Table S2. Final environmental variables used in model construction

Target soil property	Used environmental covariates	Target soil property	Used environmental covariates	Training set	Validation set
Soil organic carbon (SOC)	Normalized difference vegetation index (NDVI) – Sentinel 2A MSI	Available phosphorus (Ava-P)	Normalized difference vegetation index (NDVI) – Sentinel 2A MSI	It consists of 201 observations. Each dataset contains 15 environmental variables, along with the target soil property (1 item).	It consists of 87 observations. Each dataset contains 15 environmental variables, along with the target soil property (1 item).
	Normalized clay index - Sentinel 2A MSI		Normalized clay index - Landsat 8 OLI		
	Elevation (m)		Elevation (m)		
	Green Normalized Difference Vegetation Index [GNDVI] - Sentinel 2A MSI		Green Normalized Difference Vegetation Index [GNDVI] - Landsat 8 OLI		
	Normalized difference vegetation index (NDVI) – Landsat 8 OLI		Normalized difference vegetation index (NDVI) – Landsat 8 OLI		
	Saturation index - Landsat 8 OLI		Saturation index - Landsat 8 OLI		
	Topsoil grain size index - Sentinel 2A MSI		Normalized clay index - Sentinel 2A MSI		
	Normalized clay index - Landsat 8 OLI		Topsoil grain size index - Sentinel 2A MSI		
	Total Solar Radiation (kJ m^{-2} year^{-1})		BIO-1-Mean Annual Temperature (MAT) (°C)		
	Green Normalized Difference Vegetation Index [GNDVI] - Landsat 8 OLI		Green Normalized Difference Vegetation Index [GNDVI] - Sentinel 2A MSI		
	Topsoil grain size index - Landsat 8 OLI		Clay map produced with Ordinary Kriging (%)		
	BIO-1-Mean Annual Temperature (MAT) (°C)		pH map produced with Ordinary Kriging		
	Saturation index - Sentinel 2A MSI		Sand map produced with Ordinary Kriging (%)		
	Sand map produced with Ordinary Kriging (%)		Topographic wetness index (TWI)		
	Flow Accumulation		Slope (%)		