

pastglobalchanges.org

Adding the perspective of time to science for sustainability, we seek ideas for cross-GRN initiatives.

We build understanding of Earth system dynamics through observationally constrained modeling.

We provide additional temporal context for recent global change and strategies for sustainability.

Currently supported <u>working groups</u> are addressing topics that include:







How have ecosystems recovered from and transitioned through past crises?



ACME ARCTIC CRYOSPHERE CHANGE AND COASTAL MARINE ECOSYSTEMS

How has cryospheric change affected boreal and high-altitude ecosystems through past warming events? Photo credit: A. Pienkowski



simulations of dynamic ice sheets in rapidly warming climates?





OUTREACH

Energy consumption as a framework for understanding past socio-ecological system dynamics and tipping points

CONTEXT FOR THE FUTURE

FLQODS

FLOODS WORKING GROUP

Building the record of floods for more durable estimates of event probabilities

2-23, 2005, Sainte-Agnès, France (photo credit: D. Thillet



How have sea-ice dynamics produced feedbacks to climate change through past warming events? ea ice in the Southern Ocean (photo cr

Our cross-cutting initiatives would be improved with input from other GRNs!



Extremes

Validated probability of extreme events, such as hurricanes, droughts, and floods is only possible by extending the data record of variability beyond the remote-sensing instrumental and documentary time period.

AIR LIFE

ICE

LAND

SOCIETY WATER



Thresholds

Identification of thresholds, tipping points and multiple equilibria in the Earth system: is there evidence, and is there predictability? We use paleo-evidence and modeling to diagnose state changes and assess future risk.



Please contact PAGES with your ideas for cross-GRN collaboration at: pages@pages.unibe.ch



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