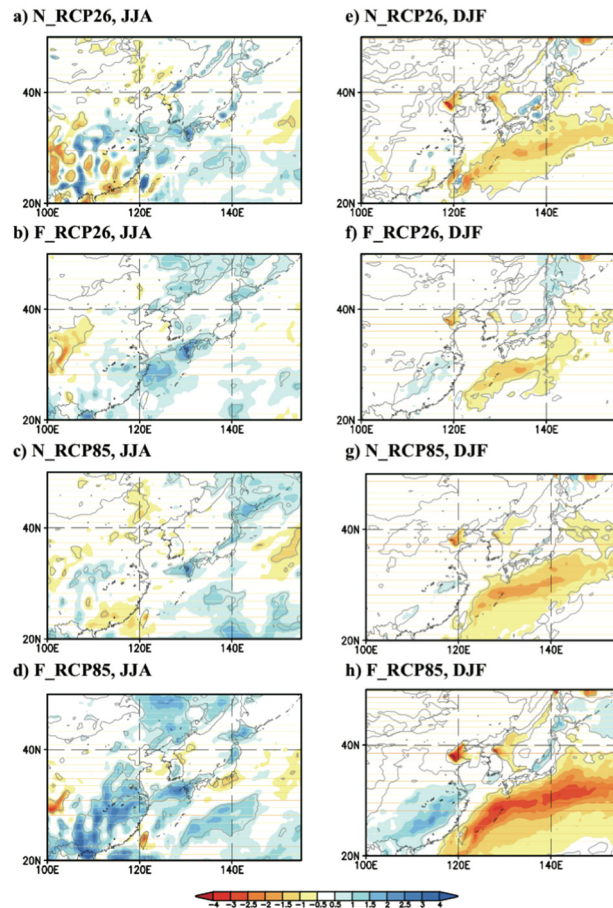


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**Fig. 7.** Difference in seasonally averaged precipitation ( $\text{mm day}^{-1}$ ) against the current climate obtained from RCP2.6 and RCP8.5 experiments over the East Asia region for JJA (a, b, c, d) and DJF (e, f, g, h). Note that the averaged period for near- (far-) future climate is from 2025 to 2050 (2075 to 2100), whereas it is 1980–2005 for current climate. Closed contours (gray line) indicate the 95 % significance level.

- From future climate projection, the increasing temperature trends of each RCP scenario are consistently reproduced in RSM downscaling; in particular, the result from the RCP 8.5 experiment shows a significantly steeper trend in increasing temperature.
- The East Asian monsoon is intensified in future climate projection by the strengthening North Pacific subtropical high and Okhotsk high in summer and intensified Siberian high in winter. These changes lead to an increase in precipitation for the summer and a decrease for winter.
- High-resolution RCM data make it possible to use various climatic elements, such as variation in the strength and/or frequency of monsoons, typhoons, and so on.