Ranking of Comprehensive Data Impact Score (*CDIS*) of the Datasets Published in GCdataPR (2018–2022)

The Geographical Society of China

Since the release of Ranking of comprehensive data impact score of the scientific datasets in 2018 by the Geographical Society of China, the evaluation of scientific data's contribution to scientific and technological development and social sustainable development has attracted more and more attention. In 2023, based on the concept of "Comprehensive Data Impact Score—CDIS" and "Calculation Method of CDIS" (Liu Chuang, 2023), the CDIS of each dataset published during 2018–2022 in the *Digital Journal of Global change Data Repository*, which was co-sponsored by the Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, and the Geographical Society of China, was calculated and statistically analyzed. During 2018–2022, a total of 795 datasets were published, including 440 scientific research datasets, 330 Global Change Data Encyclopedia, and 25 video data. The dataset included in the calculation of CDIS and ranking is 440 scientific datasets among them. The evaluation factors include (1) contributions to the accumulation of global and national data resources; (2) contribution to data sharing and service platform construction; (3) the degree of influence in the fields of scientific discovery and new dataset development; (4) the degree of impact on public welfare undertakings (including education, science popularization, disaster relief, decision-making consultation, etc.); (5) the impact on industrial development (including industrial application, brand enhancement, economic benefits, etc.), which was impacted in 5 major areas and 19 factors. The information of the above factors is open and available as the evaluation basis.

In 440 scientific datasets, the highest CDIS is 26.47, and the lowest one is 8.00. 4 sections were divided based on 5%, 15%, 30%, and 50% of the total dataset, in which there are 22 dataset (CDIS: 26.47−15.67) in Q1 section (5%); 66 dataset (CDIS: 15.53−12.14) in Q2 section (15%); 132 dataset (CDIS: 12.14−9.43) in Q3 section (30%); 220 dataset (CDIS: 9.43−8.00) in Q4 section (50%). The ranking and zoning results of the top 88 CDIS (Q1 and Q2 sections) are published and listed in Table 1. The ranking list of CDIS of all the datasets is published and retrieved in the Global change Scientific Research Data Publishing & Repositroy.

Table 1 Ranking of the Comprehensive Data Impact Score (*CDIS*) of the scientific datasets of the top 20% (2018−2022)

Section	No.	DOI	Dataset full name	CDIS	First author
Q1	1	10.3974/geodb.20 21.02.01.V1	Global 10-day Surface Soil Moisture Dataset (RSSSM, 2003−2018)	26.47	CHEN Yongzhe
Q1	2	10.3974/geodb.20 21.06.01.V1	Panshi Rice Lanjia Village Case Dataset on Permanent Basic Farmland Protection and Sustainable Development	18.51	FU Jingying
Q1	3	10.3974/geodb.20 21.07.10.V1	Boundary Data of the Tibetan Plateau (2021 Version)	18.16	ZHANG Yili
Q1	4	10.3974/geodb.20 20.05.07.V1	Dataset of NDVI Change Trends and Impact Factors in Inner Mongolia (2000−2015)	18.16	CHEN Kuan
Q1	5	10.3974/geodb.20 21.04.07.V1	Coastline Types and Their Spatiotemporal Variations in Guangdong, Hong Kong and Macao Bay Area (1979−2020)	18.16	SU Qianxin
Q1	6	10.3974/geodb.20 20.01.04.V1	Irrigation Water Requirement for Cotton and Winter Wheat in Five Central Asian Countries under RCP2.6 and RCP4.5 Scenarios (2020−2100)	17.22	TIAN Jing
Q1	7	10.3974/geodb.20 20.02.16.V1	Training Samples Dataset of Building Identification in Urban Village	17.13	LIU Yufei
Q1	8	10.3974/geodb.20 20.05.17.V1	Dataset of Land Use and Its Ecological Value Assessment in Liuhe District of Nanjing City (2009, 2019)	17.13	WANG Bo
Q1	9	10.3974/geodb.20 18.03.15.V1	LAI Validation Dataset Based on 28 Ground Stations in Asia and North American (1-km Grid, 2001−2011)	16.70	LI Jing
Q1	10	10.3974/geodb.20 20.03.26.V1	Organic Compounds Dataset Detected by High Resolution Mass Spectrometer in Ambient Aerosols from the Coastal Atmosphere of Zhejiang，China	16.68	YU Huan
Q1	11	10.3974/geodb.20 19.06.04.V1	Spring Phenological Grid Dataset of Typical Woody Plants in Warm Temperate Zone of China	16.48	DAI Junhu
Q1	12	10.3974/geodb.20 19.05.17.V1	1 km Grid Precipitation Dataset in the Three-River Headwaters Region (2009−2013)	16.27	JIANG Yuhao
Q1	13	10.3974/geodb.20 20.03.10.V1	1-km NPP Product in National Barrier Zone of China (2000−2015)	16.26	WANG Xiaofeng
Q1	14	10.3974/geodb.20 20.04.08.V1	High-resolution Image based Landslides Dataset in Loess Plateau	16.26	HU Sheng
Q1	15	10.3974/geodb.20 21.03.01.V1	Leaf Area Index Daily Dataset from Observation Nodes in Yucheng of Shandong Province, China (2020)	16.14	LI Ruoxi
Q1	16	10.3974/geodb.20 21.05.09.V1	Yanchi Tan Sheep Huamachi Town Arid Grassland Case Dataset on Ecosystem Protection and Sustainable Development	16.14	ZHANG Mingxia
Q1	17	10.3974/geodb.20 21.05.10.V1	Baoshan Coffee Xinzhai Village Dry-Hot Valley Case Dataset on Ecosystem Protection and Sustainable Development	16.14	DUAN Ruting
Q1	18	10.3974/geodb.20 21.06.06.V1	Fengxian Burdock (Arctium lappa) Ancient Yellow River Flooding Area Case Dataset on Habitat Protection and Sustainable	16.14	YAO Fengteng
Q1	19	10.3974/geodb.20 21.12.43.V1	Congjiang Litchi Jiangpu Street Subtropical Low Hills Case Dataset on Ecosystem Protection and Sustainable Development	16.14	WANG Jinnian
Q1	20	10.3974/geodb.20 21.12.44.V1	Wheat-Maize Double Cropping Field in Yellow River Irrigation Fangsi Town Case Dataset on Environment Protection and Sustainable Development	15.53	WANG Zhenbo
Q1	21	10.3974/geodb.20 21.12.46.V1	The Panshi Large Corylus Futai Low Mountain and Hills Case Dataset of Ecosystem Protection and Sustainable Development	15.14	Dai Junhu
Q1	22	10.3974/geodb.20 21.04.06.V1	Time Series Dataset of Wuhan East Lake Changes (1990−2020)	15.14	LIU Xiaoqiong
Q2	23	10.3974/geodb.20 20.02.17.V1	Dataset of Soil Erosion and Factors in the Three Gorges Reservoir around Area (1982−2015)	15.14	XIAO Yang
Q2	24	10.3974/geodb.20 21.01.06.V1	Grid Dataset of High Temperature Days and Types in China (1983−2017)	15.14	JIA Zikang
Q2	25	10.3974/geodb.20 21.01.10.V1	Extreme Precipitation Dataset on Tibetan Plateau (1961−2017)	15.14	MA Weidong
Q2	26	10.3974/geodb.20 21.02.06.V1	Extreme Precipitation Dataset of Weihe River Basin (1961−2016)	15.14	ZHOU Qi
Q2	27	10.3974/geodb.20 21.03.12.V1	1-km/monthly Humidity Dataset in Yellow River Basin Covering Nine Provinces of China (2000−2015)	18.51	CAI Hongyan
Q2	28	10.3974/geodb.20 21.04.04.V1	1-km Raster Dataset of Annual Soil Erosion Modulus in Southwestern Mountainous Region of China (2000−2015)	18.16	WANG Jinying
Q2	29	10.3974/geodb.20 21.05.05.V1	Global Ocean Surface Chlorophyll-a Concentration Fusion 4-km Grid Dataset (1998−2018)	18.16	LI Lianwei

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Section	No.	DOI	Dataset Full Name	CDIS	First Author
Q2	30	10.3974/geodb.2021.06.02.V1	Spatial Distribution Dataset on Ecological Agriculture Patterns of China (2018−2020)	15.14	WANG Shu
Q2	31	10.3974/geodb.2021.07.07.V1	Dataset of Luoyang Inscription during the Period of Republic of China	15.14	LV Jiuqing
Q2	32	10.3974/geodb.2021.02.17.V1	Dataset of Housing Rents and their Influencing Factors in the Guangdong-Hong Kong-Macao Greater Bay Area (2019)	15.01	WANG Yang
Q2	33	10.3974/geodb.2021.06.03.V1	Dataset of National and Provincial Levels Development Zones in China (2006−2018)	15.01	NIE Jingxin
Q2	34	10.3974/geodb.2021.06.04.V1	Population Dataset in Regions of Vietnam (2000−2019)	15.01	YIN Xu
Q2	35	10.3974/geodb.2021.07.09.V1	Monthly/8-km Grid Meteorological Dataset at the Middle and Upper Reaches of the Yellow River Basin of China (1980−2015)	15.01	WANG Yaqin
Q2	36	10.3974/geodb.2021.09.05.V1	Dataset of Temporal-Spatial Distribution of Lakes in the Eight Deserts of China (2000−2019)	15.01	FENG Qiyu
Q2	37	10.3974/geodb.2021.09.09.V1	Monitoring Vegetation Dataset from 31 Sample Sites in Qinghai Lake Basin (2018)	15.01	CHEN Zhirong
Q2	38	10.3974/geodb.2021.11.06.V1	1-km Raster Dataset of Annual Soil Erosion Modulus in Loess Plateau (2001−2015)	15.01	GENG Wenguang
Q2	39	10.3974/geodb.2019.04.15.V1	Dataset of China Oversea Port Projects during the Last Forty Years (1979−2019)	14.68	LI Humei
Q2	40	10.3974/geodb.2021.01.17.V1	Dataset of Foliar Element Concentrations of Plants from Natural Forests with Different Substrates in Southern China	14.68	CUI Peixin
Q2	41	10.3974/geodb.2020.01.05.V1	Time Series of Land Surface Phenology Dataset in Central Asia (1982−2015)	14.63	MA Yonggang
Q2	42	10.3974/geodb.2020.02.02.V1	Global Land Slope Frequency Dataset	14.63	TANG Ling
Q2	43	10.3974/geodb.2020.03.18.V1	Water Yield Product 1-km Grid Yearly Dataset in National Barrier Zone of China	14.63	YIN Lichang
Q2	44	10.3974/geodb.2020.04.02.V1	*In Situ* Dataset of Land Cover Types in Fujian Province (2019)	14.63	CHEN Yaoliang
Q2	45	10.3974/geodb.2020.04.09.V1	Annual Iceberg Calving Dataset of the Antarctic Ice Shelves (2005−2019)	14.63	QI Mengzhen
Q2	46	10.3974/geodb.2020.04.10.V1	Dataset of Spatial Expansion of Hengyang (2001−2017)	14.63	HU Zui
Q2	47	10.3974/geodb.2020.04.11.V1	Speech at the Opening Ceremony of the World's First Museum on Long-Term Meteorological Station for More Than 100 Years in Yingkou	14.63	ZHANG Wenjian
Q2	48	10.3974/geodb.2020.04.13.V1	Monthly Iceberg Calving Dataset of the Antarctic Ice Shelves (2010−2019)	14.63	QI Mengzhen
Q2	49	10.3974/geodb.2020.04.17.V1	Monthly Drought Index (1951−2016) and 8-day Frequency Soil Moisture (2007−2016) Dataset in Southwest China	14.63	HU Guangcheng
Q2	50	10.3974/geodb.2020.05.06.V1	Pan-Antarctic Emperor Penguin Colony Dataset (2000, 2014, 2018)	14.63	ZHANG Miao
Q2	51	10.3974/geodb.2020.05.16.V1	Land Use/Cover Dataset of Changwu, Shaanxi, China (1990−2015)	14.63	CHEN Pengfei
Q2	52	10.3974/geodb.2020.03.22.V1	The Spatial Distribution Dataset of 2666 Chinese Traditional Villages	14.53	YU Liang
Q2	53	10.3974/geodb.2019.01.19.V1	The Spatial Distribution Dataset of 1598 More Chinese Traditional Villages	14.28	YU Liang
Q2	54	10.3974/geodb.2019.03.05.V1	Dataset of *in Situ* SPAD Readings, in Vitro Chlorophyll Concentration Measuring, and Their Relationship: Moso Bamboo (Phyllostachys edulis) in Zhejiang, China	14.28	WANG Zhengxing
Q2	55	10.3974/geodb.2019.03.10.V1	Land Use and the Spatial Distances Dataset of Panyu District, Guangzhou City of China (1999, 2008)	14.28	ZHANG Yihan
Q2	56	10.3974/geodb.2019.04.01.V1	Dataset of Fruit Types and Seed Dispersal Modes of Plants in Five Communities in Shilin Geopark, Yunnan, China	14.28	YU Xiaoya1
Q2	57	10.3974/geodb.2019.04.02.V1	Dataset of Cultural Diversity Index in Southwest China (1990, 2000, 2010)	14.28	SHEN Yuan
Q2	58	10.3974/geodb.2019.04.08.V1	Land Use Classification Dataset Covering XiAn's Suburban Area (2015)	14.28	HUANG Xiaojun
Q2	59	10.3974/geodb.2019.04.16.V1	Bayberry Tree Recognition Dataset Based on the Aerial Photos and Deep Learning Model	14.28	WANG Dongliang

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Sec- tion	No.	DOI	Dataset Full Name	CDIS	First author
Q2	60	10.3974/geodb.20 19.04.17.V1	Dataset of Urban Housing Price in Yangtze River Delta Region (2008–2018)	14.28	MA Yuzhu
Q2	61	10.3974/geodb.20 19.05.03.V1	*In Situ* Soil Moisture Dataset in the Zhonggou River Basin of Loess Plateau (2018)	14.28	DI li
Q2	62	10.3974/geodb.20 19.05.14.V1	Monthly and Yearly VIIRS/DNB Nighttime Light Data Based on Cubic Hermite Model in Beijing-Tianjin-Hebei Region	14.28	CHEN Mulin
Q2	63	10.3974/geodb.20 19.05.15.V1	Potentialities Dataset of Carbon Emission Reduction based on per Capita and Efficiency in Provincial Level of China	14.28	ZHOU Di
Q2	64	10.3974/geodb.20 19.05.18.V1	0.25° Grid Precipitation Dataset covering Midwestern China (2010)	14.28	JIANG Yuhao
Q2	65	10.3974/geodb.20 19.06.06.V1	Autumn Phenological Grid Dataset of Typical Woody Plants in Warm Temperate Zone of China	14.28	ZHU Mengyao
Q2	66	10.3974/geodb.20 20.03.06.V1	Wenchuan Earthquake Aftershocks Classification Dataset	14.25	ZHAO Ming
Q2	67	10.3974/geodb.20 19.05.01.V1	Time Series of Monthly Global Marine NPP Dataset Based on MODIS and SABPM Model (Since 2003)	13.85	TAO Zui
Q2	68	10.3974/geodb.20 19.05.11.V1	Dataset of OLR Abnormal Signals in Nepal (2009–2018)	13.85	LIN Ling
Q2	69	10.3974/geodb.20 19.05.19.V1	Elements and Magnetic Susceptibility Dataset from the Lake Yamzhog Yumco Core in Southern Tibetan Plateau over the Past 2000 Years	13.85	GUO Chao
Q2	70	10.3974/geodb.20 19.06.12.V1	School Districts Dataset of Middle and Primary Public School in Nanjing Urban Area (2008, 2018)	13.85	CHEN Yanru
Q2	71	10.3974/geodb.20 21.01.03.V1	Leaf Anatomical Structure and Geographic Environment Data of Caryopteris Mongholica from 7 Provenances	13.69	JI Ruoxuan
Q2	72	10.3974/geodb.20 21.05.03.V1	Time Series of Soil Erosion Dataset in Water Erosion Area of China in Five-year Increments (2000−2015)	13.66	LI Jialei
Q2	73	10.3974/geodb.20 21.04.09.V1	Coastline Types and Their Spatiotemporal Variations in San Francisco Bay (1980−2020)	12.80	SU Qianxin
Q2	74	10.3974/geodb.20 22.05.05.V1	Panshi Qiantang (Thousands Reservoirs) Rice Case Dataset on Permanent Farmland of Ecosystem Protection and Sustainable	12.42	SONG Xianfang
Q2	75	10.3974/geodb.20 22.05.09.V1	Suining Sweet Potato Subtropical Hills in Qingfeng Village Case Dataset on Ecosystem Protection and Sustainable Development	12.42	TAN Wenfang
Q2	76	10.3974/geodb.20 22.05.10.V1	Korla Fragrant Pear Kongque River Oasis Case Dataset on Ecosystem Protection and Sustainable Development	12.42	GUI Dongwei
Q2	77	10.3974/geodb.20 20.07.07.V1	Dataset of Ice Core Deposition to Stratospheric Loading Conversion Factor and the Tropical Volcanic Forcing of the Past 1500 Years (2.0)	12.30	GAO Chaochao
Q2	78	10.3974/geodb.20 21.08.06.V1	Dataset of GI Environment Protection and Sustainable Development of Black Rice and Crested Ibis (Nipponia nippon) Habitat in Caoba Village, Yang County, Shaanxi Province of China	12.25	WANG Yongsheng
Q2	79	10.3974/geodb.20 21.01.01.V1	Questionnaire Statistics Dataset from Guangdong-Taiwan Agricultural Cooperative Experimental Area in Shaoguan of China	12.14	LI Hangfei
Q2	80	10.3974/geodb.20 21.01.09.V1	Taro Co Changes Dataset (1975−2020)	12.14	ZENG Lin
Q2	81	10.3974/geodb.20 21.03.02.V1	Geo-economic Relation Dataset between US and Northeast Asia Nations (2000−2016)	12.14	MA Teng
Q2	82	10.3974/geodb.20 21.03.07.V1	Dataset of Reference Crop Evapotranspiration in Guanzhong Area of China (2010−2019)	12.14	WANG Shuanding
Q2	83	10.3974/geodb.20 21.03.11.V1	High Risk Analysis Dataset on Elderly Patients with Hypertension in Xiji, Ningxia of China (2015−2016)	12.14	ZHANG Mingxin
Q2	84	10.3974/geodb.20 21.04.08.V1	Coastline Types and Their Spatiotemporal Variations in Tokyo Bay (1980−2020)	12.14	SU Qianxin
Q2	85	10.3974/geodb.20 21.06.07.V1	Heluo Musical Relics Dataset (Xia Dynasty 2070 BC−Qing Dynasty 1912)	12.14	ZHAO Jun
Q2	86	10.3974/geodb.20 21.07.02.V1	Collection of Wei Chun and Wei Tingzhang's Imperial Examination Papers Archived by Luoyang Indenture Documents Museum	12.14	XU Nenhong
Q2	87	10.3974/geodb.20 21.07.03.V1	Dataset of Embroidery Cultural Relics in Luoyang Folk Museum	12.14	GE Shan
Q2	88	10.3974/geodb.20 21.07.04.V1	Wood Carving Figures Dataset of Immortals and Gods Archived in Luoyang Folk Museum	12.14	HE Tingting