

Climate, life and surface environments

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Earth surface processes modulate life and climate through the production, transport and export of carbon, nutrients, and other elements from landscapes to the ocean.

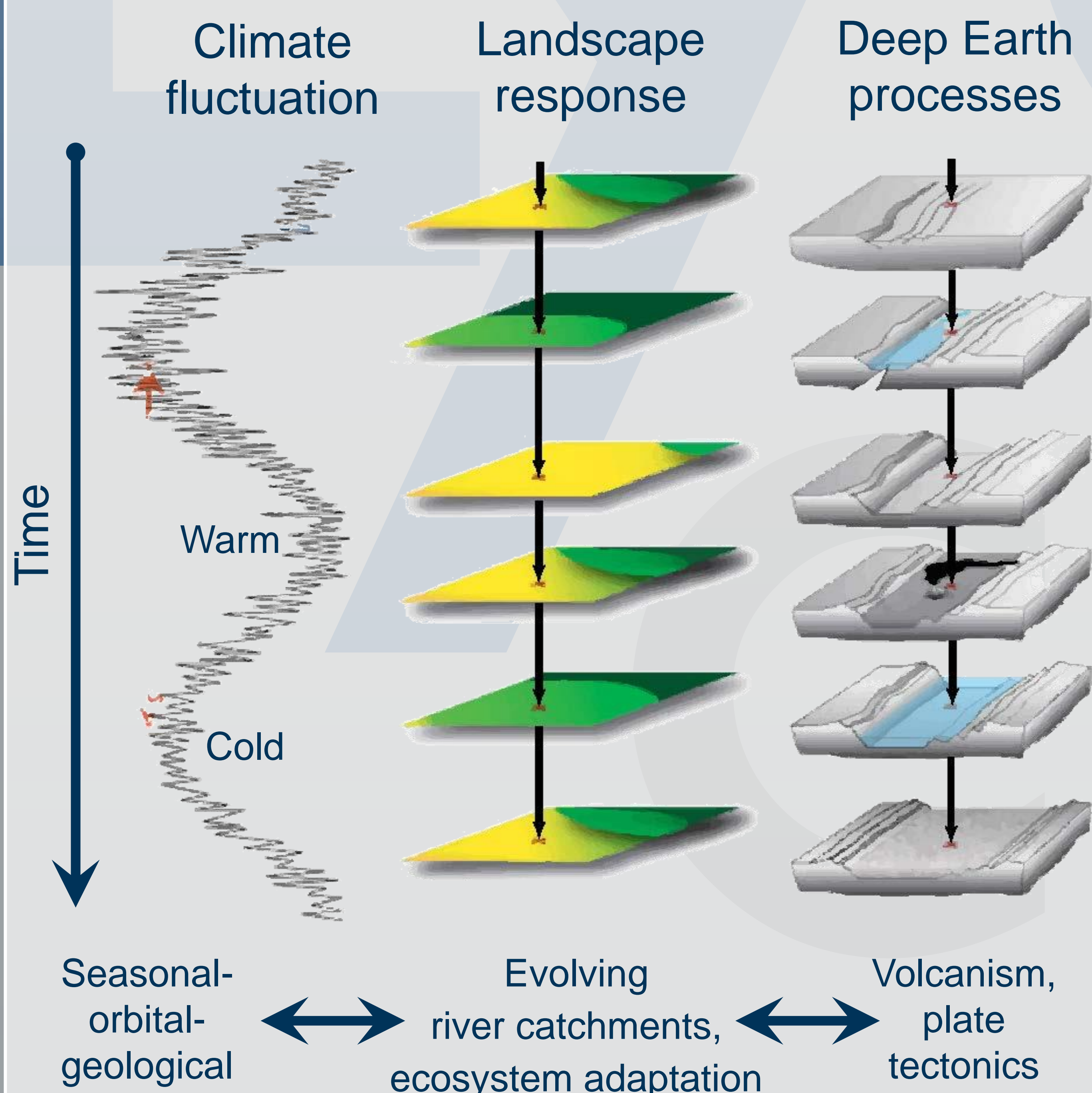
- These multi-scale processes connect the atmosphere with the coastal and deeper ocean, via hydrologic cycling, weathering, biological response.
- As many of these processes are (micro)biologically mediated, our research strategy integrates physical, chemical and biological disciplines, as well as model simulations.



Natural fluctuations in climate, in the past, today, and in the future; modulated by human intervention. Changes to climatic boundary conditions enable us to study:

- The resilience and adaptation of ecosystems to change, and their feedback on climate;
- The source, rate and products of carbon cycling, e.g. greenhouse gases (carbon dioxide, methane);
- The linkage between changing landscapes and early human evolution some 2-3 million years ago.

The time dimension...



At the Lyell Centre, we study these integrated systems under modern and past climatic conditions, informing improved predictions into the future.