www.pastglobalchanges.org

Marie-France Loutre
PAGES is an international organization which coordinates community-based research on the study of climate and environment of the past.
Global Challenges for our Common Future: a paleoscience perspective.

Meeting – 7-13 May 2017.
During her invited talk at PAGES OSM, **Gabi Hegerl** underlined the importance of the long-term background (from paleoclimate) to study changes in extremes.
PAGES and WCRP can benefit from each other.

Paleo-information can be used to understand climate variability, climate processes and the functioning of the earth system, and to improve climate predictions.

Observation can be used to validate climate reconstructions.

As an implementation step,

Gabi Hegerl and Hugues Goosse agreed to serve as a link between the WCRP grand challenge on weather and climate extremes and the PAGES integrative activity on Extreme events and risk assessment.

This should ensure the palaeo perspective has weight, and weather and climate are placed in a broader perspective.
Data assimilation for paleoenvironmental reconstruction shares methods and tools with climate reanalysis.

(Hakim et al., JGR-Atm, 2016)
Comparing proxy and model estimates of hydroclimate variability and change over the Common Era

Comparison of the hydroclimate reconstructions with the multi-model simulations of the past millennium in order to understand climate change at regional scales and the mechanisms of climate variability at decadal to centennial timescales.
PAGES and PMIP - WG Emerging Datasets

<table>
<thead>
<tr>
<th>PMIP + other PaleoMIPs</th>
<th>PAGES Working Group</th>
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<tbody>
<tr>
<td>Last millennium (850-1850 CE)</td>
<td>PAGES2k</td>
</tr>
<tr>
<td>Mid Holocene (6 ka)</td>
<td>SISAL; LandCover6k</td>
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<tr>
<td>Transient Holocene; early Holocene; 8.2 ka</td>
<td>SISAL</td>
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<tr>
<td>Last Glacial Maximum (21 ka)</td>
<td>SISAL; OC3; PALSEA2</td>
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<tr>
<td>Last Interglacial (127 ka)</td>
<td>QUIGS; PALSEA2</td>
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<tr>
<td>Transient: 128-122 ka; 116 ka; H11</td>
<td>QUIGS</td>
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<tr>
<td>Mid-Pliocene 3.2 Ma</td>
<td>PlioVAR</td>
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<td>OMIP — ocean low frequency</td>
<td>CVAS; OC3</td>
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<tr>
<td>ISMIP6 — cryosphere and sea level</td>
<td>PALSEA2</td>
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<tr>
<td>AerChemMIP — aerosols</td>
<td>DICE</td>
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<tr>
<td>LS3MIP — land surface processes</td>
<td>GloSS; LandCover6k; Floods</td>
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Joint issue of CLIVARExchanges and Past Global Changes Magazine
Ocean circulation and carbon cycling during the last deglaciation: global synthesis

Workshop – 6-9 September 2018.

Scientific questions
Changes in the deep ocean circulation during the last deglaciation.
Changes in the ocean carbon cycling and storage during the last deglaciation.
Their effects on climate and atmospheric CO2.

Ref: Calibration of the carbon isotope composition (δ13C) of benthic foraminifera, Schmittner et al., Paleoceanography, 2017.
C-PEAT aims to synthesize data and knowledge on all topics related to peat carbon.
INQUA-PAGES Conference for Early-Career Researchers

Impacts of sea-level rise from past to present

26-29 August 2018, Utrecht, The Netherlands

Past sea-level changes
Submerged landscapes
Recent and future sea-level changes
Mitigation, adaptation and coastal impacts

http://www.islr18.org
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Thank you for your attention