Supplementary material for Kilavi et al. 'Extreme rainfall and flooding over central Kenya including Nairobi city during the Long Rains season 2018: Causes, predictability and potential for early warning and actions'.

Supplementary material

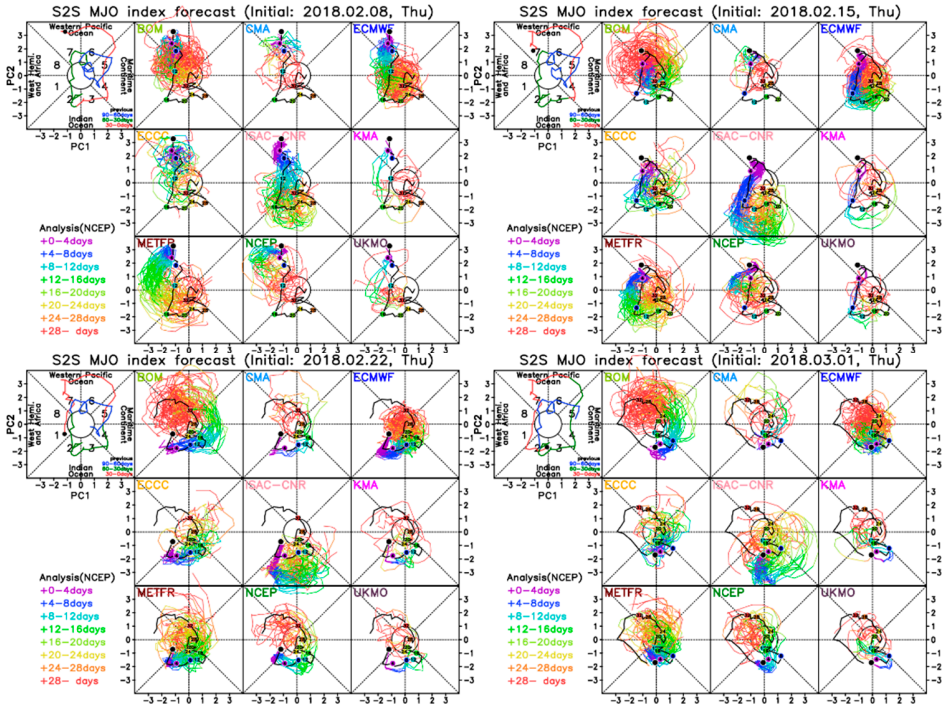

Figure S1. Sub-seasonal forecasts of the MJO. Ensemble forecasts of MJO track from forecasts of various initialisation dates leading up to the strong MJO activity in early March 2018 (associated with the P1 rainfall event). Specifically, top row, initialisation on: (left panel) 8th Feb. 2018 (~3–4 weeks ahead) and (right panel) 15th Feb. 2018 (~2–3 weeks ahead). Bottom row, initialisation on: (left panel) 22nd Feb. 2018 (~1–2 weeks ahead) and (right panel) 1st March (~1 week ahead). Sub-panels indicate forecasts from the different centers contributing to the S2S project [25]; in each sub-panel the thick black line indicates observations whilst the thin lines show ensemble forecast tracks. Colours of forecast tracks and numbered circles on the observed track indicate forecast lead times. Top left sub-panel shows 90 day past conditions. Plots accessed from the S2S museum (http://gpvjma.ccs.hpcc.jp/S2S/; see here for definitions of model acronyms). Similar plots for more start dates are available in supplementary material. Here ECMWF and UKMO refer to the ECMWF extended range system and the UK Met Office GloSea5 prediction system discussed elsewhere in this analysis.

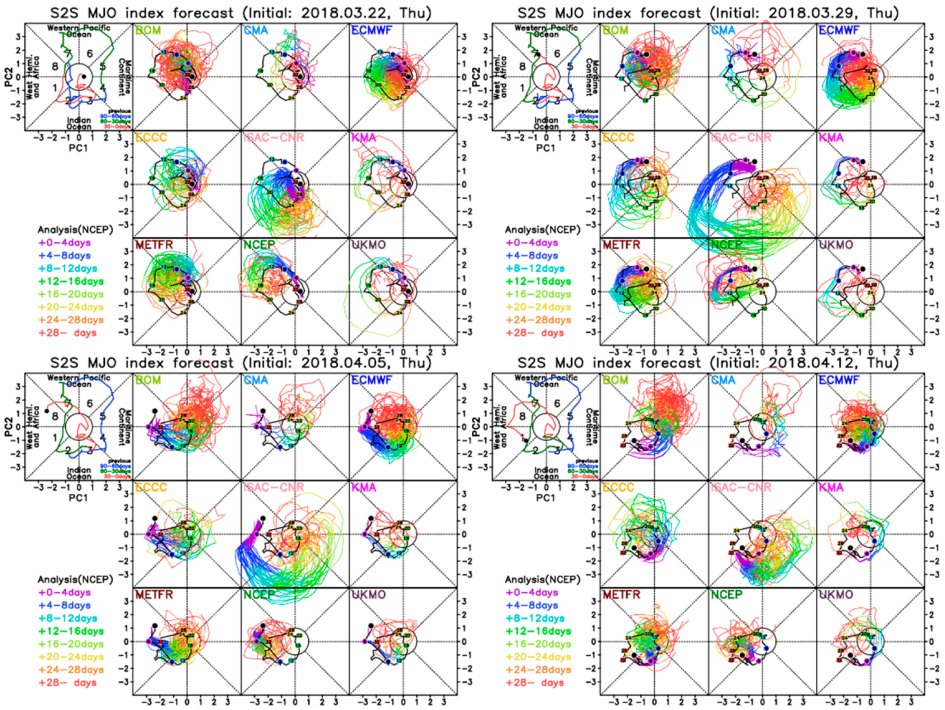

Figure S2. Sub-seasonal forecasts of the MJO. Ensemble forecasts of MJO track from forecasts of various initialisation dates leading up to the strong MJO activity in mid-April 2018 (associated with the P3 rainfall event). Specifically, top row, initialisation on: (left panel) 22nd March 2018 (~3–4 weeks ahead), (right panel) 29th March 2018 (~2–3 weeks ahead). Bottom row, initialisation on: (left panel) 5th April 2018 (~1–2 weeks ahead) and (right panel) 12th April (~1 week ahead). Sub-panels indicate forecasts from the different centers contributing to the S2S project [25]; in each sub-panel the thick black line indicates observations whilst the thin lines show ensemble forecast tracks. Colours of forecast tracks and numbered circles on the observed track indicate forecast lead times. Top left sub-panel shows 90 day past conditions. Plots accessed from the S2S museum (http://gpvjma.ccs.hpcc.jp/S2S/; see here for definitions of model acronyms). Similar plots for more start dates are available in supplementary material. Here ECMWF and UKMO refer to the ECMWF extended range system and the UK Met Office GloSea5 prediction system discussed elsewhere in this analysis.