

Monsoon 2.0 – Kilometer-scale time slices of various background climates

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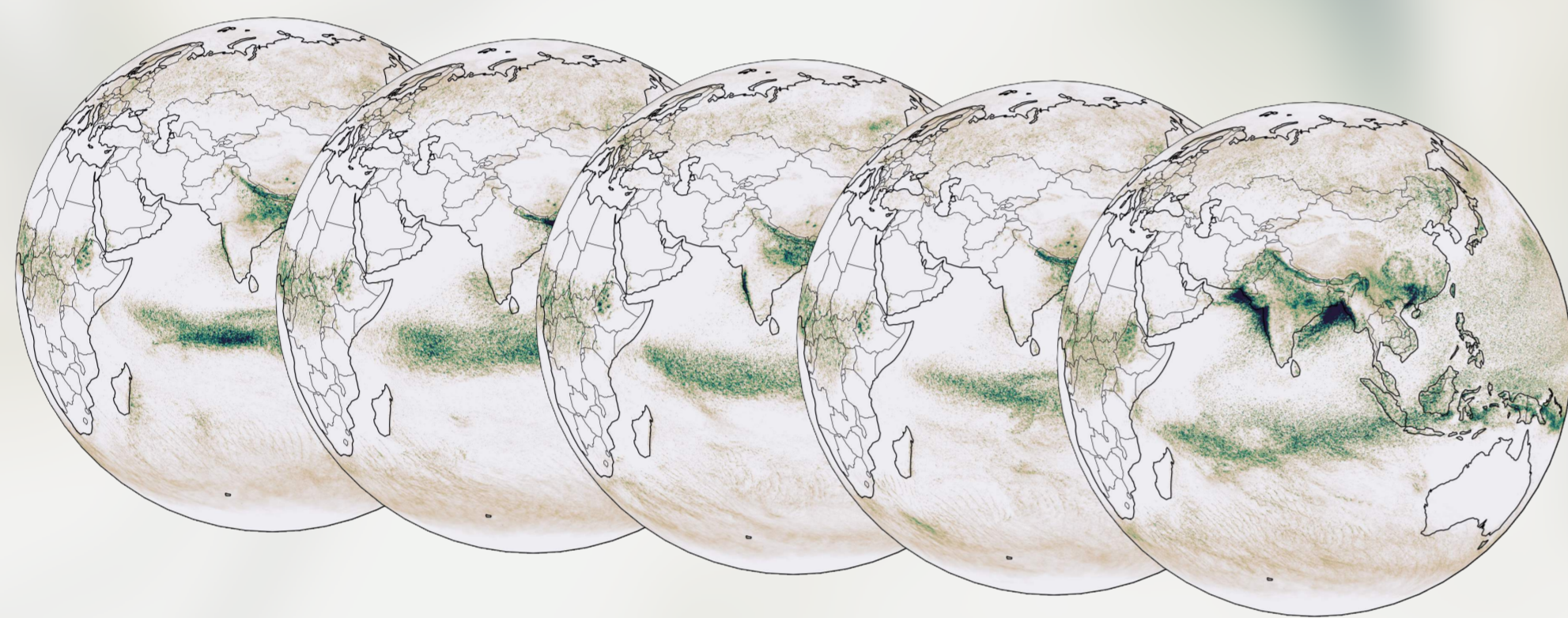
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Creating different worlds

We are using the ICON model to perform global storm-resolving simulations (5 km) during the Monsoon season (April–October).

The Monsoon 2.0 ensemble currently consists of 18 simulations in different background climates.

The ensemble will be made publicly available.



Boundary conditions

Pre-industrial	4
RCP 4.5 (2070)	2
RCP 8.5 (2070)	4
+1 K	2
Increased ice-particle sedimentation	2
IFS analysis (2018–2021)	4

Who killed the Indian monsoon?

When using CMIP6 sea-surface temperatures, the Indian monsoon is not well represented. Simulations using the IFS analysis as boundary conditions capture the precipitation signal.

Patterns in the sea-surface temperature play a decisive role in controlling precipitation.

We are currently investigating the role of zonal temperature gradients around India and the Maritime Continent.

