



BIOCLIM and BIOMOSA

Joint Final Seminar

Matters Arising!

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Matters arising (1)

The past, palaeodata, was the key to the future, but anthropogenic inputs v important... *humans not predictable...!* What site specific information will be needed?

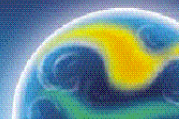
What are the most 'realistic' (**relevant**) biosphere system assumptions?

Biosphere – Geosphere - Biosphere interactions noted as important



Matters arising (2)

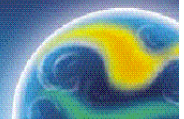
- 100,000 y of high CO₂! Long delay before next glaciation...
- Timing of use of economic fossil reserve not important;
- Insolation affects the climate which drives the ice;
not insolation -> ice -> climate
- Technical uncertainties – still questions for climate modellers; but lots of data for different scenarios and models and downscaling available in BIOCLIM deliverables and on Business Collaborator;
Is this sufficient for repository PA?





Matters arising (3)

- BIOCLIM approach to managing the assessment of climate change has been demonstrated;
- Application of the BIOCLIM approach within real site and assessment context conditions;
 - *Can we actually model the changes!???*
 - *What answers will we get?*
 - *What will be the implications?*





Matters arising (4)

- Comparing results for the Generic and each Site Specific Model; and results for different sites arising from the Site Specific models. Interesting and valuable, but caution:
 - *We are also, simultaneously, comparing bias among the separate modellers?*
 - *Carry out bias audit...?*



Matters arising (5)

- Processes considered and models for assessing different types of release to the biosphere (different interfaces) very interesting;
- Normalising (for comparison purposes) is difficult for anything but well – direct water use scenarios;
- Intra-comparison among pathways for individual radionuclides is good;
- Comparison of different radionuclides needs to be related to likely source term ‘concentrations’ before significance can be determined;



Matters arising (6)

- The real issue is data interpretation at different sites, not different models.
- Paradigm is that the same biosphere system processes occur at all sites – but the significant ones will be identified only according to the relative proportions of radionuclides in source term and how the source term is delivered to the biosphere.



Matters arising (7)

- Checkout the data quality (*EMRAS, IUR Waste Task Force, BIOPROTA*);
- Determine adequacy of the data for systems of interest, allowing for time dependence (*BIOCLIM, and modelling exercises: BIOSCOMP, BIOMOSA, on-going BIOPROTA*);
- Can data deficiencies be resolved generically or only by (further) site specific consideration (*Hypothesis testing with additional modelling exercises, ...*);
- Develop guidance on site investigation requirements...

All the above projects imply further investigation of effects at Geosphere-Biosphere Interface Zone.