Support Material

NMP-Hydro 1.0: a C# language and Windows System based Ecohydrological Model Derived from Noah-MP

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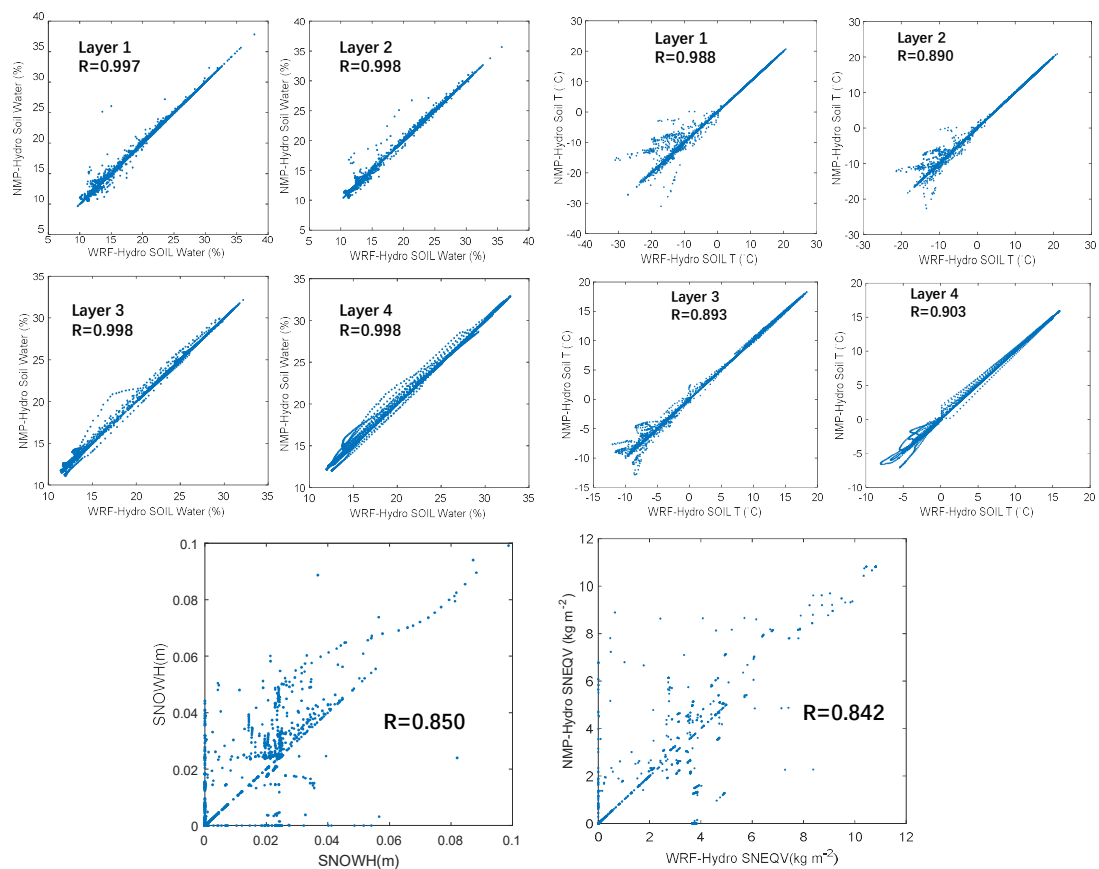
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Fig. S1 Comparison of soil water content (SOIL_W, %), soil temperature (SOIL_T, ℃) at different soil layers, snow depth (SNOWH, m) and snow water equivalent (SNEQV, kg m^{-2}) between the two models (NMP-Hydro 1.0 versus WRF-Hydro 3.0). The samples are daily values at Gridbox 3 (a sampling position in the grid domain), in 2000-2010.
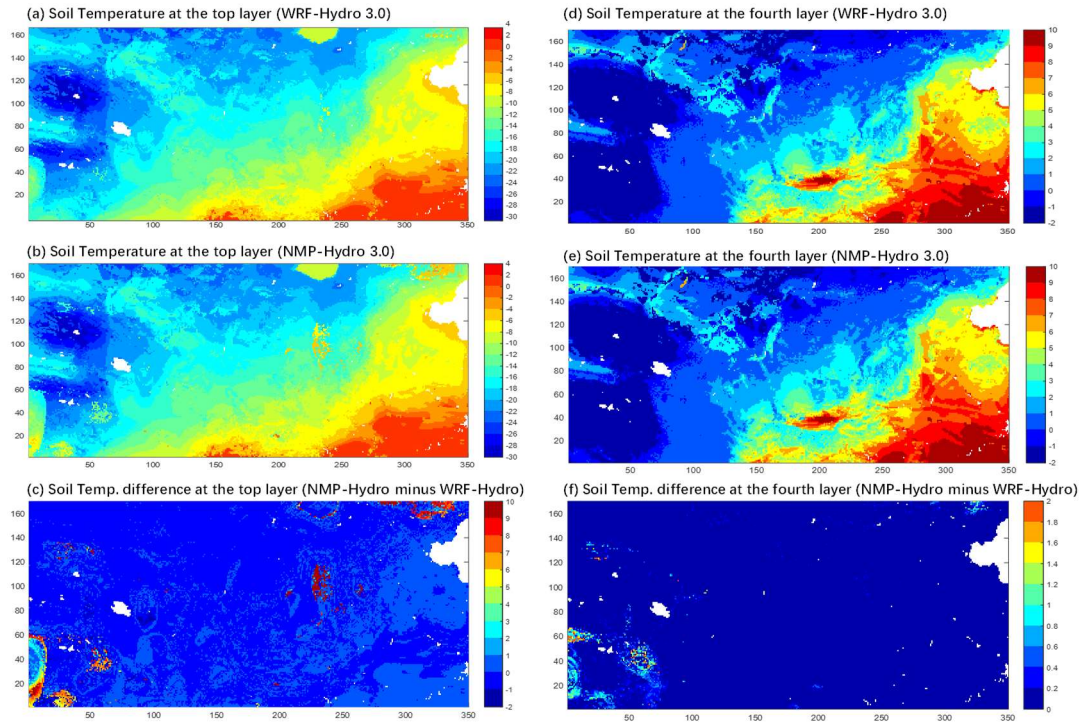
Fig.S2 Maps of soil temperature (℃) at the top layer and the lowest layer (the fourth layer) simulated by NMP-Hydro 1.0 and WRF-Hydro 3.0 (a, b, d, e), and the soil temperature differences(℃) between the two models(c,f), at Jan. 1, 2008. The labels for horizontal axis and vertical axis are row numbers and column numbers of the grid domain respectively.
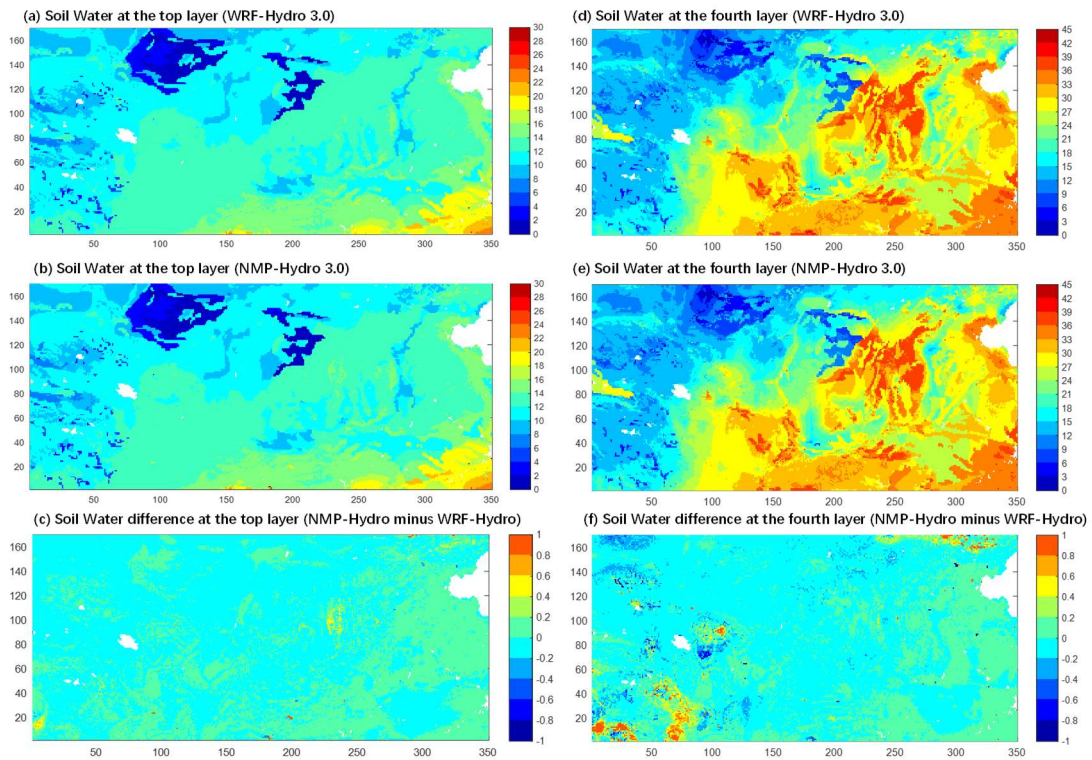

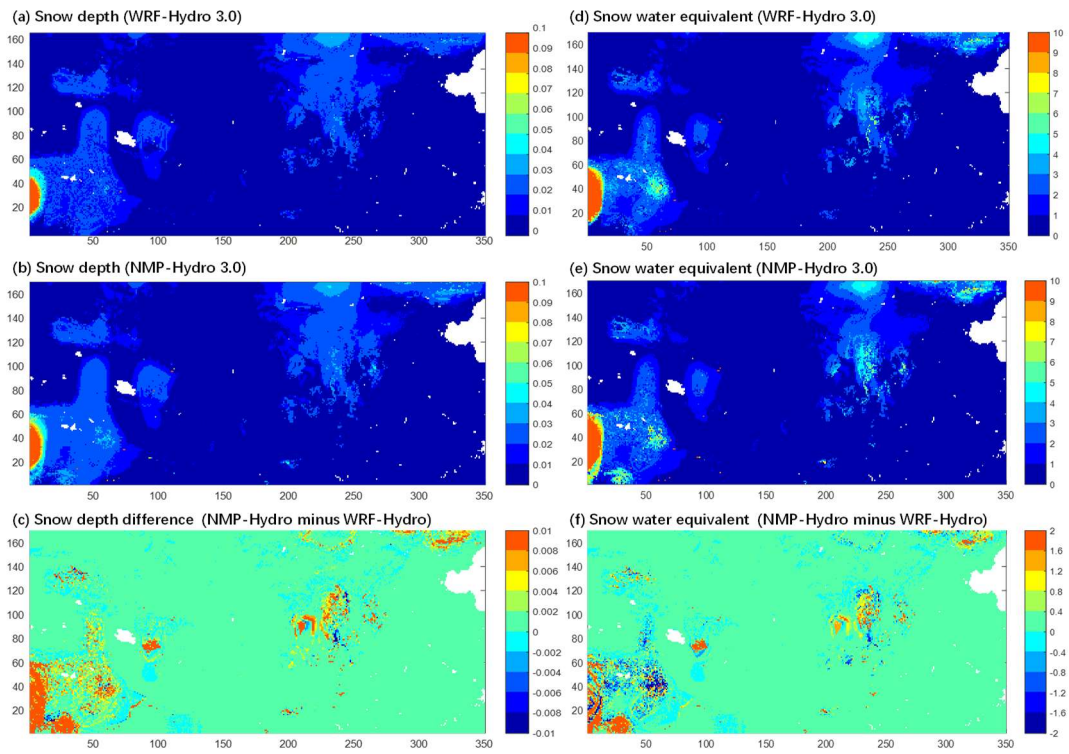**Fig.S3** Similar to Fig.S2, at Jan. 1, 2008, but for soil water content, represented in volume percent.

Fig.S4 Similar to Fig.S2 and Fig.S3, at Jan. 1, 2008, but for snow depth (SNOWH, m)(a,b,c) and snow water equivalent(kg·m^{-2})(d,e,f).
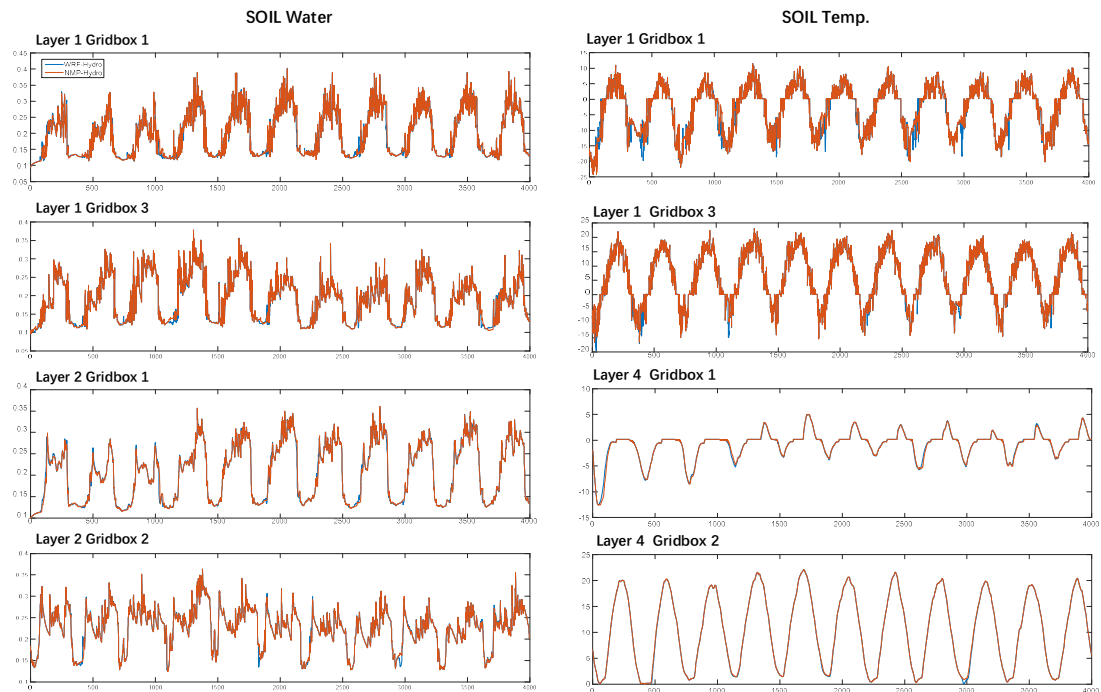

Fig.S5 The daily time series (2000-2010) of soil water content and soil temperature at different grid boxes of some soil layers (not all grid boxes and layers are shown here), simulated by NMP-Hydro (in red) and WRF-Hydro (in blue). The labels for the vertical axis represent the value of soil water content or soil temperature, while the labels for the horizontal axis represent the number of days
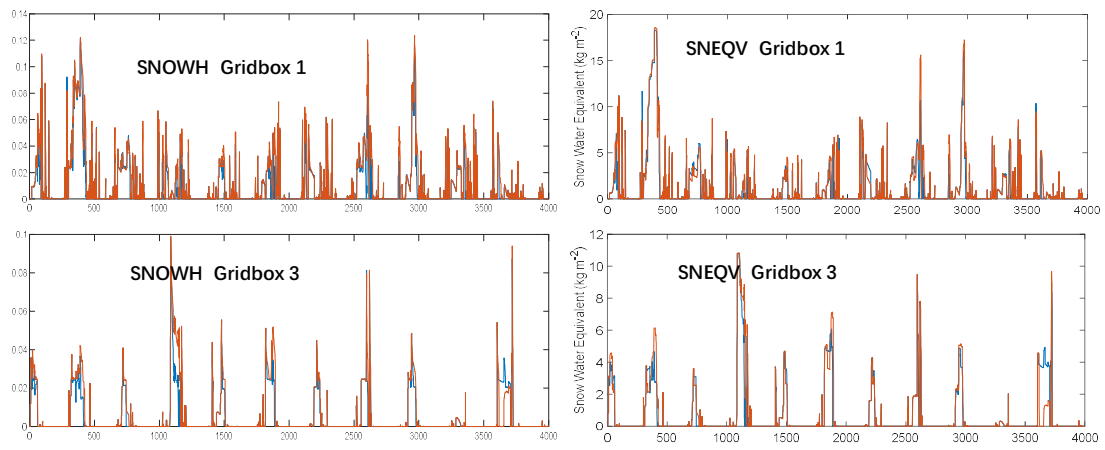
starting from 1 January 2000.

Fig.S6 Similar to Fig.S5, but for snow thickness (m) and snow water equivalent.