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Degrees of Risk

Defining a Risk Management Framework
for Climate Security

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Background to the Report



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- Builds on E3G's climate security work since 2005
- Seminars with climate and security experts in 2009-10
- Joint analysis and drafting process with climate and security experts; Jay Gulledge and Bernard Finel
- Testing ideas: UK National Security Council; Halifax Security Conference; Global Military Advisory Group etc.

This report aims to open a debate

Why Risk Management?



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- E3G's work on climate security showed the importance of considering the full range of climate scenarios for effective security planning
- Most analysis uses median IPCC scenarios which do not reflect latest science on extreme impacts or analysis on instability
- Public debates unhelpfully equate uncertainty with inaction
- In contrast major security decisions made on far more uncertain data than climate policy; "what threat will China pose in 2050?"

Question: what would climate strategy look like if we treated it as seriously as nuclear proliferation?

Risk Management is...



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- Broader than optimisation, cost-benefit, real options....
- A pragmatic approach to making policy decisions under uncertainty
- Built on a long history of success – and failure – in security (and finance, resource management, infrastructure management etc)
- About “who” as well as “what” and “how much”
- A way of framing political debates but not replacing them
- Something we do all the time: deterrence vs disarmament; civil liberties vs terrorism risks; intervention vs isolationism.

How much risk should we take?

Methodology Underpinning the Report



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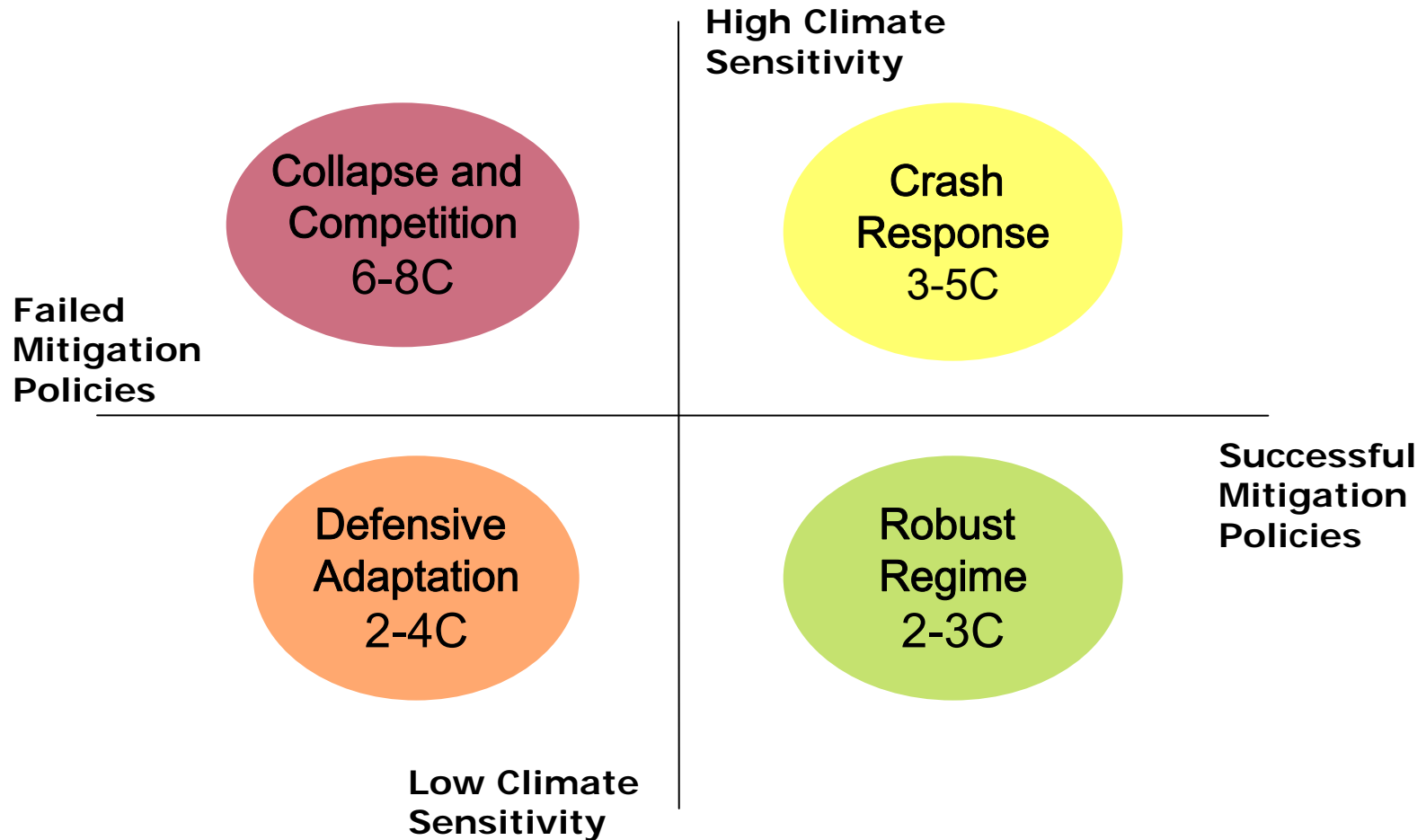
- **Information Gathering:** systematic analysis of major impacts and uncertainties across climate science, impacts and mitigation/adaptation options.
- **Assessment:** of the policy implications of current information, including limits to what we know, what we could know and biases in how we understand issues and threats.
- **Risk Management Analysis:** evaluation of current risk management approaches to assess gaps or flaws in risk management frameworks; risk management instruments; and delivery of risk management

We are not managing any of the risks well!

Scenarios assuming agreement to keep global temperatures below 2C



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Could breach tipping points even if mitigation policy is successful

The “**ABC**” Risk Management framework



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- **Aim** to mitigate to stay below 2°C;
- **Build** and budget for resilience to 3-4°C;
- **Contingency** plan for capability to respond to 5-7°C

Elements same for all countries/actors but goals will differ;
there is no universal risk management approach

Ten Steps to implement a Risk Management Framework



Aim to stay below 2°C	
	Sufficient mitigation goals
	Increased investment in transformational RD&D
	Resilient and flexible global climate regime
	Independent national climate security risk assessment
Build and budget for 3-4°C	
	Adaptation strategies for “perfect storms” and interdependent impacts
	Improved cooperation on preventive and humanitarian intervention
	Increased resilience of international resource management frameworks
	Provision of data and tools decision-makers need
Contingency plan for 5-7°C	
	Contingency ‘crash mitigation” planning’
	Systematic monitoring of tipping points

Aim to stay below 2°C

Build and budget for 3-4°C

Contingency plan for 5-7°C

Sustainable global response relies on National Climate Risk Assessments



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- A clear view on national interests is the necessary foundation on which to build an effective global regime to manage climate change
- Most countries have yet to develop clear goals which reflect their core national interests e.g. effectively eliminating the chance of 4°C? a 1% chance of materially shifting the Indian Monsoon?
- Current assessment is dominated by ministries in charge of implementing policy; need to separate the assessment and policy functions.
- Actors responsible for areas of economy, infrastructure and security most impacted by climate change do not yet have a say on the effectiveness and scale of domestic and international climate mitigation policy

Without a “whole of government” risk assessment countries cannot effectively define their national interests

Need to plan for “Perfect Storm” and Policy Failure Scenarios



Aim to stay below 2°C

Build and budget for 3-4°C

Contingency plan for 5-7°C

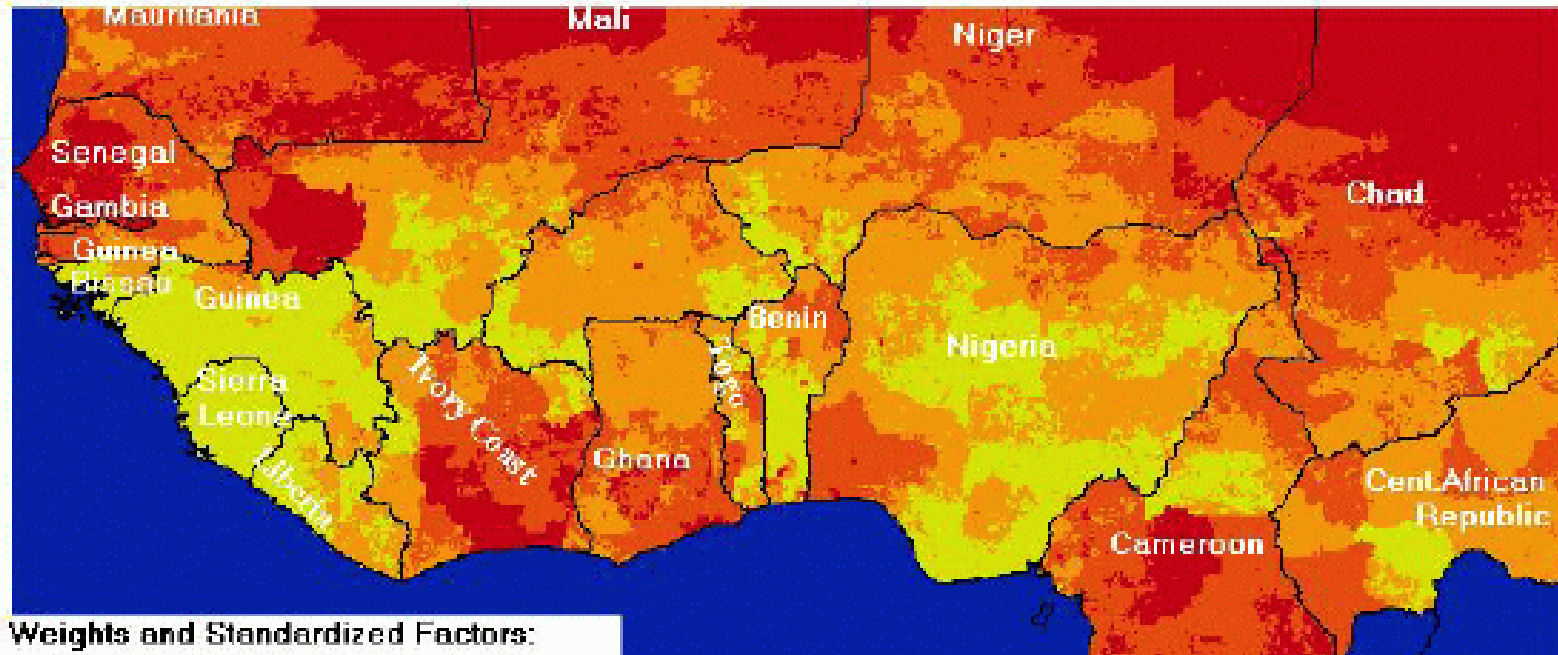
- Effective investment in national resilience requires clear identification of planning scenarios (2, 3, 4°C or higher)
- In the near term the highest risk come from the combination of climatic volatility, resource scarcity, poor governance and high energy prices
- Planning must go beyond the technical to address the impact of instability on adaptation e.g. in Pakistan post-flood reconstruction
- We do not yet have data or tools to effectively design adaptation strategies to manage these risks;

Large potential for cooperative action in building better tools and decision support systems

Mapping Vulnerability

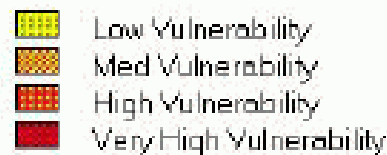


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Weights and Standardized Factors:

- 0.14 Precipitation
- 0.14 Coeff. of Variability of NDVI
- 0.14 Supply as a Percentage of Demand
- 0.14 Market Accessibility
- 0.14 Percentage Cash Crop
- 0.14 Population Density
- 0.14 Percentage Crop Area

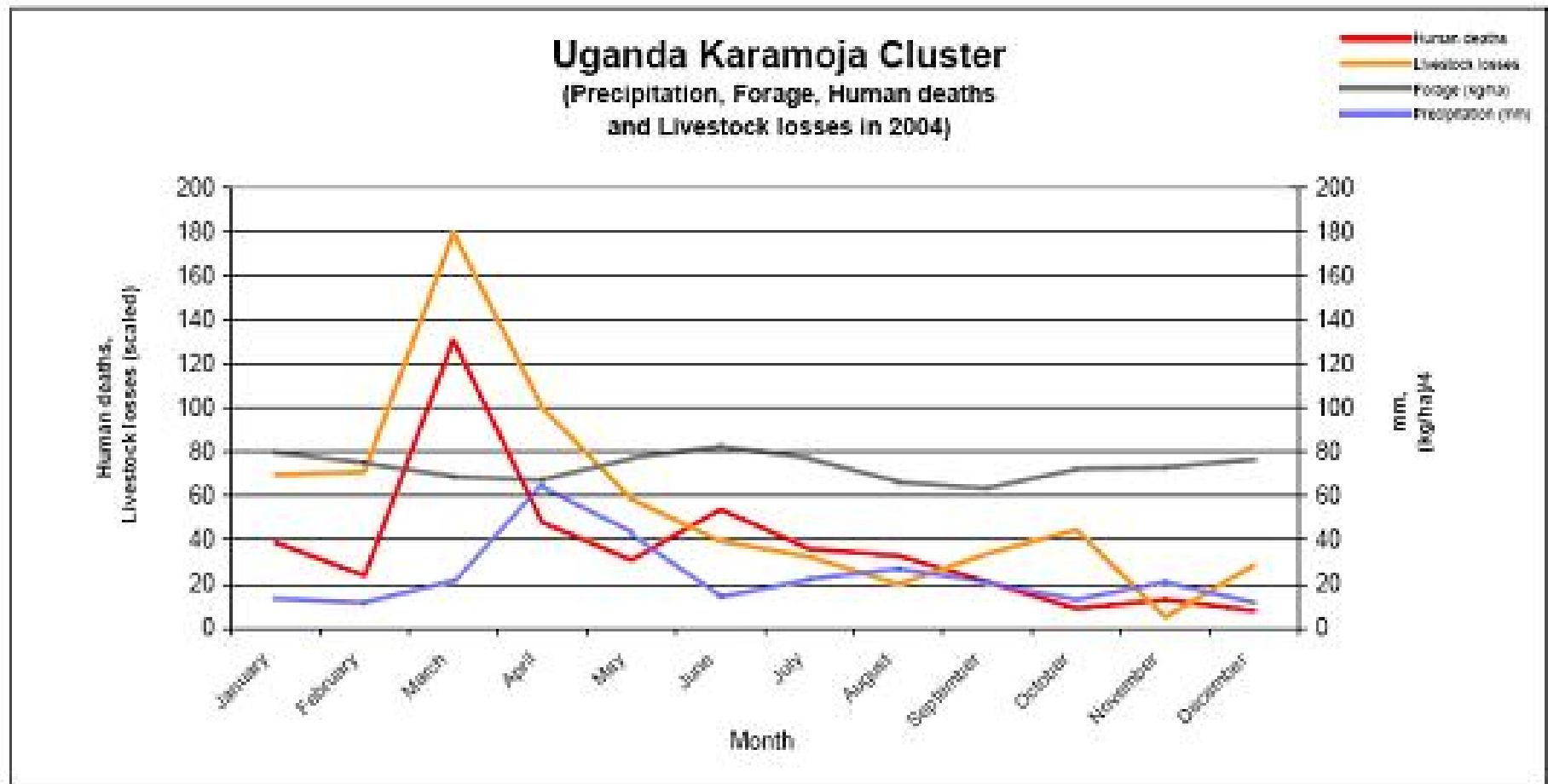


Multi-Attribute Analysis of Vulnerability 2

Detailed understanding of resource conflicts



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Aim to stay below 2°C

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Preparing Crash Programmes



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- In the case of policy failure and/or high climate sensitivity there will be strong political pressure (panic?) for “crash responses”
- A large number of technological options are available, but many have high climatic, security and feasibility risks e.g. proliferation risks of global crash nuclear fission programme
- Prudent to develop contingency plans – and international controls – over major geoengineering and technological options
- Critical to improve monitoring systems for key climate tipping elements to improve warning of extreme scenarios

No sensible risk management framework should ignore the worst case scenarios



Risk management gives an opportunity to reframe the public debate



- Current debate – especially in US – split into climate “sceptics” and “believers”; has led to an under-emphasis of both scientific uncertainties and extreme scenarios
- This debate alienates the majority of people who do not identify with either camp; undermining effective policy making
- Risk management allows a debate where all information can be used and assessed; a pragmatic not a belief based approach
- Need to reframe debate to a public conversation

“How much climate risk are you prepared to take?”



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Thank You!

E3G is planning follow-up work in many of the areas highlighted in the report

If you would like to know more please contact

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