

Table S1. Details of satellite datasets used for reclamation classification in Shandong coastal zone.

Dataset	Spatial Resolution	Temporal Resolution	Acquisition Time	Path/Row	Cloud Cover
Landsat 5 TM	30m (reflective); 120m (thermal)	16 days	1990-10-08	119/34	0.03%
			1990-10-08	119/35	0.01%
			1990-10-15	120/34	—
			1990-10-15	120/35	—
			1990-10-31	120/36	0.37%
			1990-06-16	121/34	11.01%
			1990-10-29	122/33	—
			1990-10-13	122/34	3.00%
Landsat 7 ETM+	30m (reflective); 60m (thermal); 15m (Panchromatic)	16 days	2000-11-28	119/34	0.06%
			2000-11-12	119/35	7.51%
			2000-11-03	120/34	—
			2000-11-03	120/35	2.4%
			2000-11-03	120/36	—
			2000-08-06	121/34	13.13%
			2000-11-17	122/33	0.21%
			2000-11-01	122/34	—
			2007-10-15	119/34	1.40%
			2007-10-15	119/35	7.80%
			2007-11-07	120/34	0.08%
			2007-10-22	120/35	0.20%
			2007-10-22	120/36	0.64%
			2007-09-11	121/34	0.31%
			2007-10-20	122/33	0.04%
			2007-10-20	122/34	0.03%
Landsat 8 OLI	30m (reflective); 100m (thermal); 15m (Panchromatic)	16 days	2017-12-21	119/34	0.59%
			2017-12-21	119/35	0.26%
			2017-11-10	120/34	1.05%
			2017-12-12	120/35	1.25%
			2017-11-26	120/36	1.00%
			2017-12-19	121/34	1.56%
			2017-11-24	122/33	2.25%
			2017-11-24	122/34	0.21%
			2021-11-14	119/34	0.51%
			2021-11-14	119/35	0.24%
			2021-12-07	120/34	0.28%
			2021-12-07	120/35	1.09%
			2021-12-07	120/36	10.81%
			2021-11-12	121/34	0.24%
			2021-12-21	122/33	2.50%
			2021-12-05	122/34	1.50%

Table S2. The main purposes of each reclamation activity.

Reclamation activity	Main purposes
Enclosed mariculture	Breeding economic aquatic plants or animals.
Saltern	Manufacturing sea salt.
Fishery infrastructure	Breeding important germplasm resources; docking/loading/unloading/sheltering fishing boats.
Coastal industrial construction	Manufacturing ships; generating electricity.
Tourism infrastructure	Providing coastal tourism services for tourists.
Port	Docking/loading/unloading/sheltering/maneuvering cargo/passenger vessels.
Urbanization	Building towns to provide living areas for coastal residents.
Others	Reservoirs: controlling flood and regulating runoff; Coastal protection engineering: protecting coastal towns, farmland, salterns and beaches; resisting the storm damage.
Unused infilled reclamation area	Subsequent use for urban construction or industrial manufacturing.
Unused enclosed reclamation area	Subsequent use as aquaculture ponds, harbor pond, or industrial reservoirs.