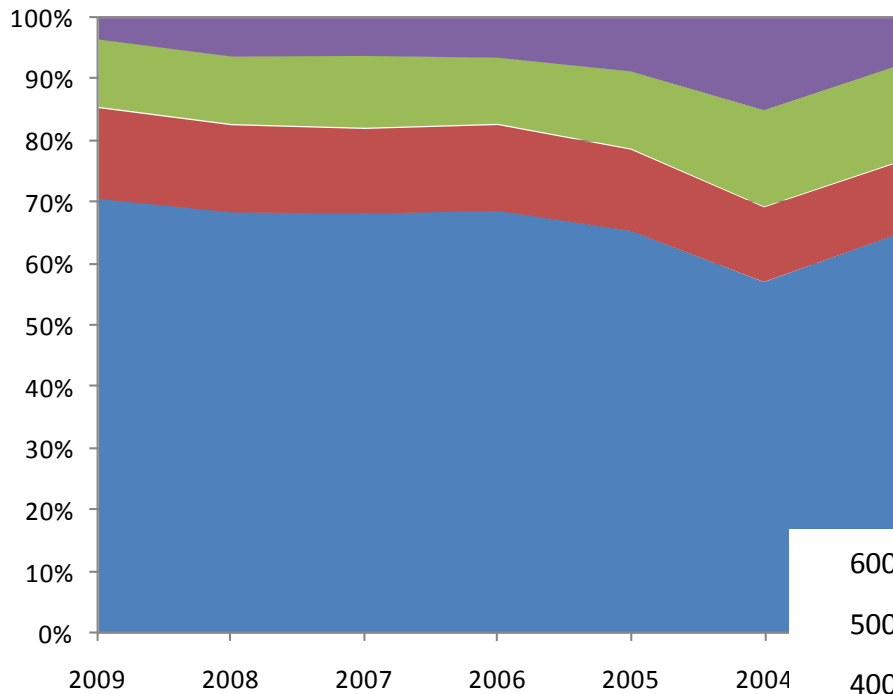
## Santam Special Perils Payouts: 1996 -2010



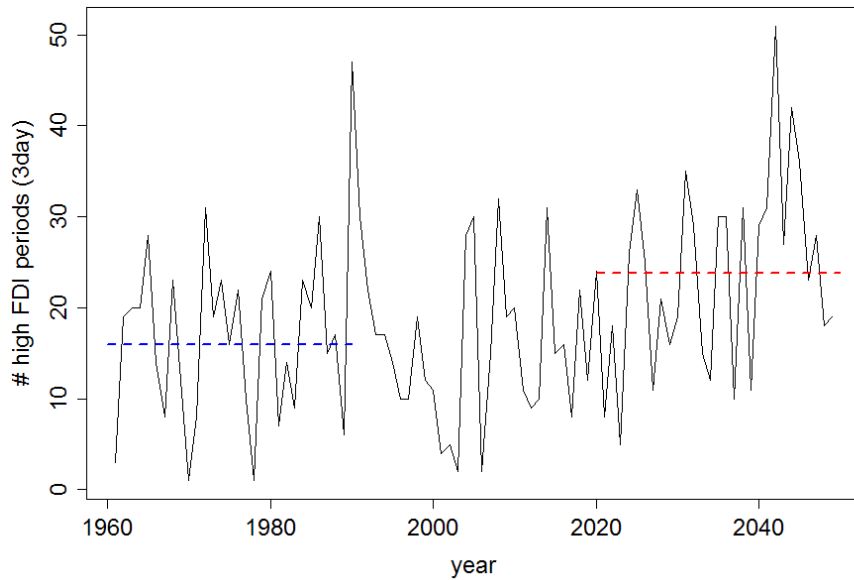
## Weather Damage in the Western Cape



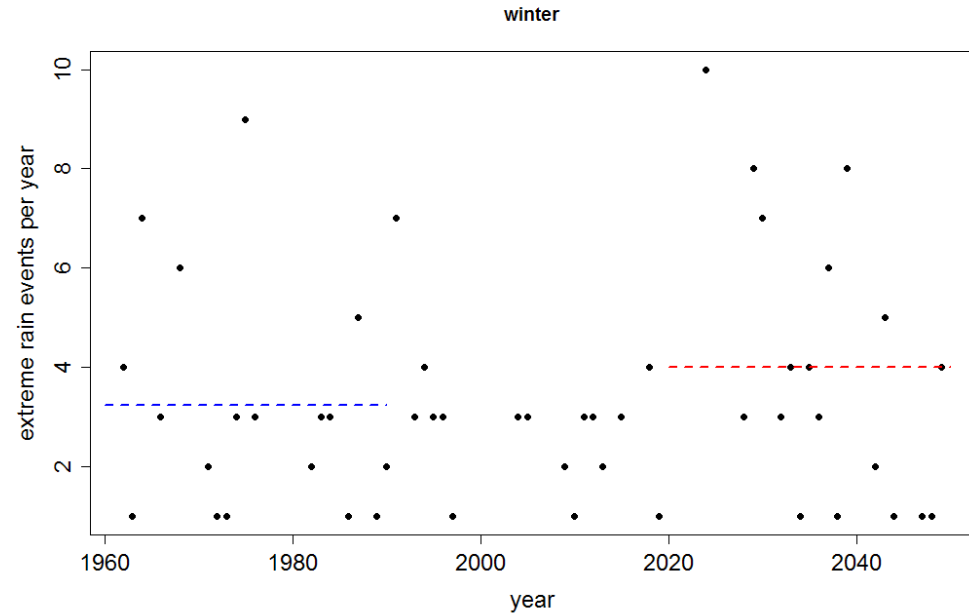
# *Places pressure on the underwriting result*



## 2. The future climate risk is even worse....

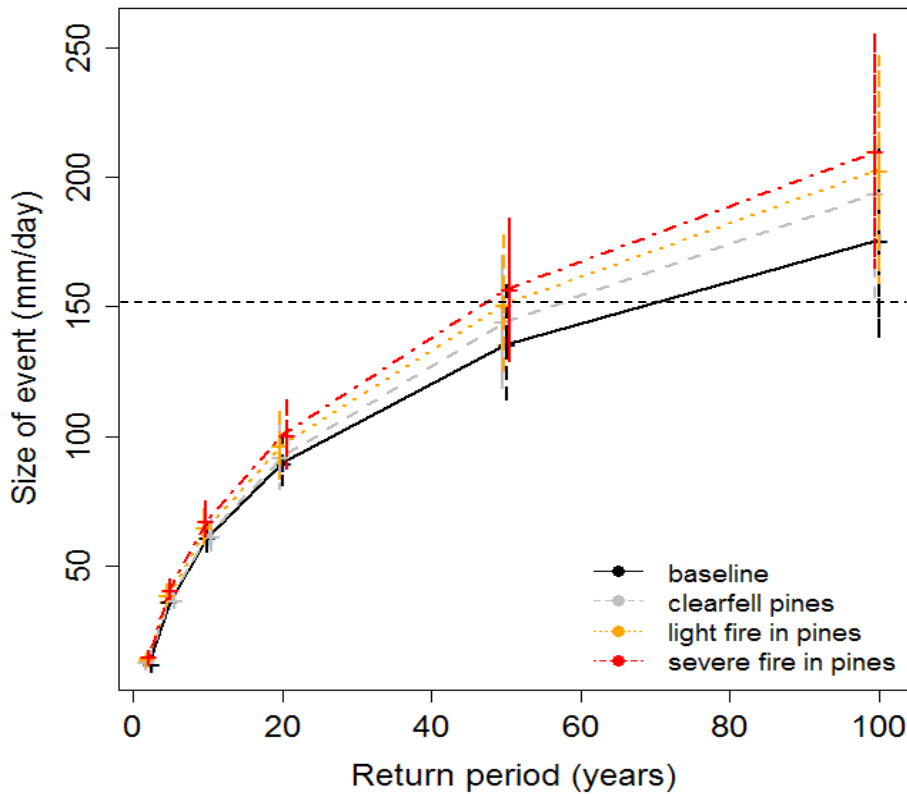


**Fire Risk**



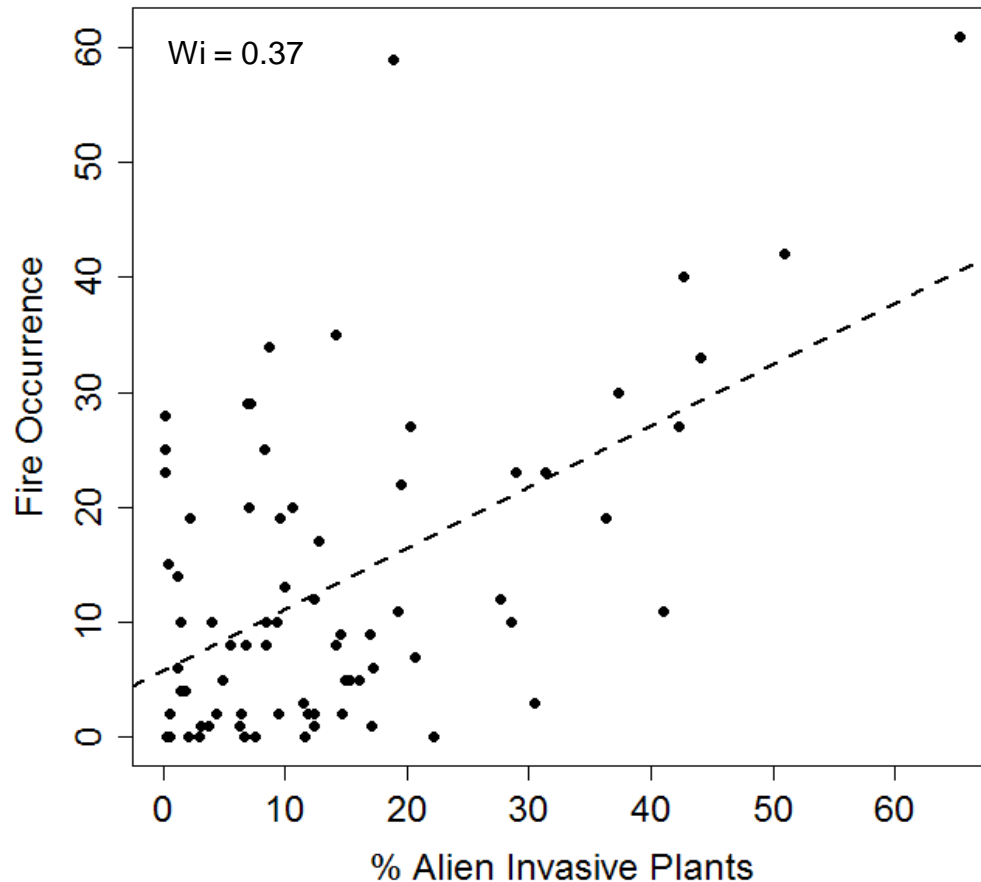
**Extreme Rainfall**

### 3. However, land-use changes are equally important risk drivers!



- Changes in land-use such as observed in past decade, results in a 1:75 year flow becoming a 1:35 year flow
- Equally important risk driver to climate change

### 3. However, land-use changes are equally important risk drivers!



- Density of Alien Invasive Plants explained 37% of the variance in occurrence of fires
- More important driver than climate change

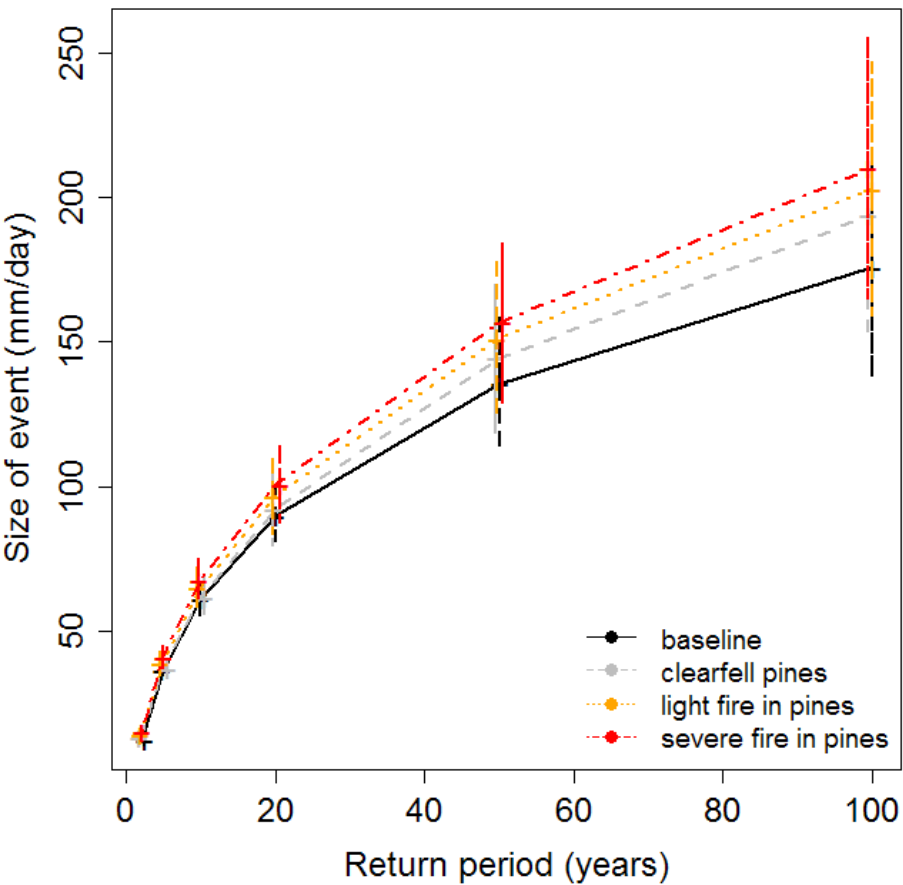
## 4. How is the global insurance industry responding?



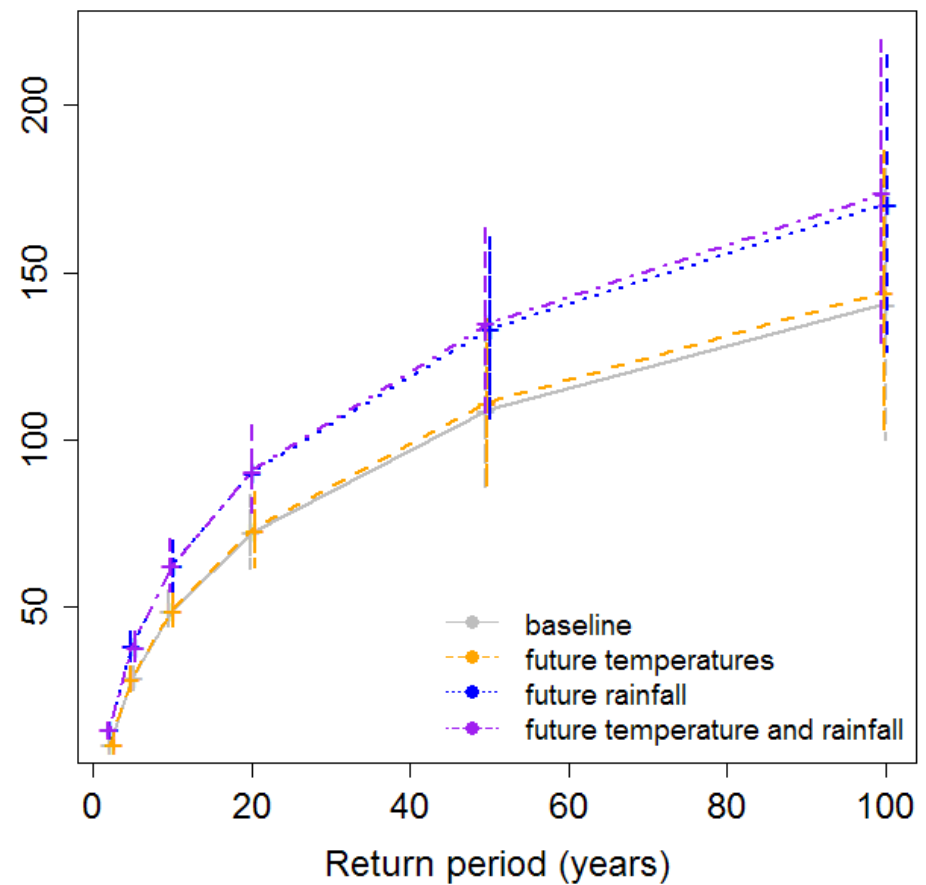
Fine-scale predictive assessments and price differentiation.....

# *Predictive capacity in complex systems*

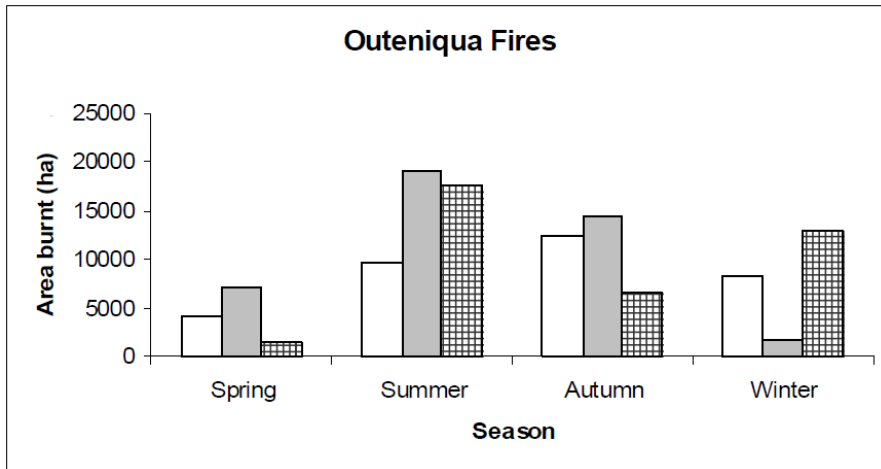
## Land cover change scenarios



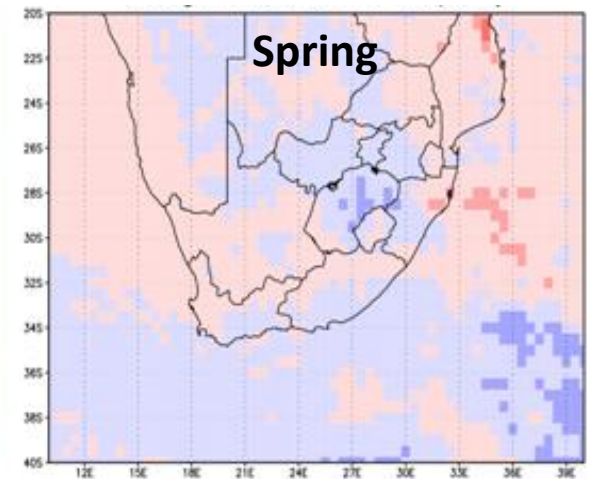
## Climate change scenarios



# *Predictive capacity in complex systems?*

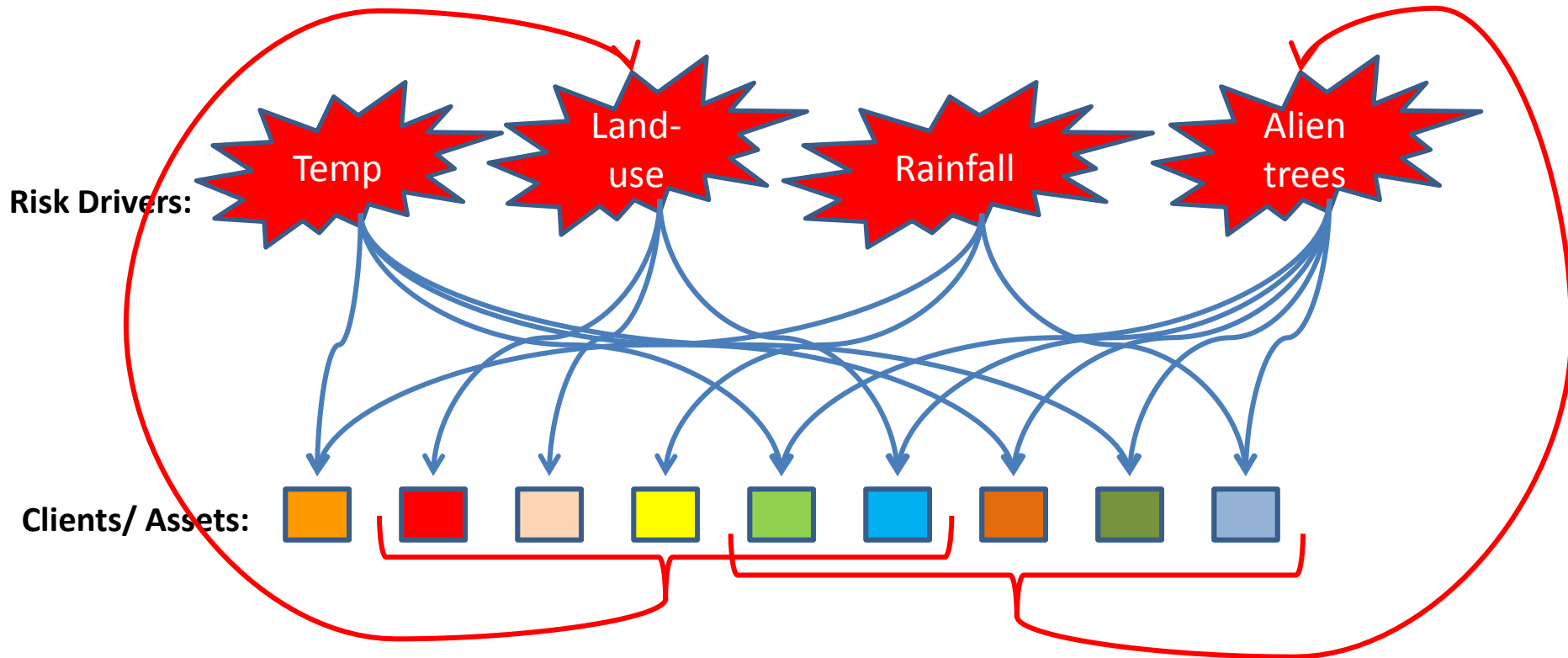


## Intense Rainfall events



# 5. The role of insurance in building resilience

*In complex systems it is more important to focus on what we **share** than how we **differ**!*



# The Role of Insurance

- One of the largest connectors of individuals, societies, ecosystems and economies....
- Huge potential to mobilise its massive constituency to manage our shared risks!



**Risk Transfer → Risk Management**