

**Table S1** Drought indices in terms of ease of use, number of publications, most used countries and time span

Category	Abb.	Ease of use	Number of publications	Most Cited Countries (Top 3)	Number of countries used	Time Span
Meteorological	AAI	1	7	Netherlands; India; Korea	4	2009:2018
Meteorological	deciles	1	69	Australia; Greece; USA	17	1992:2021
Meteorological	KBDI	1	86	USA; Australia; Italy	20	1988:2021
Meteorological	PNPI	1	22	India; USA; Serbia	9	2009:2021
Meteorological	SPI	1	2483	USA; China; Spain	85	1998:2021
Meteorological	WASP	1	48	USA; Japan; Australia	17	1977:2021
Meteorological	AI	2	241	China; Iran; Germany	43	1965:2021
Meteorological	CZI	2	34	Iran; USA; Turkey	10	2001:2021
Meteorological	CMI	2	40	Spain; Canada; USA	12	1976:2021
Meteorological	DAI	2	44	USA; China; Norway	15	1979:2021
Meteorological	DRI	2	260	Greece; Spain; Iran	32	1999:2021
Meteorological	EDI	2	100	Iran; Korea; Australia	19	1999:2021
Meteorological	HTC	2	21	Germany; Australia; South Africa	9	1982:2021
Meteorological	NDI	2	11	USA; Mexico; Malaysia	8	1993:2020
Meteorological	PDSI	2	1245	USA; China; Norway	57	1977:2021
Meteorological	PZI	2	48	USA; Czech Republic; Italy	11	1986:2021
Meteorological	RAI	2	314	Japan; USA; Brazil	39	1981:2021
Meteorological	sc-PDSI	2	120	Spain; USA; China	24	2004:2021
Meteorological	SAI	2	29	Spain; China; Bahrain	13	1986:2021
Meteorological	SPEI	2	1207	Spain; China; USA	68	2010:2021
Meteorological	ARID	3	11	USA; Brazil	2	2012:2020
Meteorological	CSDI	3	9	USA; Iran; India	3	1984:2017
Soil Moisture	SMA	2	140	USA; Switzerland; United Kingdom	28	1991:2021

Soil Moisture	ETDI	3	18	USA; Netherlands; China	7	2005:2021
Soil Moisture	SMDI	3	18	USA; Netherlands; China	8	2005:2021
Soil Moisture	SWS	3	680	USA; China; Spain	62	1963:2021
Hydrological	PHDI	2	43	USA; Greece; Spain	10	1989:2020
Hydrological	SRSI	2	4	China	1	2015:2015
Hydrological	SSFI	2	89	China; Spain; Iran	20	2007:2021
Hydrological	SWI	2	57	India; China; USA	17	2004:2021
Hydrological	SDI	2	185	Greece; China; Spain	39	1990:2021
Hydrological	SWSI	2	21	USA; Australia; Iran	7	1982:2020
Hydrological	ADI	3	25	USA; China; Australia	9	1996:2021
Hydrological	SMRI	3	2	South Africa	1	2014:2017
Remote sensing	EVI	1	293	USA; China; Brazil	36	2004:2021
Remote sensing	ESI	1	96	USA; China; Korea	26	2002:2021
Remote sensing	NDVI	1	2023	USA; China; Spain	76	1986:2021
Remote sensing	TCI	1	171	USA; China; India	30	1995:2021
Remote sensing	VCI	1	283	USA; India; China	39	1990:2021
Remote sensing	VegDRI	1	16	USA; China; Korea	3	2008:2021
Remote sensing	VHI	1	152	USA; China; India	29	2001:2021
Remote sensing	WRSI	1	19	USA; South Africa; Brazil	5	2002:2020
Remote sensing	NDWI	1	181	USA; China; United Kingdom	34	2004:2021
Remote sensing	LSWI	1	24	USA; India; Japan	6	2009:2021
Remote sensing	SAVI	3	63	USA; China; Japan	18	1994:2021
Composite or modelled	CDI	1	40	China; Korea; India	18	2005:2021
Composite or modelled	GIDMaPS	1	2	USA	2	2014:2019
Composite or modelled	GLDAS	1	109	USA; China; Germany	21	2008:2021

Composite or modelled	MSDI	1	39	USA; China; Australia	10	2013:2021
Composite or modelled	USDM	1	49	USA; Korea; China	5	2010:2021

Abb. is abbreviation

**Table S2** Themes and keywords in thematic map

<b>Cluster Representation</b>	<b>Theme</b>	<b>Keywords in Clusters</b>
Drought prediction	Motor Theme	Drought prediction, standardized precipitation index, drought indices, copula, hydrological drought
Drought risk	Basic Theme	Drought risk, risk assessment, vulnerability, agricultural drought, drought index
Remote sensing	Emerging Theme	Remote sensing, GIS, MODIS, Bangladesh, monitoring
Drought	Basic Theme	Drought, climate change, risk, precipitation, soil moisture, adaptation, agriculture, ENSO
Risk management	Motor Theme	Risk management, droughts, climate variability, drought, management, drought risk, management, uncertainty
Cloud computing	Niche Theme	Cloud computing, fog computing
Markov chain	Niche Theme	Markov chain
SPI	Basic Theme	SPI, drought forecasting, forecasting, machine learning
Prediction	Emerging Theme	SPEI, artificial neural network Prediction, modelling, hydrology, land surface model, classification
Drought stress	Niche Theme	Drought stress, drought tolerance, risk analysis, water deficit, wheat