

## A drastic change in predictability of precipitation off the west coast of Australia after late 1990s

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Global warming and natural decadal variability after late 1990s strongly warm the coastal ocean off West Australia, which drastically changed climate dynamics there. The warm ocean drives precipitation locally there after the late 1990s, while the local atmospheric variability or the remotely forced atmospheric bridges mainly controlled the local precipitation variability before that. By virtue of that, precipitation predictability off West Australia on a seasonal time scale is also drastically changed after late 1990s; austral summer precipitation off West Australia is significantly predictable 5 months ahead after late 1990s, while there is no predictability of that in 1980s and early 1990s. Although the high prediction skill of precipitation off West Australia is useful for its early warning to extreme events and reducing their damages, the extreme event itself might increase due to global warming and decadal climate variability through a local air-sea feedback.

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