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**Using and validating the Strategic Assessment Method (SAM)**  
- Soft OA for supporting strategic decision-making

**Developing the Strategic Assessment Method (SAM):**  
Blending Quantitative and Qualitative Analysis

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**Customer Need**

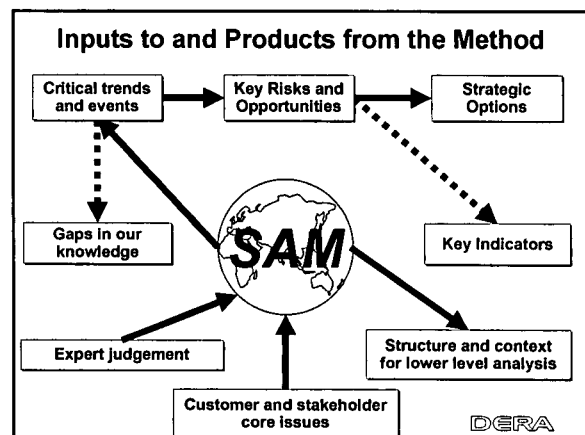
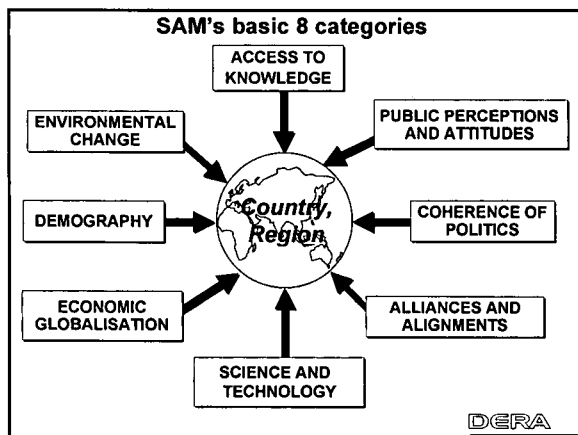
- Since the end of the Cold War, the geopolitical world has become increasingly complex and unpredictable
- Medium-term strategic decision-making problematical
- Can we improve upon existing assessment approaches?
- This has led to an ongoing programme of methodological research and development, funded by MOD.

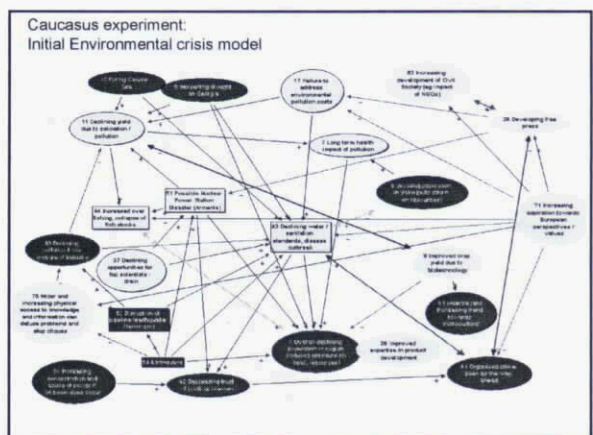
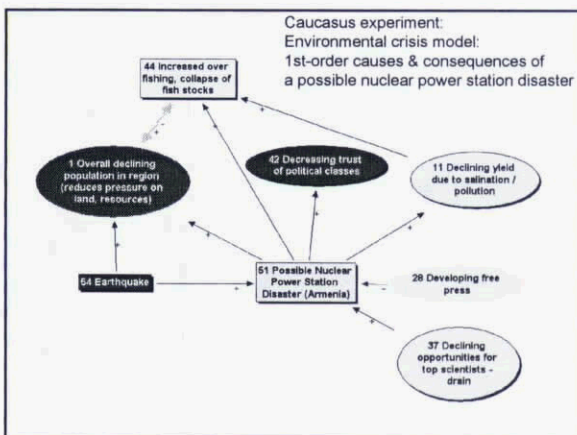
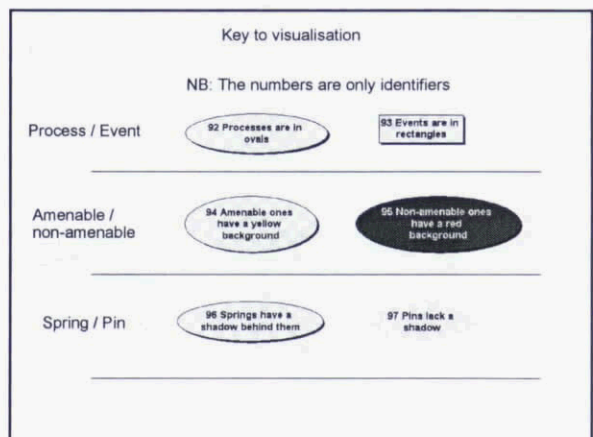
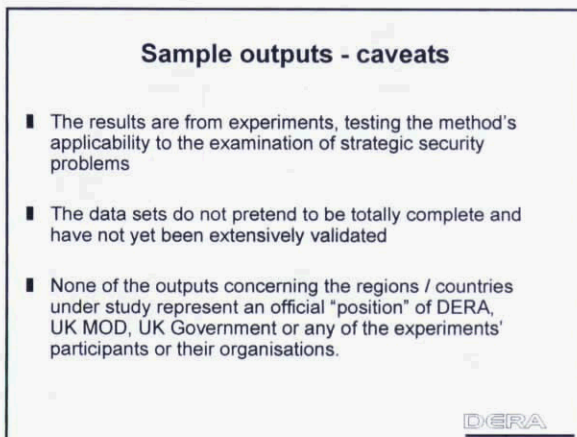
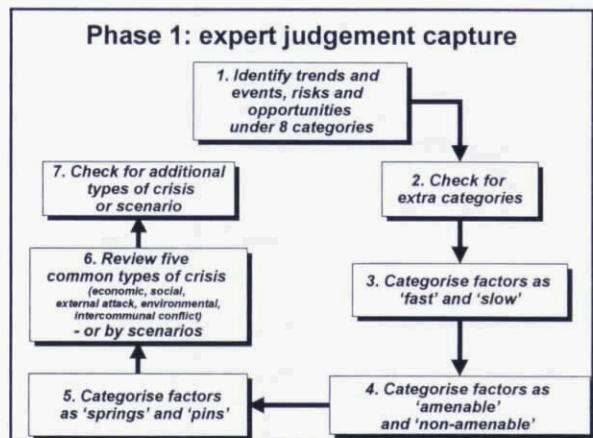
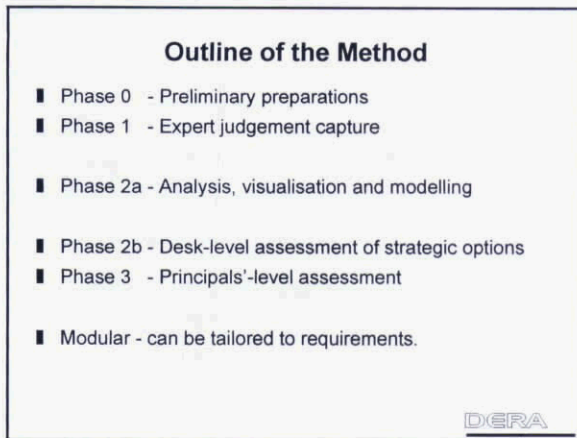
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**SAM - Philosophy**

- World is complex & changing, especially in medium-term
- Key factors sometimes evident, sometimes hidden in synergies
- Expose a wide range of possible interactions
- Causes and Consequences - benign or otherwise - need to be identified
- Changes we *could* make would be good to know

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### Validation / Fitness-for-purpose

- Are conventional validation criteria appropriate?
- Assessing 'fitness for purpose'
- Ideally, comparing the validity of the understanding of decision makers informed by SAM, c.f. other approaches
- Verification of interim products
- Sensitivity analysis & checking robustness
- Validation against real events: understanding "shelf life"
- Internal design reviews; External peer review
- Method Log Book - 1st draft.

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### Developing the Strategic Assessment Method (SAM): Blending Quantitative and Qualitative Analysis

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### Outline

- Reminder of some key features of SAM
- Future challenges
- Possible near term directions: 1 SAM as context
- Possible near term directions: 2 SAM method itself
- Challenge of "quantification"
- A fully quantitative approach?
- Possible long term challenges

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### Key Features of SAM

- Addresses complex geopolitical issues
- Expert judgement to explore a broad canvas of interactions (both short & medium term)
- Produces a web of links
- Which is then distilled & refined (by both analysts & experts)
- to produce more focussed views, cuts etc
- Supporting thinking about particular strands and
- Informing decisions on options both near and medium term

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### Future Challenges

- SAM designed to respond relatively quickly to a broad range of potential issues - not a long term study method
- But is a lot more than a back-of-envelope technique, requiring subject area experts, expert analysts & a fair amount of hard work!
- Can we increase its power:
  - depth, penetration, range, accuracy, confidence?
- And value for money as well?

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### Possible Near Term Directions: 1 - SAM as context

- SAM can provide context and structure for lower level analysis, e.g.:
  - non-OA studies, such as of the hydrology of the Nile Basin
  - context for operational / tactical OA: political, social, economic, ...
- Provide a basis for *quantitative* operational / tactical OA (context & assumptions)
- And provide a coherent framework for "joining up" packages of lower level analysis to guide strategic decision-making

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## Possible Near Term Directions: 2 - SAM Method itself

- Knowledge elicitation challenges:
  - group psychology & the cognitive process
  - building the web of links
- Analysing the web of links: structure & quantification
  - strengths of interactions, time-scales, triggers & sequencing
  - clustering: simple / not simple, automatic / judgement
  - looking for feedback & cascades: simple / not, automatic / judgement?

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## The Challenge of "quantification"

- Why quantify?
- Many - perhaps all - of the factors in a SAM diagram are difficult to quantify
- Some are in principle ok but insufficient *accurate* data e.g.
  - economic performance, current population, climate
- Others, which may be crucial - are much harder to quantify
  - national aspirations, charisma of the leadership

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## Fully Quantitative approach?

- Complexity Modelling for the *overall* problem? Requires:
  - large amounts of data
  - simultaneously
  - and with high level of detail
- Concluded that it was not currently practicable for broad-based strategic assessment

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## Possible Long Term Challenges

- So what can we quantify - now, later, never?
- Modelling to give insight?
  - agent models of social systems: instabilities, rates of change
  - how fast do cultures & ideas change? Memetics?
  - what is mutable, what is probably not in a given timeframe?

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## Conclusion

- OA is the art of the possible - the skill lies in finding the best simple approach
- SAM may draw on techniques, whatever they are & from wherever they come, as long as they provide insight
- The result should be not a ragbag but a rich tapestry held together by wise judgement.

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