## **Supplementary Material**

**Table S1.** The land cover classification system for the China-Pakistan Economic Corridor.

Level 1		Level 2	
Code	Name	Name	Description
	Forest land	Evergreen broadleaf forest	$H = 3-30 \text{ m}$ , $C \ge 20\%$ , evergreen, broadleaf
		Deciduous broadleaf forest	H = 3–30 m, $C \ge 20\%$ , deciduous, broadleaf
1		Evergreen needleleaf forest	H = 3–30 m, $C \ge 20\%$ , evergreen, needleleaf
		Deciduous needleleaf forest	H = 3–30 m, $C \ge 20\%$ , deciduous, needleleaf
		Mixed forest	$H = 3-30 \text{ m}, C \ge 20\%, 25\% < F < 75\%$
2	Shrubland	Evergreen shrubland	$H = 0.3-5 \text{ m}, C \ge 20\%$ , evergreen
2		Deciduous shrubland	$H = 0.3-5 \text{ m}, C \ge 20\%$ , deciduous
3	Grassland	Grassland	$H = 0.03-3m$ , $C \ge 20\%$
	Wetland	Tree wetland	W > 2 or wet soil, H = $3-30$ m, C $\ge 20\%$
4		Shrub wetland	W > 2 or wet soil, H = 0.3–5 m, $C \ge 20\%$
4		Herbaceous wetland	W > 2 or wet soil, H = $0.03-3$ m, C $\ge 20\%$
		Flood plain	Seasonal flood, C < 4%
5	Open water	Open water	Water surface
		Paddy field	Artificial vegetation, soil disturbance, aquatic crop, harvest process
6	Cropland	Dry farmland	Artificial vegetation, soil disturbance, xerophytic crop, harvest process
	-	Orchard	Artificial vegetation, H = $0.3-30$ m, C $\geq 20\%$
7	Impervious surface	Impervious surface	Built-up hard surface
	-	Sparse vegetation	H = 3-30  m, C = 4-20%
	Bare land	Bare rock	Natural, hard surface, stone, C < 4%
8		Bare soil	Natural, soft surface, soil, C < 4%
		Salina	Natural, soft surface, high salinity
		Desert	Natural, soft surface, sand, C < 4%
9	Permanent ice/snow	Permanent ice/snow	Natural, solid water

Notes: C = vegetation cover/canopy closure; F = needleleaved tree/broadleaved tree; H = plant height (m); W = annual time covered by water (months).