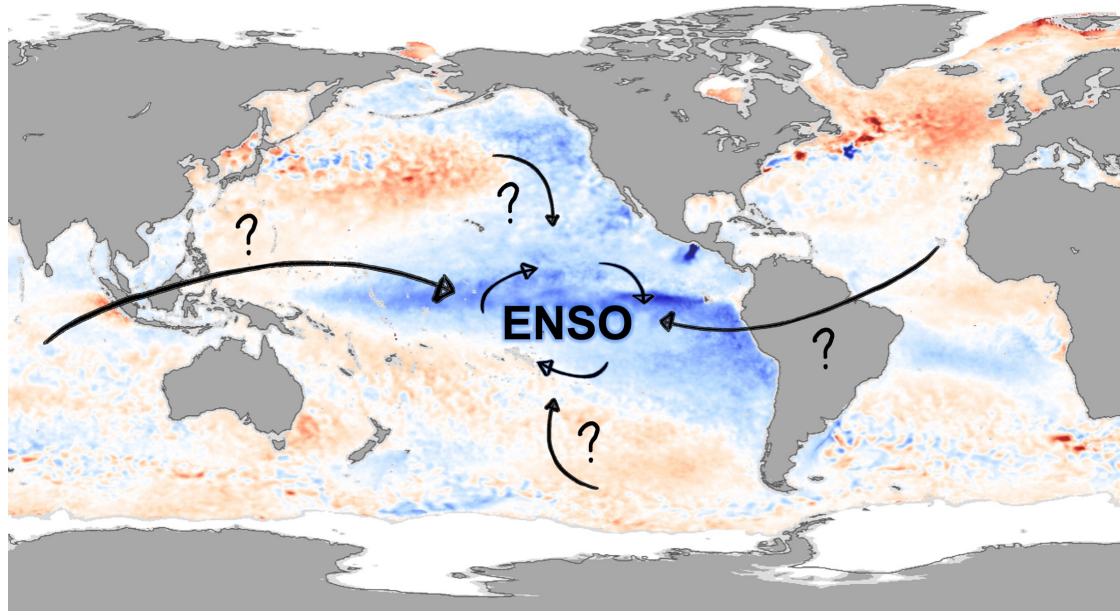


How do we compare ENSO remote forcing?

Jemma Jeffree, Nicola Maher, Dillon Amaya, Dietmar Dommenges



Australian
National
University



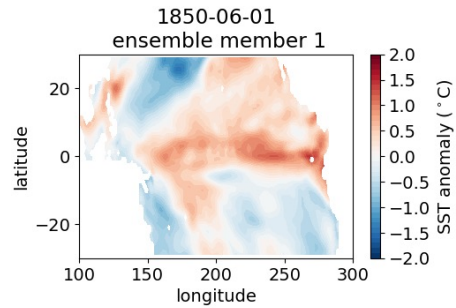
climate extremes
ARC centre of excellence

Question

- What is the relative impact of **different ocean basins** on ENSO forecast skill?
- How is this dependent on **lead time, season, or forecast model**?

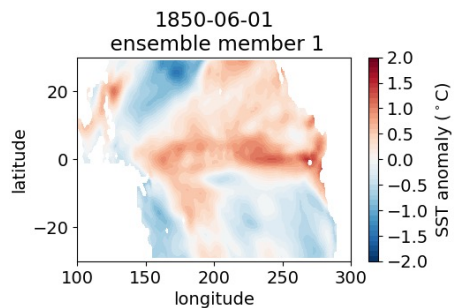
Technique: Model analogues

Initialisation
(30S-30N Pacific)



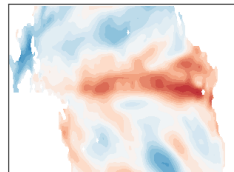
Technique: Model analogues

Initialisation (30S-30N Pacific)

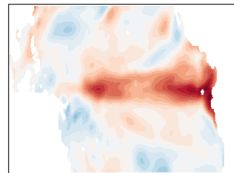


Find analogues in Large Ensemble

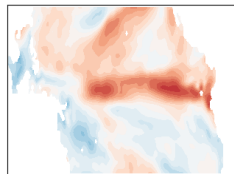
1932-06-01
ensemble member 0



1891-06-01
ensemble member 6



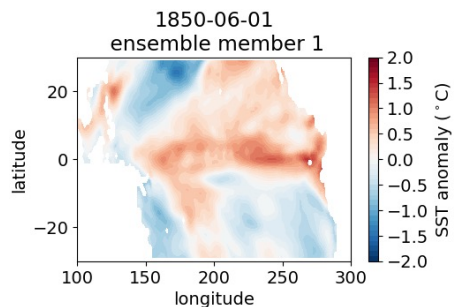
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ensemble member 6



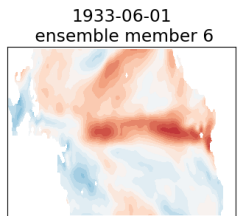
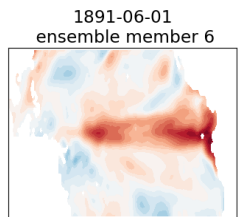
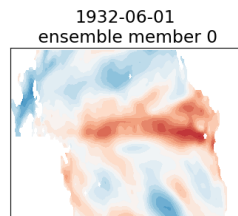
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Technique: Model analogues

Initialisation (30S-30N Pacific)

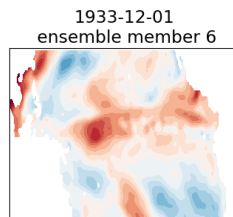
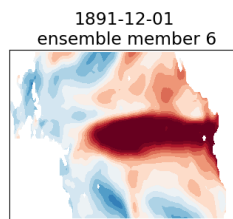
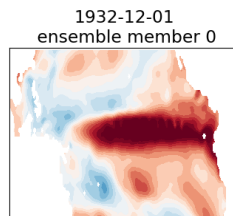


Find analogues in Large Ensemble



⋮

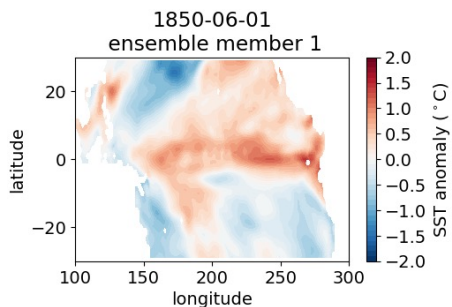
Forecast (6 months)



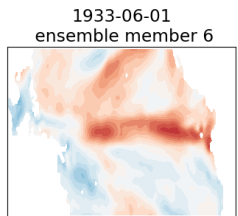
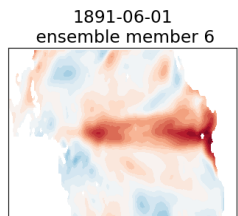
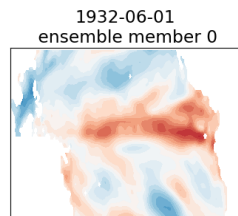
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Technique: Model analogues

Initialisation (30S-30N Pacific)

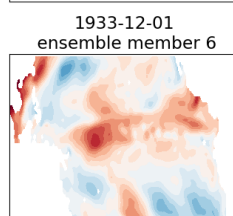
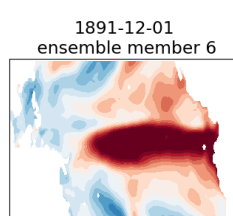
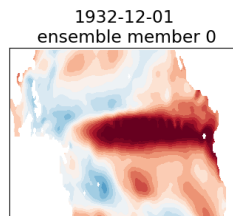


Find analogues in Large Ensemble



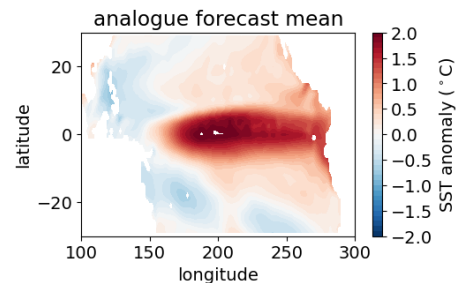
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Forecast (6 months)



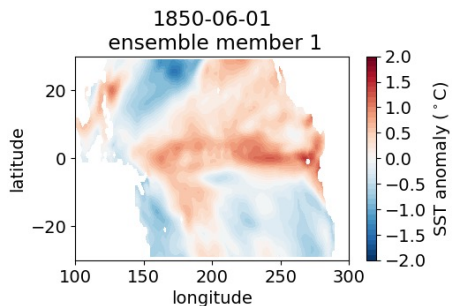
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average

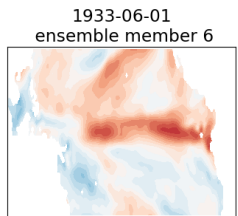
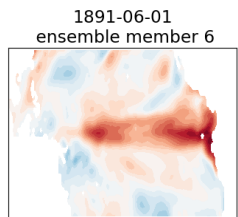
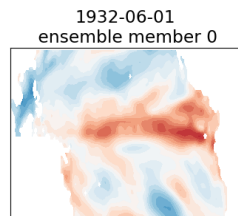


Technique: Model analogues

Initialisation
(30S-30N Pacific)

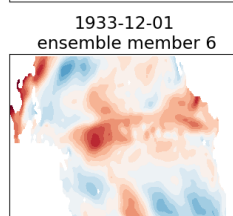
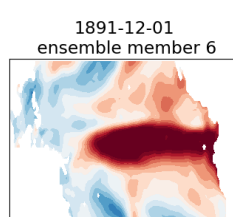
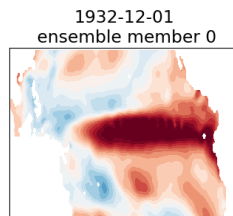


Find analogues
in Large Ensemble



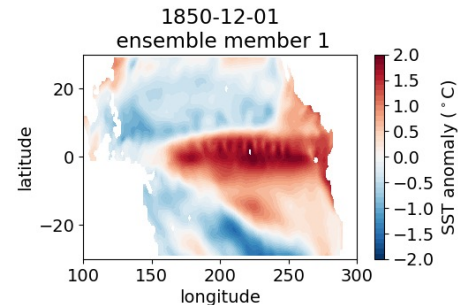
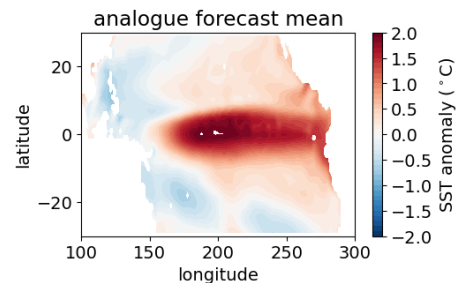
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Forecast
(6 months)



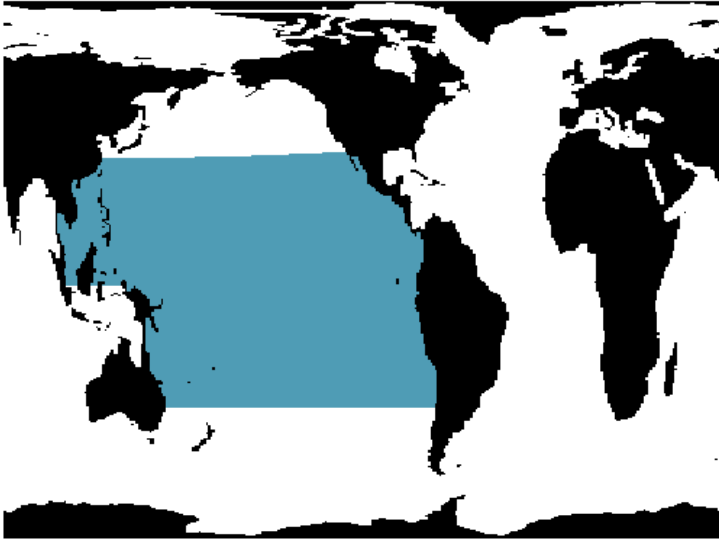
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average

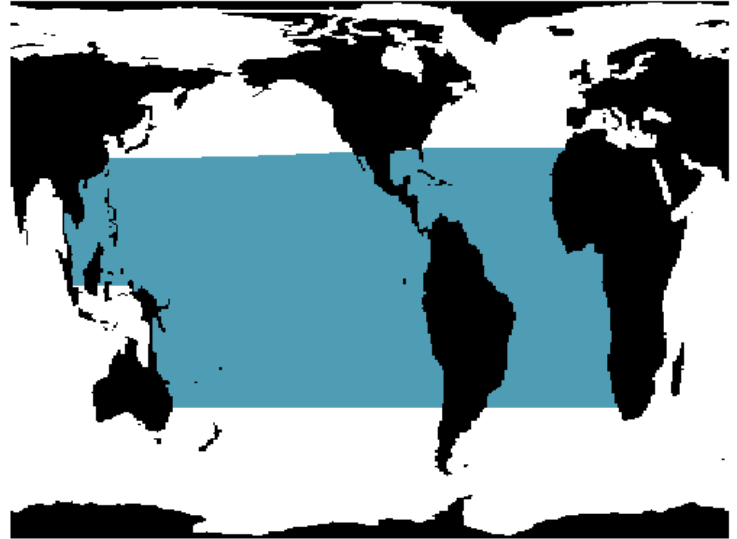


perfect model evaluation

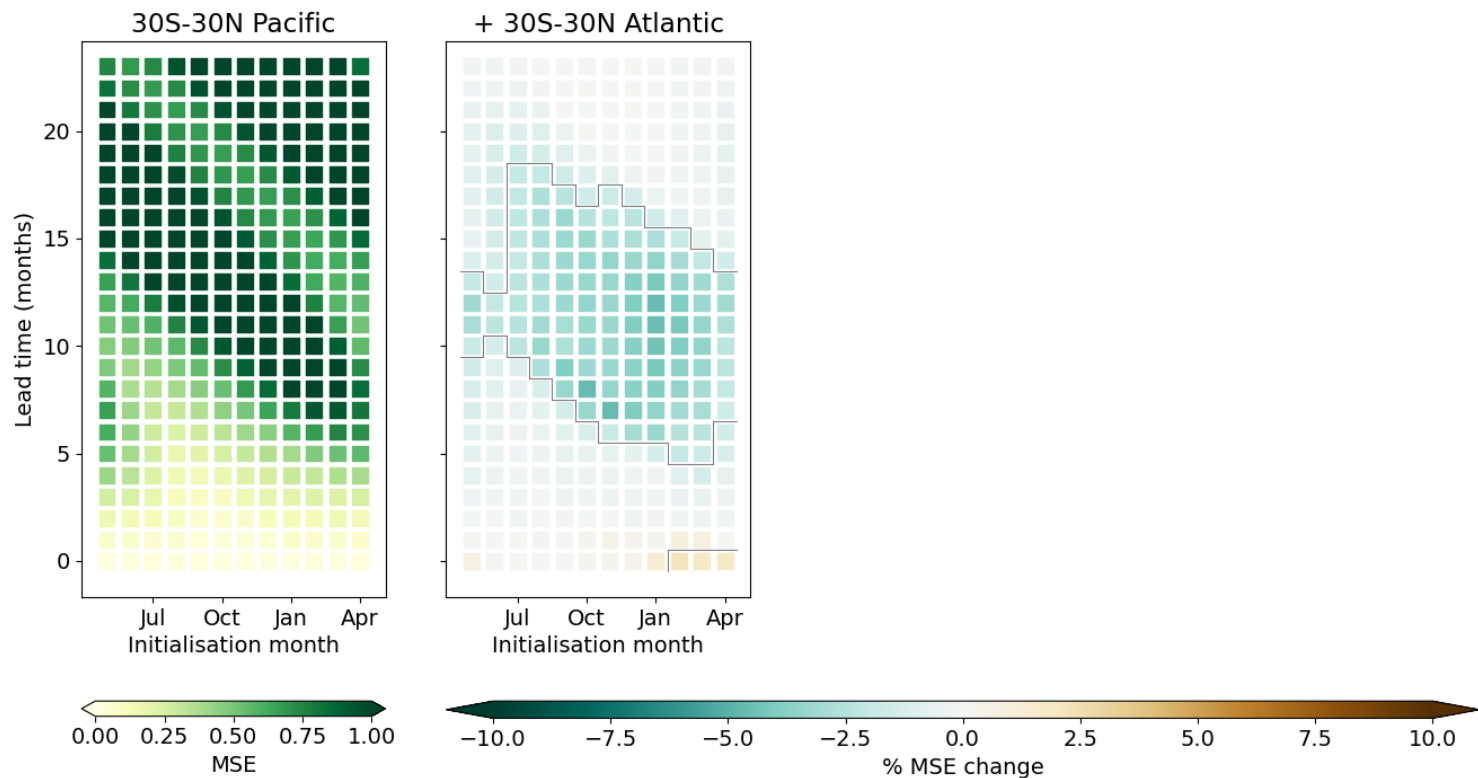
Picking analogues to understand basin links



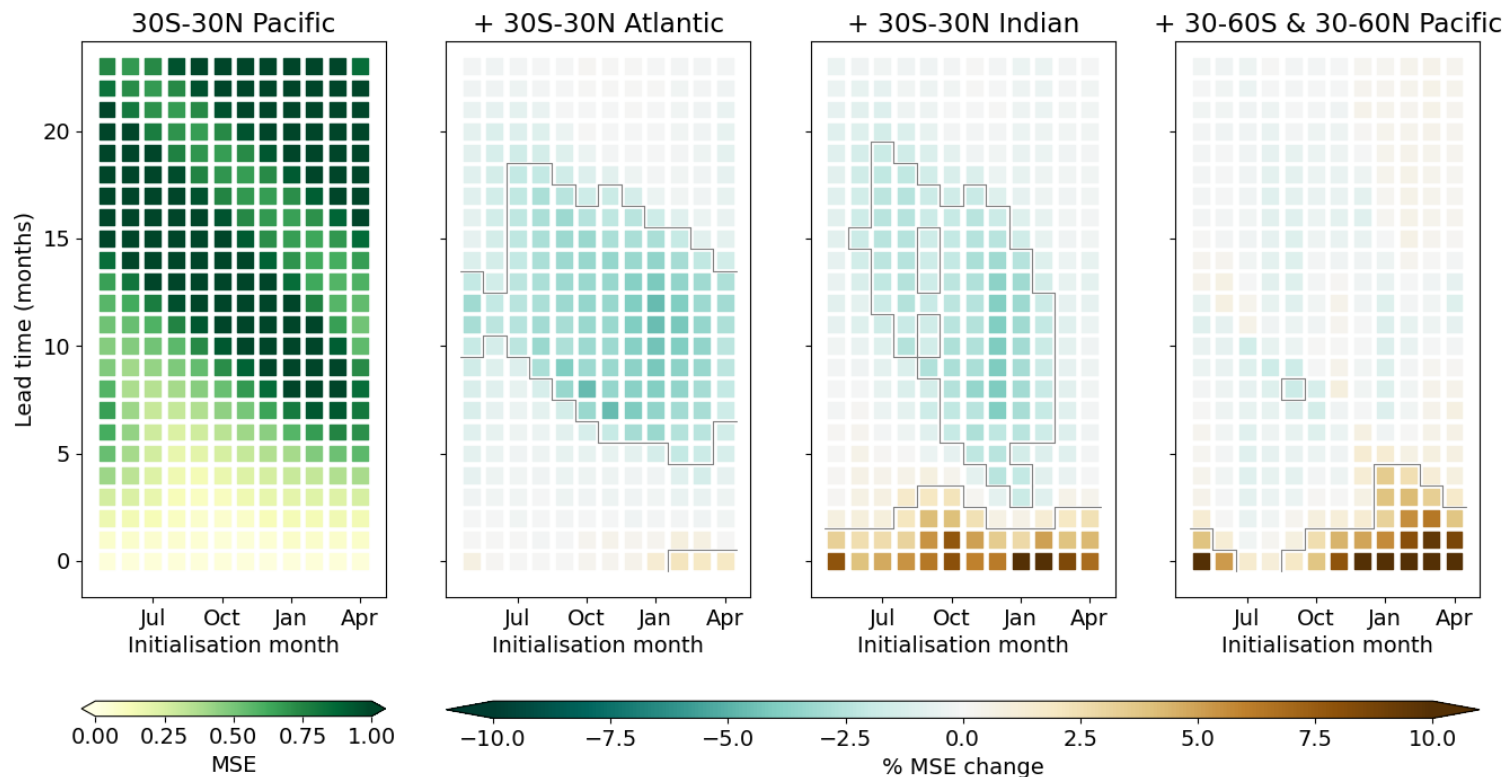
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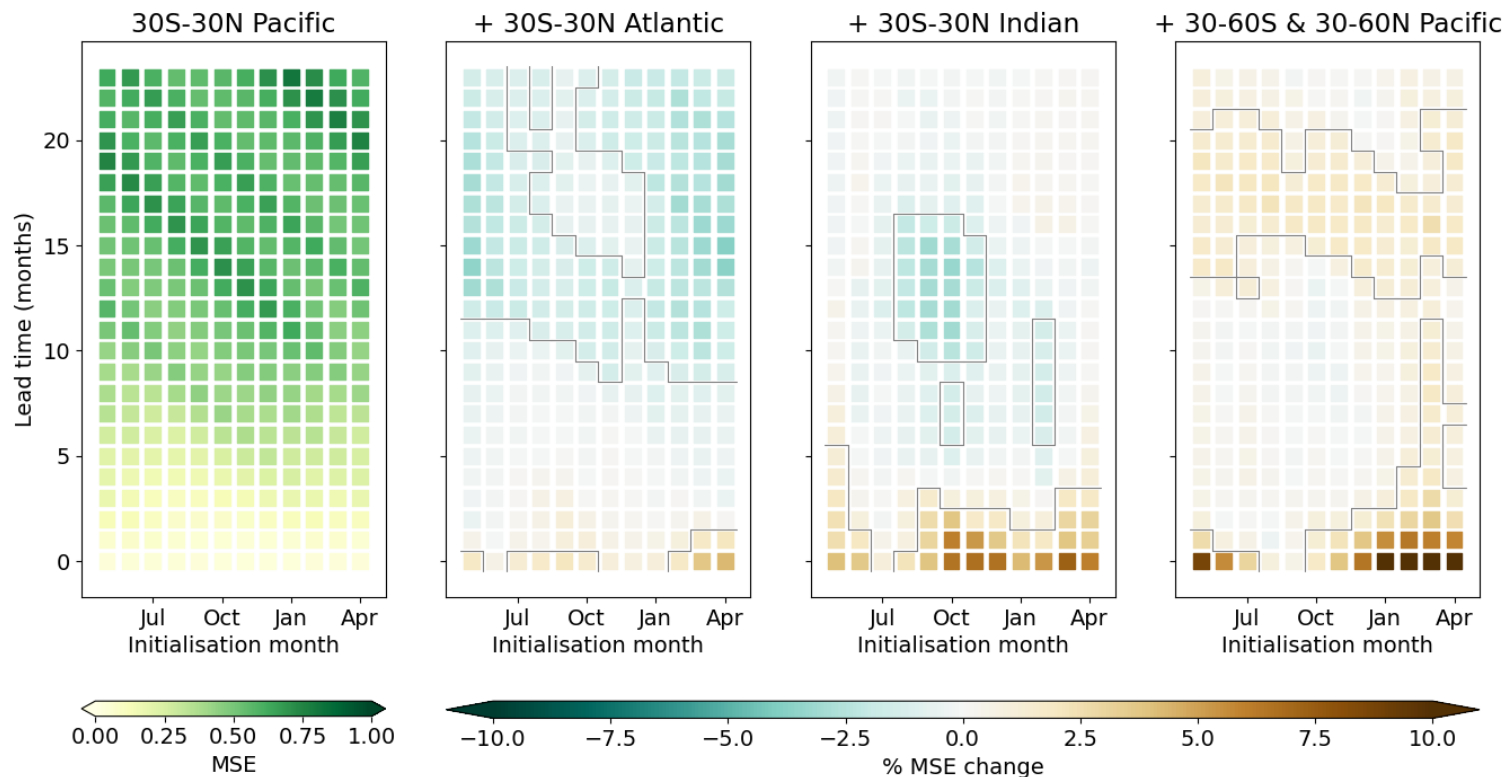
Predictive skill: NINO34 in CESM2



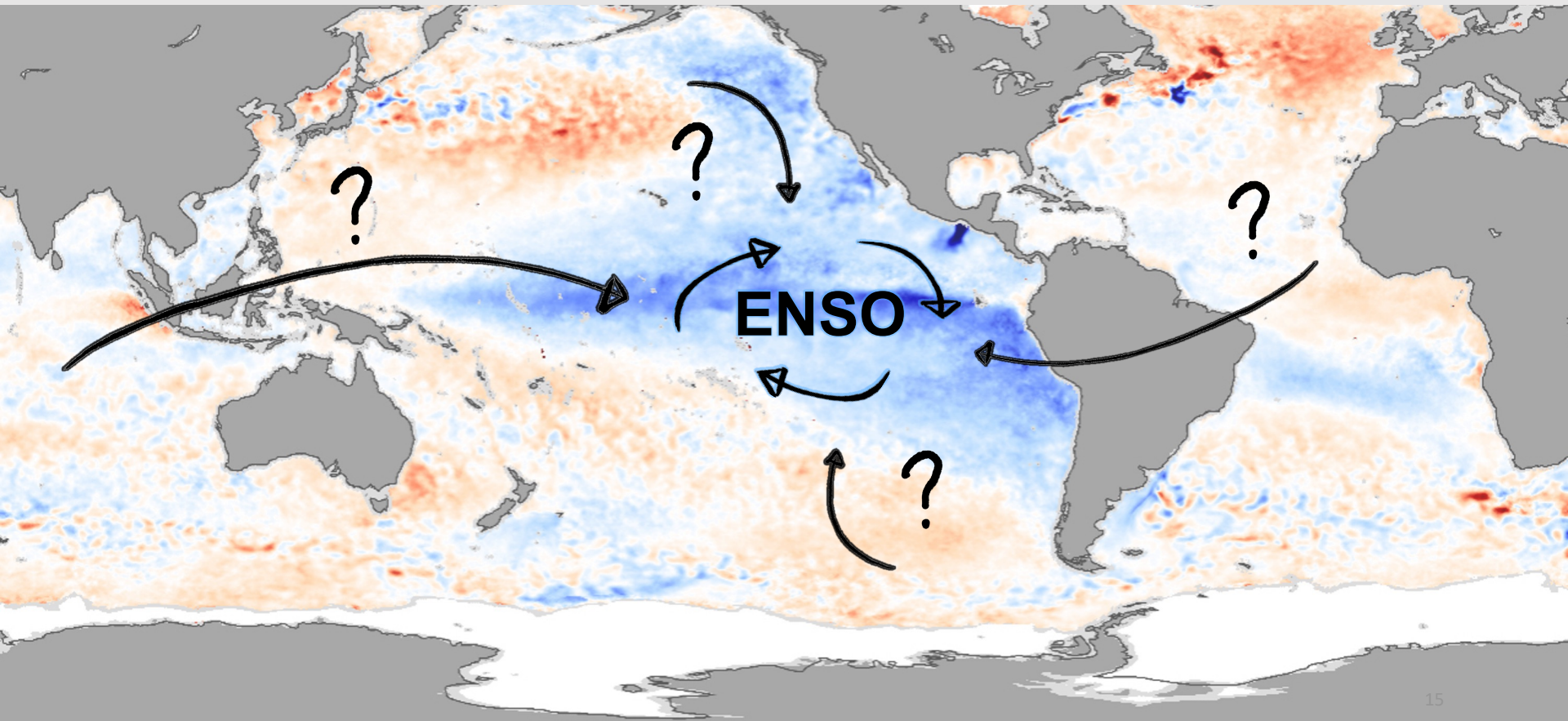
Predictive skill: NINO34 in CESM2



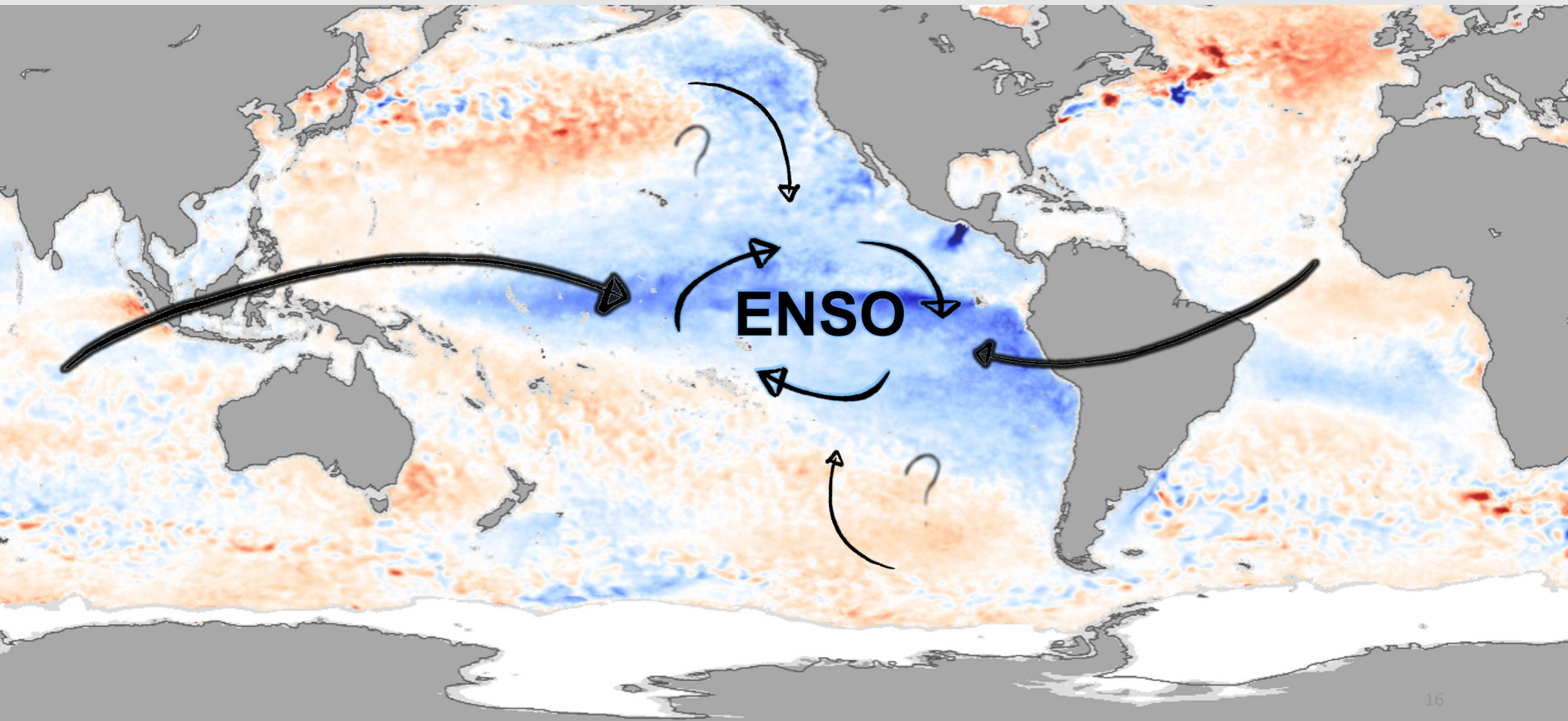
Predictive skill: NINO34 in MPI-GE



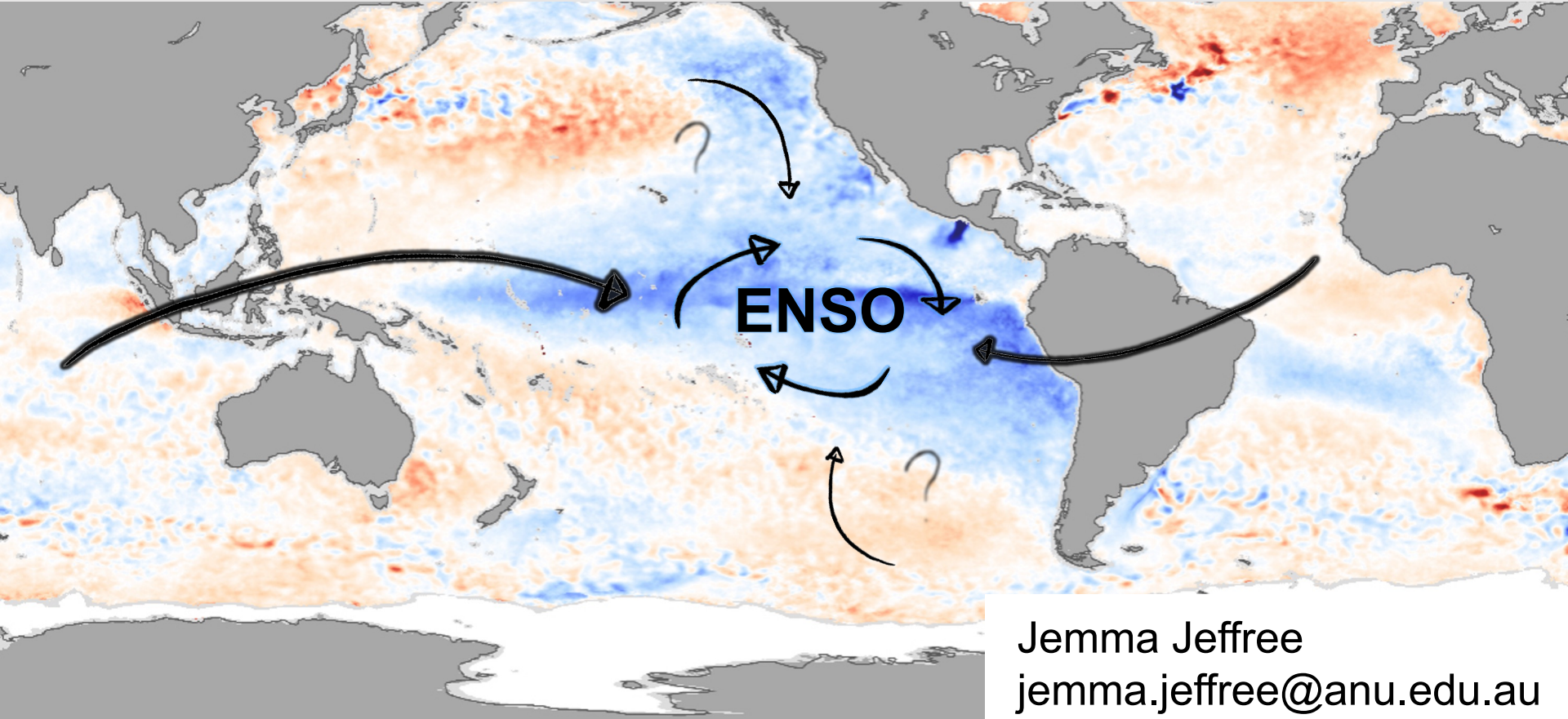
Conclusions



Conclusions

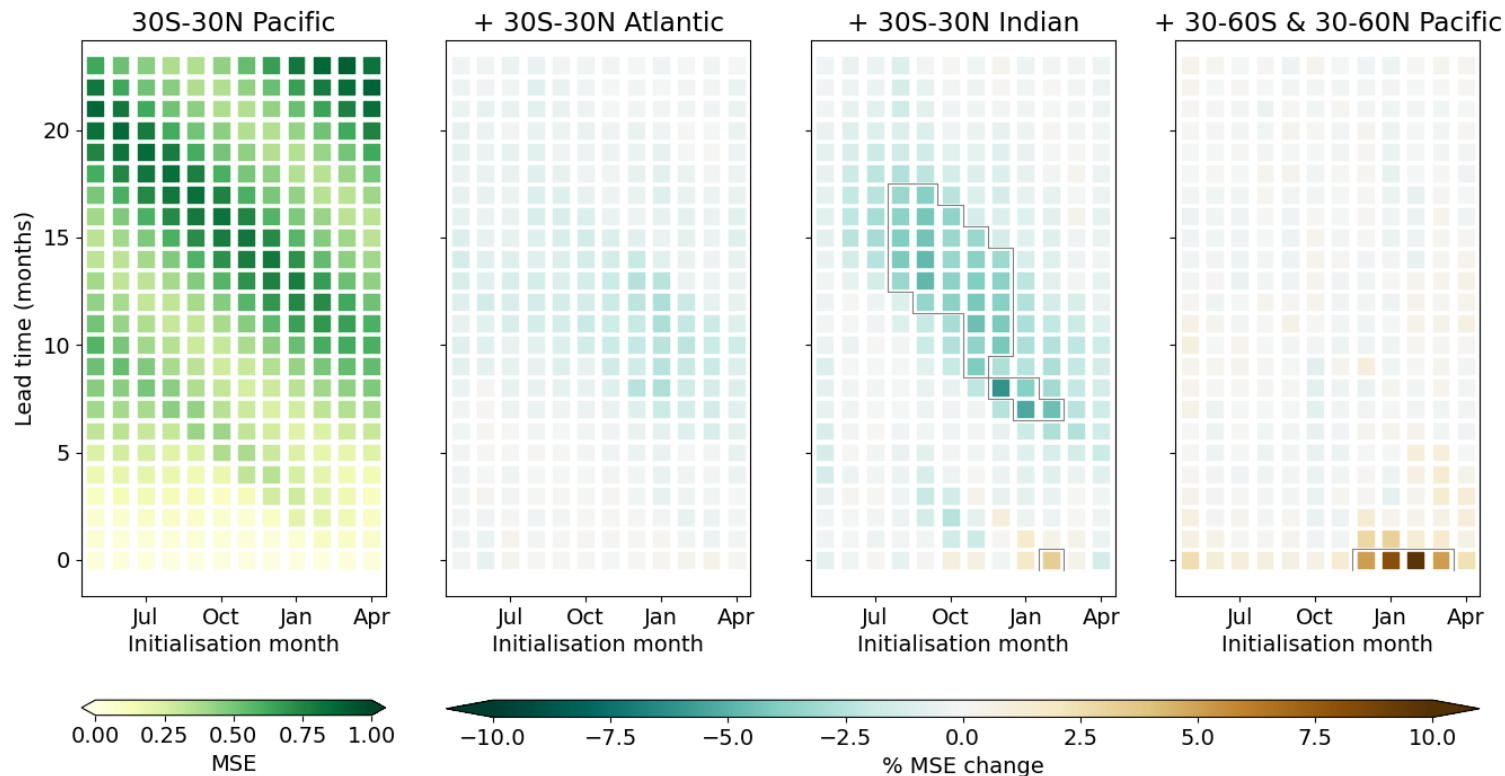


Conclusions

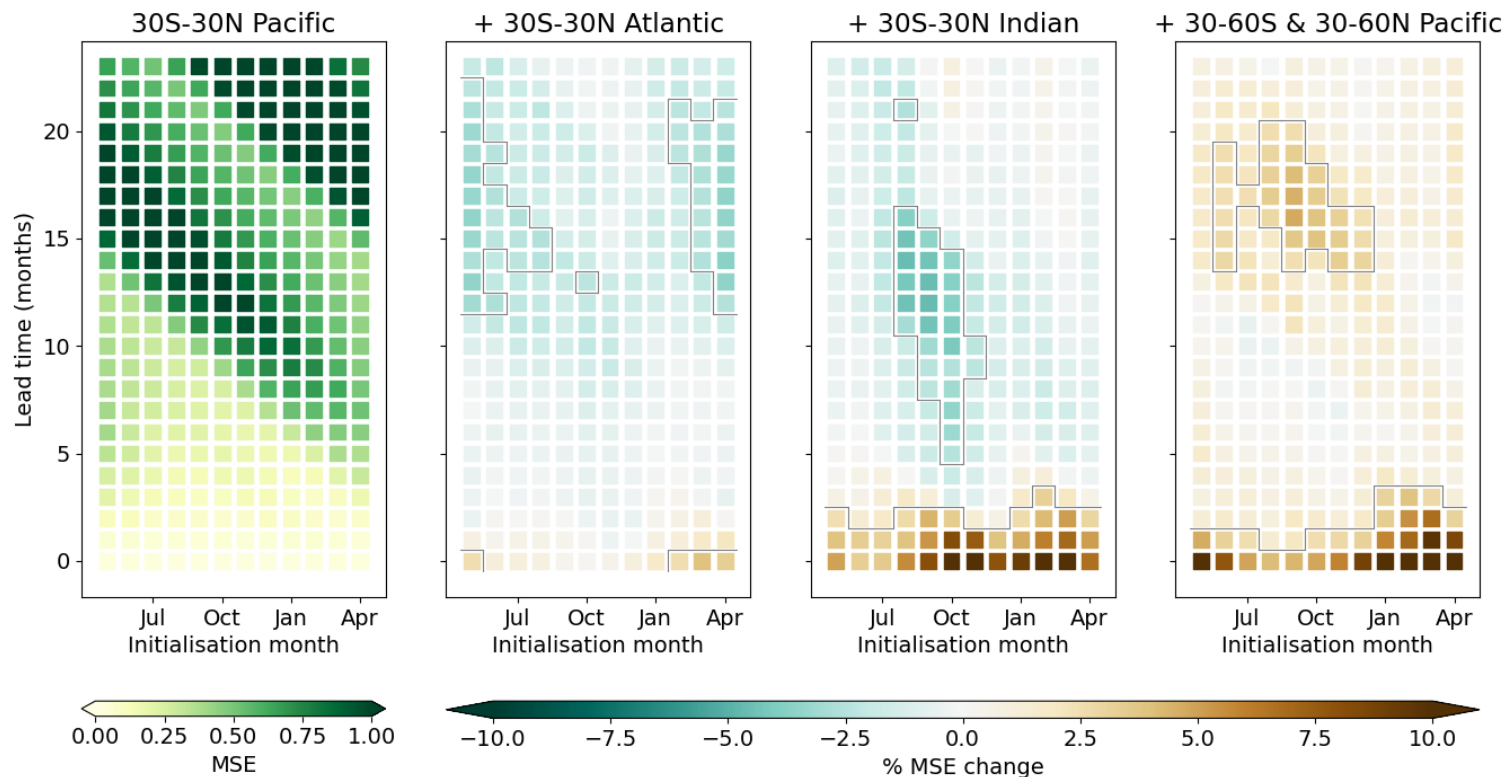


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Predictive skill: NINO34 in ACCESS-ESM1.5



Predictive skill: NINO34 in MIROC6



Predictive skill: NINO34 in CESM2

