Table S1. Studies that integrated the database.

References	Country	Weather	Soil type	Rain (mm/year)	Mean temperature (°C)	Mean altitude (m.a.s.l.)	Observations	Number of indicators	Indicators that made up the SQI
Romaniuk et al., 2011) [1]	Argentina	---	Arguidol	---	---	---	1	5	SOC, POM-C, MBC, SMR and qCO_2
(Mukherjee & Lal, 2015) [2]	EE.UU.	---	Loamy loam	---	---	---	6	4	SOC, AWC, WSA and pH
(Askari & Holden, 2015) [3]	Ireland	---	Luvisols and brown soils	875	9.9		6	7	BD, PR, Mg, C/N, TN, SMR and ASD
(Cherubin et al., 2016) [4]	Brazil	Tropical	Oxisols	---	---	---	1	38	P, S, K, Ca, Mg, B, Cu, Fe, Mn, Zn, CEC, H+Al, pH, BS, BD, SDC, PR, MaP, MiP, Porosity, WFPS, SWSC, SAC, K_{fs}, AGS, MWD, VESS, SSI, SOC, TN, MBC, MBN, BG, AcP, Eworm, Mdens, Mrich and Mdiver
							1	7	SOC, SAC, Ph, K_{fs}, Mdiver, BG and Mdens

References	Country	Weather	Soil type	Rain (mm/year)	Mean temperature (°C)	Mean altitude (m.a.s.l.)	Observations	Number of indicators	Indicators that made up the SQI
(Nabiollahi et al., 2017) [5]	Iran	Semi-arid	Inceptisols	369.8	10.8	2250	1	5	pH, EC, BD, ESP and CEC
							1	9	pH, SAR, EC, CCE, SOC, BD, CEC, ESP and MWD
(Apesteguía et al., 2017) [6]	Spain	Dry subhumid	Haplic calcisols	525	13.5	402	2	9	BD, PR, MWD_d, TN, P, K, $CaCO_3$, SOC and MBC
(Mishra et al., 2017 [7]	India	---	Clay loam and sandy clay loam	225	24.05	483.33	1	6	AN, SOC, K, pH, Ca and P
(Nabiollahi, Golmohamadi, et al., 2018) [8]	Iran	Semi-arid	Inceptisols	399	10.2	2292.5	2	9	k, MWD, pH, SOC, TNV, Porosity, CEC, BD and EC
							2	4	pH, k, Porosity and MWD
(Nabiollahi, Taghizadeh-Mehrjardi, et al., 2018) [9]	---	---	---	---	---	---	2	9	P, MWD, pH, SOC, CCE, TN, CEC, BD and EC
							2	4	EC, SOC, CEC and MWD
(Yu et al., 2018) [10]	China	Semi-arid	Solonetz	427	5.9	---	4	4	INV, N/P, WEOC and LC

References	Country	Weather	Soil type	Rain (mm/year)	Mean temperature (°C)	Mean altitude (m.a.s.l.)	Observations	Number of indicators	Indicators that made up the SQI
(Budak et al., 2018) [11]	Turkey	---	---	474.9	15.8	931	1	5	pH, $CaCO_3$, AS, K, and P
(Chandel et al., 2018) [12]	India	---	Haplustepts	1090	22.5	385	1	6	SOC, K, EC, k, Clay and PAW
(Mei et al., 2019) [13]	China	Semi-wet	Brunisolic	675	6.3	---	2	3	AN, TN and SOM
(Klimkowicz-Pawlas et al., 2019) [14]	Poland	---	Luvisols	6407.8	---	---	1	4	TN, HU, NIT and DHA
(Mahajan et al., 2020) [15]	India	Tropical	Coastal plains	2139	27.4	0	1	15	pH, EC, BD, N, P, K, S, B, Fe, Mn, Cu, Zn, Ca, Mg and Na
							2	6	pH, Mn, BD, Cu, EC and Na
(Zeraatpisheh et al., 2020) [16]	Iran	---	Haptic luvisols	789	17.9	35	2	8	SOC, TN, CEC, SMR, BD, CCE, pH, EC
							2	5	SOC, CEC, CCE, pH and EC
(Acir & Günal, 2020) [17]	Turkey	---	Petrocalcic calcixerepts	333	11.08	1051	1	8	SAR, K, TOC, WFPS, pH, BD, AWC and P

References	Country	Weather	Soil type	Rain (mm/year)	Mean temperature (°C)	Mean altitude (m.a.s.l.)	Observations	Number of indicators	Indicators that made up the SQI
(Bedolla-Rivera et al., 2020) [18]	Mexico	Semi-arid	Chernozem	700	20	1750	5	4	WHC, Silt, N-NO_3 and qCO_2
(Zhou et al., 2020) [19]	China	Semi-wet	Mollisols	553.9	1.5	---	2	15	BD, WHC, pH, SOM, TOC, TN, N-NO_3, N-NH_4, P, K, INV, UA, APA, MBC and MBN
							3	5	BD, pH, SOM, N-NO_3 and APA
(Zhao et al., 2021) [20]	China	Semi-arid	Entisols	---	---	---	5	5	N, NB, IPB, SOM and INV
(Huang et al., 2021) [21]	China	Humid tropical	Ferralsols	1450	18	1345	1	4	Fe, SOC, TN and K
(Mahajan et al., 2021) [22]	India	Warm	Alfisols	3362.5	28	---	4	5	APA, SOC, P, MBC and AN

SOC, soil organic C; POM-C, particulate organic C fraction; SMR, soil microbial respiration; MBC, microbial biomass C; qCO_2, microbial respiration coefficient; AWS, available water content; WSA, water-stable aggregates; pH, potential of hydrogen; BD, bulk density; PR, penetration resistance; Mg, magnesium; C/N, C and N ratio; TN, total N; ASD, aggregate size distribution; P, phosphorus; Porosity; S, sulfur; K, potassium; k, soil erodibility; Ca, calcium; B, boron; Cu, cooper; Fe, iron; Mn, manganese; Zn, zinc; CEC, cation exchange capacity; H+Al, potential acidity; BS, base saturation; SDC, soil degree of compactness; MaP, macroporosity; MiP, microporosity; WFPS, water-filled pore space; SWSC, soil water storage capacity; SAC, soil aeration capacity; K_{fs}, field saturated hydraulic conductivity; AGS, macroaggregation stability; MWD, mean weight aggregate diameter; VESS, visual evaluation of soil structure; SSI, structural stability index; MBN, microbial biomass N; BG, β-glucosidase activity; AcP, acid phosphatase activity; Eworm, number of earthworms; Mdens, macrofauna density; MRich, macrofauna richness; Mdiver, macrofauna diversity; SAR, sodium adsorption ratio; CCE, carbonate calcium equivalent; ESP, exchangeable sodium percentage; MWD_d, mean weight diameter in dry; $CaCO_3$, carbonates as $CaCO_3$, TNV, total neutralizing value; INV, invertase; N/P, N and P ratio; WEOC, water extractable organic C; LC, labile C; AS, aggregate stability; CLY, Clay; PAW, plant available water; AN, available N; SOM, soil organic matter; HU, humins; NIT, potential of nitrification; DHA, dehydrogenase activity;

Mg, magnesium; Na, sodium; AWC, available water content; WHC, water holding capacity; N-NO_3, nitrates; Silt; UA, urease activity; APA, phosphatase activity; NB, nitrifying bacteria; IPB, inorganic phosphorus bacteria;

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