

Table S1 Application and evaluation of approaches to combat soil erosion in typical regions

Category of restoration technology	Name of restoration technology	Technical Evaluation					
		Potential to transfer	Easy to use	Readiness	Effectiveness	Suitability	Evaluation index
Biological	Forest/Grass Pest Control	4.00	5.00	5.00	5.00	5.00	0.96
	Forest improvement	5.00	4.50	4.50	4.50	5.00	0.94
	Plant breeding	3.50	4.50	5.00	4.50	5.00	0.90
	Aerial Seeding	5.00	3.00	4.00	5.00	5.00	0.88
	Spatial allocation of trees, shrubs and herbs plants	5.00	3.00	4.00	5.00	5.00	0.88
	Protective/Buffering forests	4.50	3.75	4.25	4.25	4.25	0.84
	Hedgerows	4.50	3.50	5.00	4.00	4.00	0.84
	Salt-tolerant plant species selection	5.00	3.00	4.00	4.00	5.00	0.84
	Artificial afforestation/grassland	4.20	4.25	4.20	4.24	4.09	0.84
	Straw mulching	5.00	3.00	4.00	3.00	3.00	0.72
Engineering	Plastic mulching	3.00	2.00	3.00	4.00	3.00	0.60
	Storage reservoir	4.00	5.00	5.00	5.00	5.00	0.96
	Terraced slopes	4.50	4.00	5.00	4.50	5.00	0.92
	Multiple-drop check dam	5.00	4.00	4.00	4.00	5.00	0.88
	Solid waste backfilling	4.00	4.00	5.00	4.00	5.00	0.88
	Grain for green	4.33	4.50	4.50	3.67	4.50	0.86
	Sewage water treatment	3.50	4.50	5.00	4.00	4.00	0.84
	Greening concrete slope protection	5.00	4.00	4.00	4.00	4.00	0.84
	Environment-friendly soil stabilizer	5.00	3.00	3.00	5.00	5.00	0.84
	Retaining walls	4.00	3.00	4.50	4.50	4.50	0.82
	Riverbed sludge dredging	4.00	3.00	3.00	5.00	5.00	0.80
	Terraces	4.33	2.80	4.12	3.82	3.91	0.76
	Stone dikes	3.00	4.00	4.00	3.00	4.00	0.72
	Check dams	2.90	3.87	4.00	3.40	3.57	0.71
	Subdrainage	2.00	4.00	4.00	4.00	3.00	0.68
Agricultural	Runoff-interception Intercepting ditches	3.00	2.00	3.00	3.00	3.00	0.56
	Agro-forestry	4.25	4.75	4.75	4.75	4.50	0.92
	Fallow/No-tillage/Minimum tillage	4.67	4.33	5.00	4.00	4.33	0.89
	Stereo-agriculture	4.25	3.50	4.25	4.75	5.00	0.87
	Conservation tillage	4.00	4.50	5.00	4.00	4.00	0.86

	Soil reclamation/fertilization	4.67	3.67	4.00	4.00	4.33	0.83
	Drip irrigation	3.50	4.50	4.00	4.00	4.50	0.82
	Contour strip farming	4.00	3.00	4.00	4.50	4.00	0.78
	Strip farming	3.00	3.00	4.00	3.00	4.00	0.68
	Groundwater irrigation	2.00	3.00	2.00	5.00	4.00	0.64
	Establish nature reserves	4.00	3.00	5.00	5.00	5.00	0.88
	Grazing exclosures	4.00	4.67	4.67	4.00	4.33	0.87
	Confined/semi-confined farming	4.00	3.50	4.50	4.50	4.75	0.85
	Using Grass to Settle Livestock	4.00	3.00	5.00	5.00	4.00	0.84
	Forest harvest regulation	4.00	3.00	5.00	4.00	5.00	0.84
	Natural restoration	4.00	4.00	5.00	3.00	4.00	0.80
Management	Participatory seedling and planting management	3.00	5.00	4.00	4.00	4.00	0.80
	Forest protection legislation	3.00	3.00	4.00	4.00	4.00	0.72
	Prohibiting/Rest/Rotational grazing	2.53	3.47	3.40	4.20	3.40	0.68
	Prescribed burning of vegetation	2.00	4.00	4.00	3.00	3.00	0.64