Supplementary Materials

Simulation of Carbon Exchange from a Permafrost Peatland in the Great Hing'an Mountains Based on CoupModel

Yue Li [1,2], Zhong Mei Wan [1,*] and Li Sun [2,*]

[1] College of Earth Sciences, Jilin University, Changchun 130061, China; yli18@mails.jlu.edu.cn
[2] Key Laboratory of Wetland Ecology and Environment, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun 130102, China
* Correspondence: wanzm@jlu.edu.cn (Z.W.M.); sunli@iga.ac.cn (L.S.)

Table S1. The correlation analysis between NEE simulation value and environmental factors in Scheme I (** indicates significant at $p < 0.1$ level).

RCP Scenarios	Correlation parameters	Air Temperature	Precipitation	Net Radiation	Relative humidity
RCP2.6	R^2	0.84	0.17	0.34	0.26
	p	0.00**	0.51	0.1**	0.27
RCP6.0	R^2	0.81	0.48	0.28	0.15
	p	0.00**	0.07**	0.52	0.69
RCP8.5	R^2	0.72	0.51	0.31	0.27
	p	0.00**	0.1**	0.1**	0.71

Table S2. The correlation analysis between NEE simulation value and environmental factors in Scheme II (** indicates significant at $p < 0.1$ level).

RCP Scenarios	Correlation parameters	Air Temperature	Precipitation	Net Radiation	Relative humidity
RCP2.6	R^2	0.88	0.25	0.33	0.15
	p	0.00**	0.27	0.1**	0.61
RCP6.0	R^2	0.85	0.17	0.32	0.21
	p	0.00**	0.46	0.1**	0.39
RCP8.5	R^2	0.83	0.68	0.23	0.41
	p	0.00**	0.06**	0.1**	0.1**

Table S3. The correlation analysis between ER simulation value and environmental factors in Scheme I (** indicates significant at $p < 0.1$ level).

RCP Scenarios	Correlation parameters	Air Temperature	Precipitation	Net Radiation	Relative humidity
RCP2.6	R^2	0.88	0.14	0.34	0.27
	p	0.00**	0.33	0.1**	0.1**
RCP6.0	R^2	0.83	0.40	0.30	0.14
	p	0.00**	0.07**	0.06**	0.39
RCP8.5	R^2	0.87	0.46	0.40	0.27
	p	0.00**	0.1**	0.1**	0.71

Table S4. The correlation analysis between ER simulation value and environmental factors in Scheme II (** indicates significant at $p < 0.1$ level).

RCP Scenarios	Correlation parameters	Air Temperature	Precipitation	Net Radiation	Relative humidity
RCP2.6	R^2	0.88	0.14	0.26	0.26
	p	0.00**	0.42	0.34	0.22
RCP6.0	R^2	0.83	0.32	0.34	0.19

	p	0.00**	0.09**	0.06**	0.52
RCP8.5	R^2	0.87	0.30	0.41	0.32
	p	0.00**	0.1**	0.1**	0.1**

Table S5. The correlation analysis between GPP simulation value and environmental factors in Scheme I (** indicates significant at $p < 0.1$ level).

RCP Scenarios	Correlation parameters	Air Temperature	Precipitation	Net Radiation	Relative humidity
RCP2.6	R^2	0.86	0.12	0.31	0.28
	p	0.00**	0.45	0.1**	0.1**
RCP6.0	R^2	0.87	0.42	0.24	0.12
	p	0.00**	0.01**	0.1**	0.39
RCP8.5	R^2	0.81	0.47	0.38	0.18
	p	0.00**	0.07**	0.1**	0.61

Table S6. The correlation analysis between GPP simulation value and environmental factors in Scheme II (** indicates significant at $p < 0.1$ level).

RCP Scenarios	Correlation parameters	Air Temperature	Precipitation	Net Radiation	Relative humidity
RCP2.6	R^2	0.87	0.13	0.18	0.16
	p	0.00**	0.61	0.27	0.33
RCP6.0	R^2	0.81	0.34	0.30	0.25
	p	0.00**	0.1**	0.08**	0.66
RCP8.5	R^2	0.84	0.35	0.32	0.19
	p	0.00**	0.09**	0.1**	0.29