Supplemental materials of *A component-specific exposure-mortality model for ambient $PM_{2.5}$ in China: findings from a nationwide epidemiology based on outputs from a chemical transport model*

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Table S1 Cross-validation results for different risk assessment models by regions.

Region	Model	Bias	RMSE	MAE	R
Central	$PM_{2.5}$-EMM	208	1044	766	0.840
	BC-EMM	210	1024	752	0.847
	SC-EMM	193	1040	763	0.841
East	$PM_{2.5}$-EMM	-849	2183	1224	0.848
	BC-EMM	-966	2439	1309	0.842
	SC-EMM	-818	2155	1214	0.847
North	$PM_{2.5}$-EMM	-25	597	277	0.964
	BC-EMM	-19	504	257	0.970
	SC-EMM	12	559	279	0.966
Northeast	$PM_{2.5}$-EMM	-423	778	485	0.941
	BC-EMM	-411	782	474	0.939
	SC-EMM	-403	741	463	0.944
Northwest	$PM_{2.5}$-EMM	624	1609	970	0.671
	BC-EMM	631	1599	965	0.679
	SC-EMM	623	1605	967	0.674
South	$PM_{2.5}$-EMM	272	2612	1134	0.746
	BC-EMM	356	2572	1128	0.760
	SC-EMM	234	2585	1119	0.751
Southwest	$PM_{2.5}$-EMM	-183	1503	985	0.780
	BC-EMM	-135	1494	973	0.779
	SC-EMM	-97	1485	971	0.776

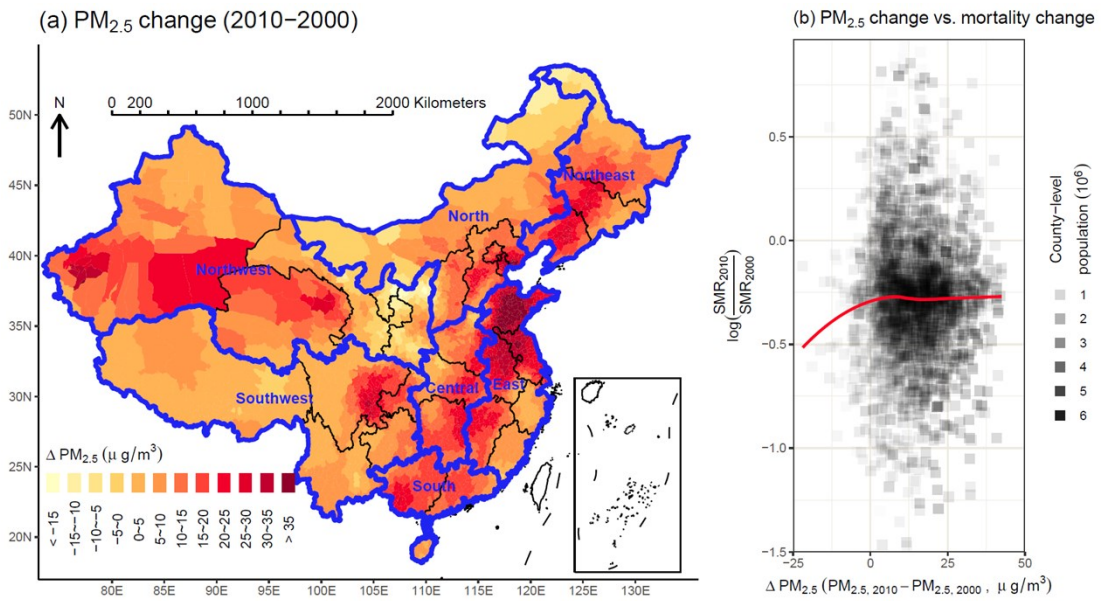

Figure S1 Variations of $PM_{2.5}$ and mortality risks in China from 2000 to 2010. Panel (a) presents the study domain with change of $PM_{2.5}$ concentrations in each county-level geographic unit. Panel (b) presents a scatterplot of the $PM_{2.5}$ changes against the relative changes in standardized mortality rate, with a local regression line (red line). The map (a) also shows the seven sub-regions used in the cross-validation.

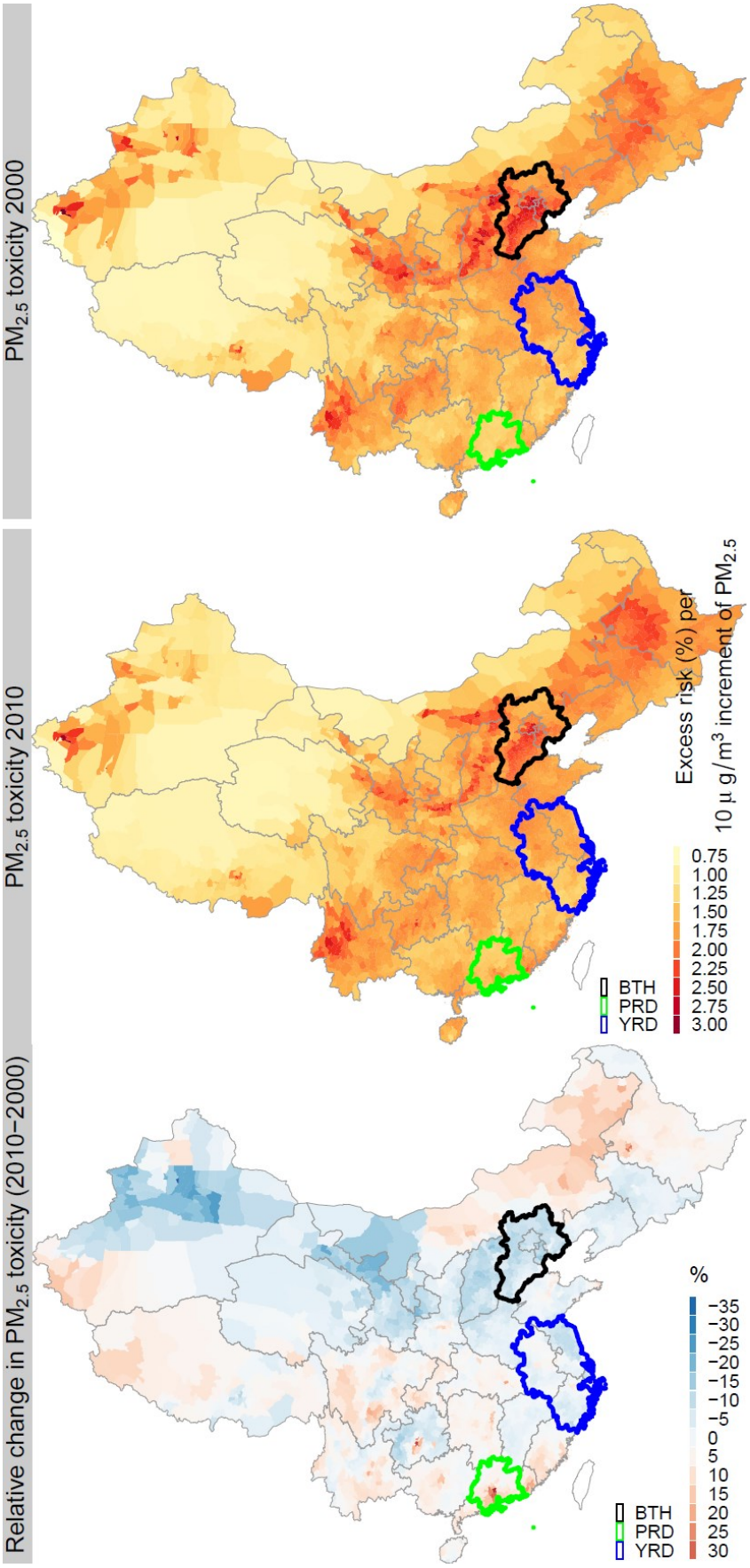

Figure S2 Spatial distribution of the $PM_{2.5}$ toxicity and its changes during 2000-2010.