Supplementary Materials

Table S1. Data for Cohen's Kappa calculation

		Rater 1		
		Eligible	Ineligible	Row Marginals
Rater 2	Eligible	153	19	172
	Ineligible	12	147	159
	Column Marginals	165	166	

Table S2. The journals variety

No.	Source title	Sample size (109)
1	SUSTAINABILITY	18
2	ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH	12
3	INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH	11
4	ENERGY ECONOMICS	7
5	ECOLOGICAL INDICATORS	6
6	ENERGY POLICY	5
7	ENERGIES	4
8	ENVIRONMENTAL & RESOURCE ECONOMICS	3
9	FRONTIERS IN ENVIRONMENTAL SCIENCE	3
10	APPLIED ECOLOGY AND ENVIRONMENTAL RESEARCH	2
11	ECOLOGICAL ECONOMICS	2
12	EMPIRICAL ECONOMICS	2
13	JOURNAL OF CLEANER PRODUCTION	2
14	JOURNAL OF ENVIRONMENTAL MANAGEMENT	2
15	CARBON BALANCE AND MANAGEMENT	1
16	LAND	1
17	INTERNATIONAL JOURNAL OF CLIMATE CHANGE STRATEGIES AND MANAGEMENT	1
18	REVUE d'ECONOMIE POLITIQUE	1
19	LETTERS IN SPATIAL AND RESOURSE SCIENCES	1
20	ENVIRONMENTAL ECONOMICS AND POLICY STUDIES	1
21	CLIMATE POLICY	1
22	ADVANCES IN METEOROLOGY	1
23	ECONOMIC RESEARCH-EKONOMSKA ISTRAZIVANJA	1
24	JOURNAL OF ENVIRONMENTAL ECONOMICS AND MANAGEMENT	1
25	RESOURCES CONSERVATION AND RECYCLING	1
26	WORLD DEVELOPMENT	1
27	CLEANER ENVIRONMENTAL SYSTEMS	1
28	ENVIRONMENT AND DEVELOPMENT ECONOMICS	1

29	CLIMATIC CHANGE	1
30	ADVANCES IN CLIMATE CHANGE RESEARCH	1
31	FRONTIERS IN ENERGY RESEARCH	1
32	JOURNAL OF REGIONAL SCIENCE	1
33	RESOURCE AND ENERGY ECONOMICS	1
34	ENERGY REPORTS	1
35	RENEWABLE ENERGY	1
36	ENVIRONMENT DEVELOPMENT AND SUSTAINABILITY	1
37	TECHNOLOGICAL AND ECONOMIC DEVELOPMENT OF ECONOMY	1
38	CHINA ECONOMIC REVIEW	1
39	APPLIED ECONOMICS	1
40	JOURNAL OF INTERNATIONAL ECONOMICS	1
41	ENERGY	1
42	DISCOVER SUSTAINABILITY	1
43	POLISH JOURNAL OF ENVIRONMENTAL STUDIES	1
44	ENERGY STRATEGY REVIEWS	1

Figure S1. The results of Elbow method

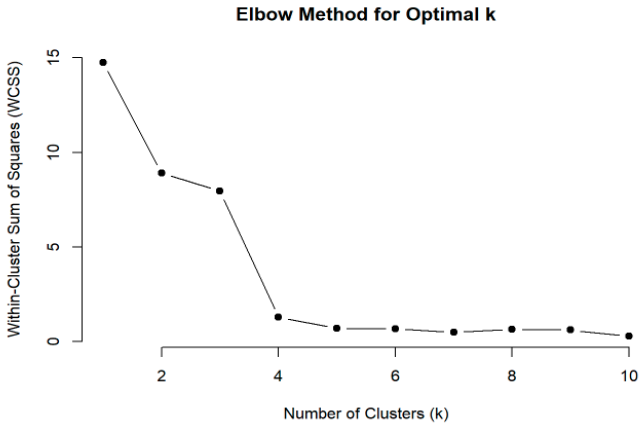

Figure S2. The results of clustering

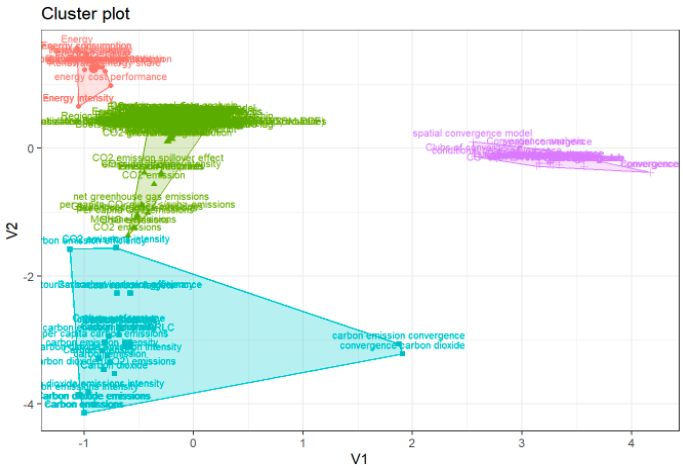

Table S3. Sample description by regions and hierarchical level

Region	Number of papers by region	Country or segmentation of the region	Hierar-chical level	Number of papers related to the level	Authors
Africa	3	Angola, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Cote d Ivoire, Gambia, Ghana, Guinea, Kenya, Mali, Mozambique, Niger, Nigeria, Rwanda, Sierra Leone, Somalia, Togo, Uganda and, Zimbabwe	Country	1	[58]
		South Africa	Country	1	[118]
		Africa (N=47)	Country	1	[41]
Asia	52	China	City	11	[42, 50, 60, 61, 84, 85, 90, 103, 128, 130, 131]
		China	Region	36	[22, 25, 27, 28, 30, 31, 32, 35, 39, 44, 45 ,62, 63, 64, 66, 68, 69, 71, 73,75, 76, 80, 83, 86, 87, 89, 91, 93, 96, 97 ,98, 99,101, 102, 121, 122]
		China	Industry /Sector	2	[72, 129]
		India	Country	1	[117]
		Pakistan	Country	1	[116]
		Asean-5	Country	1	[59]
South America	1	Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama	Country	1	[82]
Europa	14	EU-28	Country	3	[53, 65, 100]
		EU-27	Country	1	[120]
		(N=15) Austria, Belgium, Denmark, Finland, France, Germany, Great Britain, Greece, Ireland, Italy, Luxemburg, The Netherlands, Portugal, Spain, Sweden.	Country	1	[105]
		(N=41) Albanian, Austria, Belgium, Bulgarian, Czechoslovakia, Denmark, Finland, France, Yugoslavian, USSR, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Romanian, Spain, Sweden, Switzerland, Turkey, United Kingdom (Bosnia and Herzegovina, Croatia, Macedonia and Slovenia were included in Yugoslavia's) Montenegro, Serbia, (Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Latvia, Lithuania, Moldova, Russian Republic and Ukraine were included in the USSR)	Country	1	[26]
		(N=29) Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom, Bulgaria, Croatia, Cyprus, Czechia, Estonia, Hungary, Latvia, Lithuania, Malta, Norway, Poland, Romania, Slovakia, Slovenia.	Country	1	[47]
		Germany, France	Country	1	[38]
		(N=12) Benelux, Germany, Italy, Austria, United Kingdom, Scandinavian countries, Spain, Ireland, Portugal, Greece, Latvia, Slovenia	Country	1	[29]
		(N=22) Austria, Belgium, Croatia, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom	Country	1	[74]
		EU-28	Industry /Sector	2	[49, 56]
		Sweden	Industry /Sector	2	[23, 107]
North America	5	US	Country	2	[95, 104]
		US	Region	3	[37, 11, 124]
World	34	OEDC	Country	6	[14, 33, 36, 43, 51, 112]
		RCEP	Country	1	[57]
		EU, OEDC	Country	2	[48, 108]
		OEDC, BRICS	Country	1	[12]
		BRICS	Country	2	[78, 114]
		G7	Country	1	[54]
		OPEC	Country	1	[106]
		World (N=124) OEDC and non-OEDC (Afghanistan, Dominican Republic, Lebanon, Senegal, Albania, Ecuador, Liberia, Seychelles, Algeria, Egypt, Arab Rep., Libya, Sierra Leone, Angola, El Salvador, Madagascar, Singapore, Argentina, Equatorial, Guinea, Malawi, Somalia, Australia, Finland, Malaysia, South Africa, Austria, France, Mali, Spain, Bahrain, Gabon, Mauritania, Sri Lanka, Bangladesh, Gambia, Mauritius, Sudan, Belgium, Germany, Mexico, Swaziland, Benin, Ghana, Mongolia, Sweden, Bolivia, Greece, Morocco, Switzerland, Botswana, Guatemala, Mozambique, Syria, Brazil, Guinea, Nepal, Tanzania, Bulgaria, Guinea-	Country	1	[123]

		Bissau, Netherlands, Thailand, Burkina, Faso Haiti, New Zealand, Togo, Burundi, Honduras, Nicaragua, Tunisia, Cambodia, Hong Kong, Niger, Turkey, Cameroon, Hungary, Nigeria, Uganda, Canada, India, Norway, United Arab Emirate, Cape Verde, Indonesia, Oman, United Kingdom, Central African Republic, Iran, Islamic Rep., Pakistan, United States, Chad, Ireland, Panama, Uruguay, Chile, Israel, Paraguay, Venezuela, RB, China, Italy, Peru, Vietnam, Colombia, Jamaica, Philippines, Yemen Rep., Comoros, Japan, Poland, Zambia, Congo Dem. Rep., Jordan, Portugal, Zimbabwe, Costa Rica Kenya, Qatar, Cuba, Korea, Romania, Denmark, Kuwait, Rwanda, Djibouti, Lao, PDR, Saudi Arabia			
		biggest CO2 (Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Korea, Malaysia, Mexico, Poland, South Africa, Thailand, Turkey, UK, USA, Vietnam)	Country	1	[113]
		World (N=139) Albania, Algeria, Antigua & Barbuda, Argentina, Australia, Austria, Bahamas, Bahrain, Barbados, Belgium, Belize, Bermuda, Brazil, Brunei (Darussalam), Bulgaria, Canada, Cayman Islands, Chile, China (Mainland), Colombia, Comoros, Costa Rica, Cote D Ivoire, Cuba, Cyprus, Denmark, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Faeroe Islands, Fiji, Finland, France (Including Monaco), French Polynesia, Gabon, Gambia, Gibraltar, Greece, Greenland, Grenada, Guatemala, Guyana, Hong Kong Special Administrative Region Of China, Hungary, Iceland, India, Indonesia, Iraq, Ireland, Islamic, Republic Of Iran, Israel, Italy (Including San Marino), Japan, Jordan, Kuwait, Lao People S Democratic Republic, Lebanon, Libyan Arab Jamahiriya, Luxembourg, Macau Special Adminstrative Region Of China, Mauritania, Mauritius, Mexico, Mongolia, Morocco, Netherlands, New Caledonia, New Zealand, Norway, Paraguay, Peru, Philippines, Plurina national State Of Bolivia, Poland, Portugal, Qatar, Republic Of Cameroon, Republic Of Korea, Romania, Saint Lucia, Samoa, Sao Tome & Principe, Saudi Arabia, Senegal, Singapore, South Africa, Spain, St. Pierre & Miquelon, St. Vincent & The Grenadines, Suriname, Sweden, Switzerland, Taiwan, Thailand, Tonga, Trinidad And Tobago, Tunisia, Turkey, United Arab Emirates, United Kingdom, United States Of America, Uruguay, Venezuela, United Arab Emirates, United Kingdom, United States Of America, Venezuela" Equatorial Guinea, Malta, Angola, Cape Verde, Democratic People S Republic of Korea, Honduras, Nicaragua, Sri Lanka, Syrian Arab Republic, Benin, Congo, Djibouti, Ghana, Myanmar (Formerly Burma), Nigeria, Papua New Guinea, Solomon Islands, Togo, Afghanistan , Guinea, Guinea Bissau, Haiti, Kenya, Liberia, Madagascar, Mali, Mozambique, Sierra Leone, Central African Republic, Chad, Uganda, Democratic Republic of The Congo (Formerly Zaire) , Jamaica	Country	1	[55]
		World (N=121) Australia, Bahrain, Canada, China, Estonia, Iceland, Kazakhstan, Luxembourg, Malaysia, Russia, Saudi Arabia, South Korea, Trinidad and Tobago, United Arab Emirates, United States, Antigua and Barbuda, Argentina, Austria, Bahamas, Barbados, Belgium, Bulgaria, Chile, Croatia, Cyprus, Denmark, Finland, Germany, Greece, Hungary, Ireland, Israel, Italy, Japan, Laos, Latvia, Lebanon, Lithuania, Maldives, Mauritius, New Zealand, Panama, Seychelles, Singapore, Slovakia, Slovenia, South Africa, Spain, Suriname, Thailand, Turkey, Ukraine, United Kingdom, Vietnam, Angola, Armenia, Bangladesh, Belize, Benin, Bhutan, Brazil, Burkina, Faso, Burundi, Combodia, Cape Verde, Central African Respublic, Chad, Colombia, Costa Rica, Dominican Republic, Ecuador, Ethiopia, Fiji, France, Gambia, Grenada, Guinea, Guinea-Bissau, Guyana, Haiti, India, Indonesia, Jamaica, Kiribati, Liberia, Madagascar, Malawi, Mali, Malta, Mauritania, Mozambique, Myanmar, Nauru, Nepal, Nicaragua, Niger, Nigeria, Pakistan, Papua New Guinea, Peru, Portugal, Rwanda, Saint Vincent and Grenadines, Samoa, Soa Tome and Prince, Senegal, Sierra Leone, South Sudan, Sri Lanka, Sudan, Sweden, Switzerland, Tanzania, Togo, Tonga, Uganda, Uruguay, Vanuatu, Yemen, Zambia	Country	1	[92]
		World (N=130) Afghanistan, Algeria, Angola, Argentina, Australia, Bangladesh, Bolivia, Brazil, Cameroon, Canada, Chile, Colombia, Egypt, Equatorial Guinea, France, Germany, Ghana, Guatemala, India, Indonesia, Israel, Italy, Japan, Jordan, Malaysia, Mali, Mexico, Morocco, Myanmar, Netherlands, Niger, Nigeria, Pakistan, Peru, Philippines, Poland, Qatar, Russian Federation, Singapore, South Africa, Spain, Thailand, Trinidad and Tobago, Turkey, United Arab Emirates, United Kingdom, United States of America, Vietnam, Yemen, Albania, Austria, Bahrain, Belgium, Benin, Botswana, Bulgaria, Burkina Faso, Cambodia, Chad, Congo, Costa Rica, Cote d'Ivoire, Cuba, Denmark, Dominican Republic, Ecuador, El Salvador, Finland, Gabon, Greece, Guinea, Haiti, Honduras, Hungary, Ireland, Kenya, Lao People's Democratic Republic, Lebanon, Liberia, Luxembourg, Madagascar, Malawi, Mauritania, Mauritius, Mongolia, Mozambique, Nepal, New Zealand, Nicaragua, Norway, Panama, Papua New Guinea, Paraguay, Portugal, Romania, Rwanda, Senegal, Sierra Leone, Sri Lanka, Sudan,	Country	1	[88]

		Sweden, Switzerland, Togo, Tunisia, Uganda, Zambia, Zimbabwe, Bhutan, Burundi, Central African Republic, Cyprus, Fiji, Gambia, Guinea-Bissau, Guyana, Jamaica, Lesotho, Uruguay, Bahamas, Barbados, Comoros, Malta , Samoa, Sao Tome and Principe, Timor-Leste, Tonga, Bermuda, Saint Lucia, China, Dominica			
		World (N=129) Albania, Angola, Antigua and Barbuda, Argentina, Australia, Austria, Bahamas, Bahrain, Bangladesh, Barbados, Belgium, Belize, Benin, Bhutan, Bolivia, Botswana, Brazil, Brunei Darussalam, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Canada, Cape Verde, Central African Republic, Chad, Chile, China, Colombia, Comoros, Congo, Costa Rica, Cote d'Ivoire, Cyprus, Denmark, Djibouti, Dominican Republic, DR Congo, Ecuador, Egypt, El Salvador, Equatorial Guinea, Fiji, Finland, France, Gabon, Gambia, Ghana, Greece, Guatemala, Guinea, GuineaBissau, Honduras, Hungary, Iceland, India, Indonesia, Iran, Islamic Republic of, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kenya, Korea, Kuwait, Laos, Lebanon, Liberia, Luxembourg, Madagascar, Malawi, Malaysia, Mali, Malta, Mauritania, Mauritius, Mexico, Mongolia, Morocco, Mozambique, Namibia, Nepal, Netherlands, New Zealand, Niger, Nigeria, Norway, Oman, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Rwanda, Saudi Arabia, Senegal, Sierra Leone, Singapore, South Africa, Spain, Sri Lanka, Sudan, Suriname, Swaziland, Sweden, Switzerland, Syria, Tanzania, Thailand, Togo, Trinidad and Tobago, Tunisia, Turkey, Uganda, United Kingdom, United States, Uruguay, Venezuela, Vietnam, Zambia, and Zimbabwe	Country	1	[52]
		World (N=22) emerging economies	Country	1	[94]
		World (N=92)	Country	1	[46]
		World (N=75) Qatar, Singapore, Turkmenistan, Australia, Canada, China, Estonia, Iran, Kazakhstan, Kuwait, Luxembourg, Oman, Saudi Arabia, South Korea, Trinidad and Tobago, United Arab Emirates, United States, Vietnam, Belgium, Iceland, Japan, Malaysia, Netherlands, Poland, Russian Federation, Turkey, Algeria, Argentina, Austria, Azerbaijan, Bangladesh, Belarus, Brazil, Bulgaria, Chile, Colombia, Croatia, Cyprus, Czech Republic, Denmark, Ecuador, Egypt, Finland, France, Germany, Greece, Hungary, India, Indonesia, Iraq, Ireland, Israel, Italy, Latvia, Lithuania, Mexico, Morocco, New Zealand, Norway, Pakistan, Peru, Philippines, Portugal, Romania, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Thailand, Ukraine, United Kingdom, Uzbekistan, Australia, Canada, China, Estonia, Iran, Kazakhstan, Kuwait, Luxembourg, Oman, Qatar, Saudi Arabia, Singapore, South Korea, Trinidad and Tobago, Turkmenistan, United Arab Emirates, United States, Vietnam, Belgium, Iceland, Japan, Malaysia, Netherlands, Poland, Russian Federation, Turkey, Algeria, Argentina, Austria, Azerbaijan, Bangladesh, Belarus, Brazil, Bulgaria, Chile, Colombia, Croatia, Cyprus, Czech Republic, Denmark, Ecuador, Egypt, Finland, France, Germany, Greece, Hungary, India, Indonesia, Iraq, Ireland, Israel, Italy, Latvia, Lithuania, Mexico, Morocco, New Zealand, Norway, Pakistan, Peru, Philippines, Portugal, Romania, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Thailand, Ukraine, United Kingdom, Uzbekistan	Country	1	[110]
		World (N=89) Canada, Portugal, United States, Australia, Barbados, Belgium, Denmark, Argentina, Austria, Chile, France, Germany, Greece, Israel, Italy, Japan, Netherlands, Spain, Norway, Poland, South Korea, Sweden, Switzerland, United Kingdom, Luxembourg, Panama, Albania, Brazil, China, Colombia, Costa Rica, Cuba, Dominican Republic, Fiji, Guyana, Jordan, Lebanon, Malaysia, Mexico, Paraguay, Peru, Romania, St. Lucia, Thailand, Turkey, Venezuela, Bolivia, Cameroon, Cote d'Ivoire, El Salvador, Ghana, Indonesia, Kenya, Myanmar, Nicaragua, Philippines, Tunisia, Vietnam, Angola, Congo, India, Nigeria, Pakistan, Sri Lanka, Benin, Burkina, Faso, Central African, Republic, Chad, Guinea, Laos, Mali, Mozambique, Nepal, Niger, Syria, Yemen, Afghanistan, Burundi, Congo DR, Gambia, Haiti, Madagascar, Rwanda, Sierra Leone, Somalia, North Korea, Togo, Uganda, Zimbabwe	Country	1	[111]
		World (N=182) Albania, Czech Republic, Japan, Paraguay, United Kingdom, Algeria, Denmark, Jordan, Peru, United States, Angola, Djibouti, Kazakhstan, Philippines, Uruguay, Antigua and Barbuda, Dominica, Kenya, Poland, Venezuela, Argentina, Dominican Republic, Kiribati, Portugal, Vietnam, Armenia, Ecuador, Korea, Rep. Qatar, Yemen, Rep. Australia, Egypt, Arab Rep. Kuwait, Russian Federation, Austria, El Salvador, Kyrgyz Republic, Rwanda, Azerbaijan, Eritrea, Latvia, Saudi, Arabia, Bahrain, Estonia, Lebanon, Senegal, Bangladesh, Ethiopia, Lithuania, Seychelles, Belarus, Fiji, Luxembourg, Sierra, Leone, Belgium, Finland, Macedonia, FYR, Slovak Republic, Belize France, Madagascar, Slovenia, Benin, Gabon, Malawi, South Africa, Bhutan, Gambia, The Malaysia, Spain, Bolivia, Georgia, Maldives, Sri Lanka, Botswana, Germany, Mali, St. Kitts and Nevis, Brazil, Ghana, Malta, St. Lucia, Brunei, Darussalam, Greece, Mauritania, St. Vincent	Country	2	[79, 125]

		and the Grenadines, Bulgaria, Grenada, Mauritius, Sudan, Burkina, Faso, Guatemala, Mexico, Suriname, Burundi, Guinea, Moldova, Swaziland, Cambodia, Guinea-Bissau, Mongolia, Sweden, Cameroon, Guyana, Morocco, Switzerland, Canada, Haiti, Mozambique, Syrian, Arab Republic, Cape Verde, Honduras, Namibia, Tajikistan, Central African Republic, Hong Kong, SAR, China, Nepal, Tanzania, Chile, Hungary, Netherlands, Thailand, China, Iceland, New Zealand, Togo, Colombia, India, Nicaragua, Tonga, Comoros, Indonesia, Niger, Trinidad and Tobago, Congo, Rep. Iran, Islamic Rep. Norway, Tunisia, Costa Rica, Ireland, Oman, Turkey, Cote d'Ivoire, Israel, Pakistan, Uganda, Croatia, Italy, Panama, Ukraine, Cyprus, Jamaica, Papua New Guinea, United Arab Emirates			
		(N=11) South Korea, Indonesia, Mexico, Iran, Philippines, Turkey, Bangladesh, Egypt, Nigeria, Pakistan, Vietnam	Country	1	[119]
		(N=38) Australia, Austria, Belgium, Canada, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, United Kingdom, United States, Brazil, Chile, China, Hungary, India, Indonesia, Mexico, Poland, Russia, South Africa, Republic of Turkey	Country	1	[77]
		(N=35) Australia, Estonia, Latvia, Slovak Republic, Austria, Finland, Lithuania, Slovenia, Belgium, France, Netherlands, Spain, Bulgaria, Germany, New Zealand, Sweden, Canada, Greece, Norway, Switzerland, Croatia, Hungary, Poland, Ukraine, Cyprus, Ireland, Portugal, UK, Czech Republic, Italy, Romania, USA, Denmark, Japan, Russian Federation	Country	1	[34]
		World (N=151)	Country	1	[40]
		OECD-Europe: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom; OECD-North America: Canada, Mexico, United States; OECD-Pacific: Australia, Japan, Korea, New Zealand. Non-OECD Europe countries: Albania, Bulgaria, Cyprus, Gibraltar, Malta, Romania; Former USSR, Former Yugoslavia; Africa: Algeria, Angola, Benin, Cameroon, Congo, Democratic Republic of Congo, Côte d'Ivoire, Egypt, Ethiopia, Gabon, Ghana, Kenya, Libya, Morocco, Mozambique, Nigeria, Senegal, South Africa, Sudan, United Republic of Tanzania, Togo, Tunisia, Zambia, Zimbabwe, Other Africa. Latin America: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, Venezuela, Other Latin America. Middle East: Bahrain, Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen; Asia: Bangladesh, Brunei Darussalam, Chinese Taipei, India, Indonesia, Dem. People's Rep. of Korea, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Vietnam, Other Asia, China: People's Republic of China, Hong Kong	Country	1	[67]
		World (N=7) Argentina, Brazil, Canada, Chile, Colombia, Mexico, the USA	Country	1	[81]
		(EU-27, 13 largest economies) Austria, Germany, the Netherlands, China, Belgium, Greece, Poland, the United States, India, Bulgaria, Hungary, Portugal, Japan, Cyprus, Ireland, Romania, South Korea, Czech Republic, Italy, the Slovak Republic, Australia, Denmark, Latvia, Slovenia, Brazil, Taiwan, Estonia, Lithuania, Spain, Mexico, Turkey, Finland, Luxembourg, Sweden, Indonesia, France, Malta, the United Kingdom, Russia	Industry /Sector	1	[132]
		OEDC	Industry /Sector	1	[24]

Table S4. Independent and dependent variables extracted from the selected sample of studies

No.	Independent variables	Dependent variables	Authors
1.	Environmental impact, Population size, Economic level, Technological level	CO_2	[42]
2.	Urban Innovation Index, Industrial structure upgrading index, Industrial structure rationalization index, Government's Attention to Green Development, GDP per unit population, Road Area Ratio	CO_2/GDP	[32]
3.		CO_2/GDP	[60]
4.	Labor, Pesticides, Fertilizer, Agricultural machinery power, Irrigation indicator, Agricultural plastic film indicator	CO_2	122]
5.	Population, GDP per capita, Secondary industry/tertiated Industry, Energy consumption per unit GDP, Per capita energy Consumption, Built-up area, Forest coverage	CO_2	[103]
6.	GDP per capita, Marketization index MIN, Urbanization rate, Tourism resources endowment, Transportation infrastructure, Energy consumption per GDP, Total investment environmental pollution control	CO_2 efficiency	[121]

7.	CO_2 intensity	Dagun Gini coefficient	[25]
8.	Capital, Labor, Proportion of energy consumption, Indices of capital stock of fixed assets, Number of employees in secondary industry	CO_2	[128]
9.	CO_2, SO_2, NO_X	GDP	[37]
10.	GDP growth, Institutional quality	CO_2	[123]
11.	Highway, Number of employees, Gasoline Consumption, Diesel consumption, Tonnage of operating truck, Passenger seating capacity, Freight turnover, Passenger turnover, Noise dB(A), Direct property loss, CO2 emission	Environmental efficiency	[83]
12.	Level of per capita income, World oil price, Energy use/capita	CO_2 / capita	[105]
13.	Population age, Population migration, Population size	CO_2 / capita	[101]
14.	Real GDP per capita, Real GDP per capita squared, Population density, Trade volume per capita	CO_2 / capita	[34]
15.	Population, Economic growth, Technological progress, Industrial structure, Financial development, Energy price, International trade, Urbanization rate, Fiscal decentralization	CO_2	[91]
16.	Capita/GDP, Types of energy: coal, diesel oil, gasoline, kerosene, fuel oil, raw oil, liquefied petroleum gas (LPG), natural gas, methane, non-fossil primary electricity, nuclear, hydro, solar, wind	Energy transition (low-carbon Energy / total energy consumption)	[76]
17.	Energy use per capita, Real GDP / capita, Openness ratio	CO_2	[117]
18.	GDP, Carbon equivalent emissions, Fossil energy consumption. Energy consumption / unit emission, GDP / unit energy consumption output, Energy Productivity, Capital energy substitution, Labor energy substitution, Energy consumption structure, Effective investment rate of physical capital, Effective investment rate of human capital	CO_2 productivity	[69]
19.	Sulfur oxides (SOX), Nitrogen oxides (NOX), GDP	CO_2 / capita	[26]
20.	Gross capital, Labour force, Renewable energy demand, Government expenditure on the health sector, Broad money rates	GDP / person employed	[41]
21.	Energy equity, Active population, Capital stock, Gross inland energy consumption, Ratio of renewable to total electricity production, Population, Gini coefficient, Importer, Crisis	CO_2	[47]
22.	Recycling in tons, Energy efficiency, GDP, Gross fixed capital formation, Labor force, Population, Capita / income, GDP / population	CO_2 / capita	[104]
23.	Fuel combustion and cement manufacturing	CO_2 / capita	[55]
24.	Economic development, Income per capita, Respiratory DALY per 1000 people, Particle matters < 10 mm (PM10), Particle matters < 2.5 mm (PM2.5), Carbon Monoxide (CO), Non-Methane Volatile Organic Compounds (NMVOC), Sulphur dioxide (SO2), Black Carbon (BC), Nitrogen Oxides (NOx), Organic Carbon (OC), Ammonia (NH3), Temperature variations within a year, BCG vaccination rate, Labour force, Population, Capital stock, Human capital index, Primary energy consumption, Low-carbon energy consumption, Doctors per 1000 people	Relationship (income, health, the environment)	[33]
25.	Population, Capital stock, energy consumption, GDP, CO_2, Market segmentation index, Urbanization, Carbon intensity, Energy structure	Carbon performance (CEP) index	[31]
26.	GDP, Population, Area, Investment to GDP Ratio, Trade openness, Emissions, Legal Origin, Temperature, Energy endowments, Gasoline prices	Log CO_2 / capita	[51]
27.	PM2.5 exposure, GDP per capita, Growth rate of PM2.5 concentrations, Mean summer temperature, Mean winter temperature, Annual precipitation, Mean national elevation, Population density	Growth rate of GDP per capita	[40]
28.	Degree of population urbanization, Industry upgrade, Openness, Marketization affect productivity, Efficiency of green development, Green total factor productivity, Green technical progress change, Green technology efficiency change	Green productivity	[28]
29.	Energy consumption, Water consumption, SO2 emission, CO2, Waste water discharge, GDP	Decoupling performance	[96]
30	Capital, Labor input, Energy input, Financial development level, Government scale, Urbanization rate, Market freedom, Human capital, R&D investment	CO_2/GDP	[61]
31.	Proportion of industrial value added to GDP, Proportion of primary energy consumption to GDP, Logarithm of GDP per capita, Proportion of renewable energy to total energy consumption, Proportion of forest area to land area, Proportion of urban population to total population, Proportion of foreign direct investment to GDP, Logarithm of initial per capita carbon emissions	CO_2 / capita	[92]
32.	GDP, Globalization index	Ecological footprint	[88]
33.	GDP / capita	CO_2 / capita	[87]
34.	Capital, Labor, Electricity, Natural gas, Petroleum inputs	CO_2	[116]
35.	Value of sales / a sector-specific producer price index), CO2 emissions, Capital intensity, Fossil fuel price, Share of firms within each sector	CO_2 performance index	[107]
36.	Energy efficiency, Energy intensity, Returns to scale	GDP	[36]
37.	Energy consumption, Average annual population of each province	Economic growth (GDP per capita)	[39]
38.	Sales manufacturing output value, Manufacturing carbon emissions, Labor, Capital, Energy consumption, Industry scale, Technology intensity, Industry extroversion, Institutional quality	Energy carbon emission efficiency	[72]
39.	Income per capita, Emissions intensity, Summer temperature, Winter temperature, Fossil fuel per capita, Freshwater per capita, Forest per capita, Population density	CO_2 / capita	[52]
40.	GDP, Nuclear energy consumption, Renewable energy consumption, Gross Fixed Capital Formation, Labour, Exports of goods and services	Log GDP	[38]
41.	Carbon dioxide emissions intensity, Energy intensity, Population	Carbonization index	[82]
42.	GDP, FDI, urbanization, Coal consumption	CO_2	[118]
43.	Production- and consumption-based carbon dioxide emission, Fossil fuel combustion, Trade	CO_2 / capita	[108]
44.	R&D capital, R&D persons , Patent applications, Sales revenue of new products	High-Tech industry's innovation efficiency	[27]
45.	Carbon productivity, Effective investment rate, Unit emission energy consumption, Energy productivity	CO_2	[62]
46.	Population, Capital, Energy, GDP, Export	CO_2 / capita	[57]
47.	GDP / Capita, GVCs Participation Index, Energy Consumption,	CO_2	[94]

	Environmental Patents		
48.		CO2 emission intensity	[65]
49.	CO_2 intensity of fuel use, Energy intensity, Fraction of state value added, Income / capita, Population	CO_2 / capita	[124]
50.	Number of employees in the industry, Productivity, Employment structure, Technological innovation, Number of patents, Population size, Urbanization rate, Environmental regulation, GDP per capita	CO_2/GDP	[98]
51.	Income / capita, Population density, Percent coal, Percent nat gas, Percent industrial, Fossil fuel consumption, Electricity trade, Energy intensity	Log CO_2 / capita	[11]
52.	Green space coverage area, Population, Population density, Area of the city district , GDP / capita	Green space coverage ratio	[84]
53.	GDP/capital, Industrial Structure, Investment in fixed assets, Environment regulation, Carbon dioxide, Opening ratio, Ratio of R&D to GDP	Coal consumption /capita	[80]
54.	Contribution of energy, Contribution of industry, Contribution of agriculture, Contribution of waste management	CO_2 / capita	[100]
55.	Total victim effects, Total perpetrator effects, Inter-industry victim effects, Inter-industry perpetrator effects	CO2 emission spillover effects in the digital transformation	[129]
56.	Acreage of crops, Number of various animals, Agricultural GDP, Number of livestock service number, Agricultural employment data, Quantity of energy used in agricultural, Production, Nitrogen fertilizer, phosphate fertilizer, potash fertilizer, compound fertilizer, pesticide, plastic film data	CO_2	[45]
57.		CO_2	[46]
58.	R&D investment, Development level, Institutional quality, Human capital, Environmental regulation, Renewable energy consumption share, Energy intensity, GDP	CO_2	[43]
59.	GDP, Energy consumption, Trade, Oil spot price	CO_2 / capita	[106]
60.	Urbanization rate, Structure of energy consumption, Coal consumption, Population density, Energy intensity	CO_2/GDP	[102]
61.	Energy transition, Brain drain, Trade openness, GDP, Energy efficiency, Urbanization	CO_2 / capita	[110]
62.	CO2 from rural fossil energy consumption, CO2 from rural electricity energy consumption, CO2 from rural heat consumption, various energy consumption: (calorific value, carbon content / calorific value, carbon oxidation rate)	CO2 from direct consumption	[71]
63.	GDP, Renewable energy consumption, Fossil fuel energy consumption	CO_2 / capita	[119]
64.	Economic activity in constant prices	CO_2	[120]
65.		Ecological footprint/capita	[111]
66.	Labor, Energy consumption, Installed capacity, Auxiliary power consumption, Average wage, Standard coal price, Generator cost, Electricity price	CO_2	[35]
67.	Digital economy: Digital foundation, Cable line length, Information transportation, computer services and software practitioners, Number of domain names, Years of schooling per capita, Science and technology expenditure, Mobile phone penetration, Internet penetration, Energy consumption, Courier business revenue, Postal business, Telecom traffic volume, Digital Financial Inclusion Index, Added value of the tertiary industry /GDP, Total FDI/Import and Export Volume, GDP per capita, Carbon environment governance, Urban environment practitioners, Financial environmental protection expenditure/total fiscal expenditure, Green patent applications, Forest cover, GDP, CO2 emissions, Electricity consumption	Carbon environment governance (CEG)	[86]
68.	Industrial structure, Structure of property rights, Foreign direct investment, Energy structure, Energy price, Technique level	CO2, Labor, Capital	[99]
69.	Energy Consumption, Carbon emissions, Energy intensity, Carbon intensity	CO_2/GDP	[63]
70.	Urbanization rate of permanent population, Proportion of employed persons in the secondary industry, Proportion of employed persons in the tertiary industry, Urban population density, The proportion of the secondary industry output value in GDP, The proportion of the tertiary industry output value in GDP, Per capita disposable income of urban residents, Per capita fiscal revenue, Area of per capita urban, Area of per capita built-up, Area of per capita of construction land, Area of per capita urban road, Registration unemployment rate of urban population, Water popularization rate, Gas popularization rate, The number of buses per 10,000 people, Health technicians per 1000 population, Per 1000 people have beds in medical institutions, Public library collections per capita, Per capita expenditure on education, Total retail sales of social consumer goods, Energy consumption per ten thousand yuan GDP, Green coverage rate of built-up zones, Per capita park green area, Harmless treatment rate of domestic waste, Daily treatment capacity of urban sewage, Comparison of urban and rural residents income level (urban/rural), Comparison of urban and rural residents consumption level (urban/rural), Construction industry fxed assets, Number of construction industry employees, Total power of its own construction machinery and equipmen, Energy consumption in construction industry	Coupling Coordination Degree	[22]
71.		CO_2	[12]
72.		CO_2 intensity	[64]
73.	Biocapacity /capita	Ecological footprint / capita	[59]
74.	Agricultural labor, Multiple cropping, Agricultural disaster, Agricultural economy, Industrial structure, Fiscal expenditure	CO_2	[44]
75.	CO_2 from the different fossil fuel energy sources in the world, CO_2 by regional groups and energy sources	CO_2 intensity	[67]
76.	Economic development	Relative electricity consumption/capita	[66]
77.	GDP, Energy consumption, Ratio of sectoral energy consumption to the value added, Decarbonization of sector in region (characterized the energy structure)	CO_2 intensity of region	[68]
78.	CO_2, N_2O, CH_4, GDP	Eco - efficiency	[29]
79.	Built-up land, Carbon cropland, Fishing grounds, Forest products, Grazing land	Ecological footprint / capita	[113]
80.	Energy use and costs, R&D expenditures, Rental price of capital, Wage bills, Number of employees, Wages, emissions, Environmental taxes, Carbon dioxide tax	Energy intensity	[23]

81.	GDP / capita, Urbanization, FDI, Industrialization, Renewable energy consumption, Energy consumption, CO_2, Population	Renewable energy consumption	[78]
82.	Biocapacity	Ecological footprint	[114]
83.		CO_2 / capita	[112]
84.		CO_2 / capita	[54]
85.	Population ratio, Land / capita, GDP / capita, Openness predicted ratio, Bilateral trade, CO_2	CO_2 emissions per capita	[125]
86.	GDP / capita, National expenditure on environmental protection / GDP, Energy import dependency, Nuclear enrichment capacity	Renewable energy	[53]
87.		CO_2 / capita	[49]
88.	Energy use, CO_2, CH_4, CO	CO_2 / capita	[132]
89.	Ratio of energy consumption to GDP, GPP / capita, Share of the secondary sector in GPP, Investment to GPP, Caplaborratio, FDI to GPP, Energy reserves / capita	Energy intensity growth	[75]
90.	GDP / capita, Renewable energy consumption, Industrialisation, Environmental policy stringency index, Index of globalisation	CO_2 / capita	[77]
91.	GDP / capita, Fuel price, Ratio of passenger cars to GDP, Stock of passenger cars, GDP, Ratio of traffic of goods to traffic of passengers, Goods traffic, Passenger traffic	Energy consumption of road transport / capita	[74]
92.	Sectories	Energy intensity	[24]
93.	Household's energy consumption / capita, the national mean	Energy consumption per capita	[73]
94.	Built-up-land footprint, Forest-land footprint, Fishing ground Footprint, Grazing-land footprint, Crop-land footprint.	Ecological footprint	[58]
95.	GDP / capita, Globalization index, Energy consumption	Ecological footprint / capita	[14]
96.	GDP, Industry, R&D, Fuel imports, Fuel exports, Diesel, Gasoline, Urban, Electricity, CDD	Non-renewable energy consumption / GDP	[79]
97.	GDP per capita, Population density, Trade openness, Political regime index, Share of nuclear energy in energy production, Share of fossil fuels in energy production, Fossil rents as share of GDP	Average growth rate of CO_2 / capita	[48]
98.	NOX, CO_2, SO_2, GDP	Decoupling index	[95]
99.	GDP growth rate, Percentage of tertiary production, Average profit of industrial enterprises, GDP created per unit of energy consumption, Natural population growth rate, Number of doctors / 10,000, Public finance spending as a percentage of GDP, Average salary of employees on the job, Registered urban unemployment rate, Industrial wastewater discharge intensity / GDP, Industrial soot emission intensity / GDP, SO2 emission intensity / GDP, Green coverage rate of municipal district, Harmless disposal rate of household garbage, Internet users / 100, Computer services and software employees, Total telecom business / capita, Postal services / capita, Mobile phone users / 100 people, Digital financial inclusion index	Coupling Coordination Degree	[50]
100.	Industrial wastewater discharge, Industrial dioxide emissions, Industrial smoke and dust emissions, Annual average concentration of PM2.5, Total CO2 emissions, CO2 emission intensity, Total factor productivity, Labor productivity, Capital output ratio, Per capita fiscal expenditure on, science and technology, Patent authorizations per 10,000 people, Ratio of tertiary to secondary industry value added, Fiscal revenues to fiscal expenditure ratio, Ratio of deposit and loan balances of financial institutions to GDP, Ratio of total exports and imports to GDP, Registered urban unemployment rate, Per capita fiscal expenditure on education, Number of medical beds per 1000 people, Total number of public library books per capita, Ratio of disposable income per capita for urban and rural residents, Consumption of electricity per unit of GDP, Grain production per capita	Coupling Coordination Degree	[90]
101.	Total employment, Urban b uilt-up area, Total investment in urban fixed assets, The added value of the secondary and tertiary, R&D internal expenditure/GDP, R&D employees/total employees, Patent applications per 10,000 people, Patents granted per 10,000 people, Rural–urban disposable income ratio, The value added of secondary and tertiary industries/GDP, The value added of tertiary industry/value added of secondary industry, Regional GDP per capita/national GDP per capita, Industrial wastewater discharge per unit of GDP, Industrial waste gas discharge per unit of GDP, Domestic sewage treatment rate, Comprehensive utilization rate of industrial solid waste , Total imports and exports of goods/GDP, Actual utilized foreign capital in that year/GDP, Number of foreign-invested enterprises, Number of college students per 10,000 people, Education expenditure/general public budget expenditure, Number of beds in hospitals and health centers per 100 people, Urban social insurance participation rate industries, The average wage of urban workers, total carbon sink of the urban green space, Carbon emissions of urban construction land, Industrial pollution emissions	Coupling Coordination Degree	[85]
102.	Economic Growth (GDP per capita), Income Inequality (Gini Index), Trade Openness (Exports + Imports as % of GDP), Innovation (Number of Patents), Renewable Energy (% of Total Energy Consumption)	Energy Consumption, CO_2, Ecological Footprint, Energy Intensity, Load Capacity Factor	[81]
103.	Economic share, i.e. share of output, The consumption of energy k in industry j, The total energy consumption in the industry j, The value added of industry j, The sum of the value added of each industry, The energy consumption structure effect in industry j, Energy intensity effect of industry, The industrial structure effect of industry j	Energy Intensity	[93]
104.	Urbanization Level, Aging Rural Labor Force, Farmers' Education Level, Agricultural Science & Technology Innovation, Regional Industrial Structure, Agricultural Disaster Rate	Agricultural Carbon Efficiency (ACE)	[30]
105.	Economic Growth (GDP per capita), Percentage of urban population, Share of tertiary industry in GDP., Population Density	Carbon Sink Potential (CSP)	[130]

106.	Share of raw coal production, Share of crude oil production, Share of natural gas production, Hydroelectricity generation, Share of crude oil consumption , Share of raw coal consumption, Share of natural gas consumption, Percentage of investment in industrial treatment of waste gases, Forest cover, Carbon emissions intensity per unit of GDP, Carbon dioxide emissions per capita, Number of Green Low Carbon, Patent Applications, () Surface water, Groundwater, Industrial water, Water for agriculture, Water for domestic use, Investment in industrial treatment of wastewater , Water intensity per unit of GDP, Water resources per capita, Water Resources Patent Applications	Water System ratio, Low carbon economy system ratio	[89]
107.	Environmental Regulation Intensity, Gross Domestic Product, Energy Consumption Structure, Technology Development Level, Industrial Structure, Foreign Direct Investment	Total Factor Carbon Emission Performance Index (NMTCPI)	[131]
108.	Energy digitalization, Energy Technology Innovation, Energy Structure Optimization, Energy Utilization Efficiency, Market Development, Digital Infrastructure	Carbon Productivity (CP)	[97]
109.	Sectories	CO_2 / capita	[56]

Table S5. PRISMA checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	Title
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	Abstract
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Introduction
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Introduction
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Methods, Section 2; Table 2
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Methods, Section 2
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Methods, Table 1
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Methods, Section 2; Figure 1
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	Data were extracted manually using a structured data-extraction framework developed a priori from the review questions. One reviewer performed the extraction, while the second reviewer validated the extraction categories and resolved uncertainties through discussion. No automation tools were used.
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Methods, Table 3; Results Sections 3.1–4.3
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	Methods, Table 3; Results Sections 3.1–4.3
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Not undertaken; see Methods, Section 2 for justification.
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	N/A
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	Methods, Table 3

Section and Topic	Item #	Checklist item	Location where item is reported
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	No statistical transformations or imputations were undertaken. Data were extracted and coded as reported in the original studies and grouped into predefined analytical categories for descriptive, clustering, network, and content analyses.
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Methods, Section 2; Figures 2–8; Appendix
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	Methods, Section 2; Table 3
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	N/A
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	N/A
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	Not assessed / N/A
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	Not assessed / N/A
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Methods, Section 2; Figure 1
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Table 2; Figure 1 (reasons reported, excluded studies not individually cited)
Study characteristics	17	Cite each included study and present its characteristics.	Table S2, Table S3, Table S4, Figure S1-S2.
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Not undertaken; see Methods, Section 2 for justification.
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	N/A – no effect-estimate synthesis was conducted.
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	Results Sections 3–4 (study characteristics summarised); no formal risk-of-bias assessment was undertaken, as explained in Methods, Section 2.
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	N/A
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	N/A

Section and Topic	Item #	Checklist item	Location where item is reported
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	N/A
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	Not undertaken; see Methods, Section 2 for justification.
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	Not undertaken; see Methods, Section 2 for justification.
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Conclusion; Discussion/interpretation sections
	23b	Discuss any limitations of the evidence included in the review.	Section 4.3; Conclusion
	23c	Discuss any limitations of the review processes used.	Section 4.3; Conclusion
	23d	Discuss implications of the results for practice, policy, and future research.	Section 4; Conclusion
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	This review was registered retrospectively in the Open Science Framework 2026-03-09 10.17605/OSF.IO/NJUV5
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	No review protocol was prepared
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	Not applicable, as no review protocol was prepared
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	This research received no external funding.
Competing interests	26	Declare any competing interests of review authors.	Conflicts of Interest
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	The full search strategies are reported in Table 1. Supplementary Materials contain the included-studies characteristics tables and synthesis tables. The extracted dataset and coding framework are available from the corresponding author upon reasonable request.

Page, M.J.; McKenzie, J.E.; Bossuyt, P.M.; Boutron, I.; Hoffmann, T.C.; Mulrow, C.D.; Shamseer, L.; Tetzlaff, J.M.; Akl, E.A.; Brennan, S.E.; et al. The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews. *BMJ* **2021**, *372*, n71.