

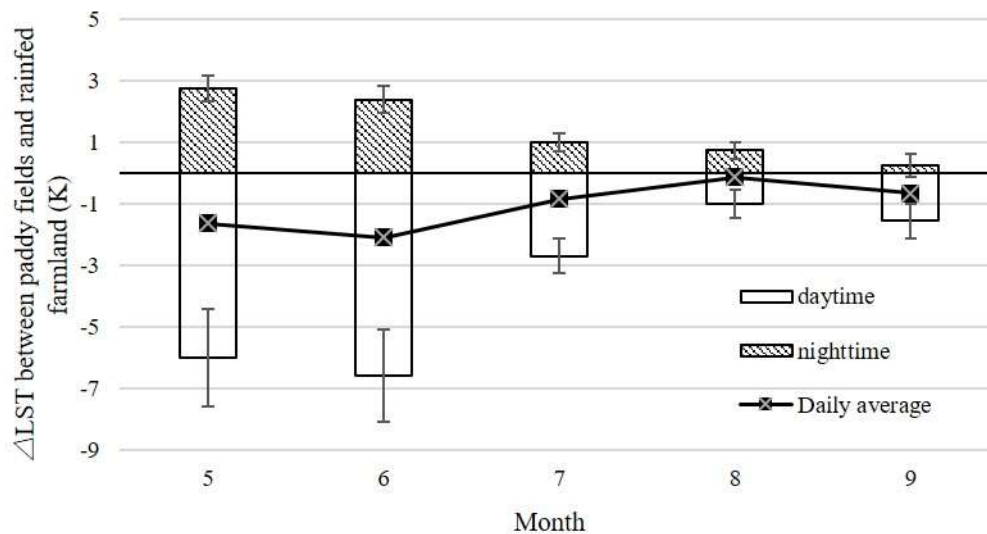
Supplementary:

# Seasonal Local Temperature Responses to Paddy Field Expansion from Rain-Fed Farmland in the Cold and Humid Sanjiang Plain of China

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**Table S1.** Land use transfer matrix of Sanjiang Plain during 2005 to 2015.

2005 2015	Forestland	Grassland	Waters	Built-up	Paddy fields	Rain-fed farmland	Marshes
Forestland	27.43	0.21	0.11	0.08	0.36	1.98	0.54
Grassland	0.33	0.31	0.22	0.03	1.53	1.70	0.56
Waters	0.01	0.01	2.65	0.02	0.30	0.44	0.18
Built-up	0.03	0.01	0.01	1.70	0.09	0.22	0.01
Paddy fields	0.09	0.01	0.07	0.11	10.06	1.69	0.04
Rain-fed farmland	1.28	0.12	0.59	0.65	11.29	23.27	0.17
Marshes	0.17	0.25	0.61	0.02	2.57	1.71	4.18



**Figure S1.** The daytime and nighttime land surface temperature difference between paddy fields and rain-fed farmland from May to September based on a ten-year average calculation from MODIS LST product.