



Ministry of Jal Shakti

जल शक्ति मंत्रालय

Department of Water Resources,
River Development and Ganga Rejuvenation

National Water information Centre

DATA CATALOGUE

Partner Datasets

Abstract

This Data catalogue encompasses a comprehensive collection of water and allied Data resources.

Curated by-NWIC

Partner Dataset

S. No	Data Producer	Data Group	Dataset Code	Dataset Name	Description	Dataset Frequency	Portal Links
1.	IMD	Climate	WCL00054	Rainfall	The dataset provides the status of rainfall in the country at various administrative, hydrological and meteorological setups. It contains the parameters such as daily rainfall status, and the rainfall deviation on the scale of Week, month and quarter from normal rainfall.	Daily	https://mausam.imd.gov.in/responsive/rainfallinformation.php
2.	IMD	Climate	WCL00055	Weather Forecast	The Dataset provides the 5 days weather forecast for Rainfall, Temperature, Humidity, Wind Speed, Wind Direction and Cloud Cover.	Daily	https://mausam.imd.gov.in/responsive/agromet_adv_ser_state_current.php

S. No	Data Producer	Data Group	Dataset Code	Dataset Name	Description	Dataset Frequency	Portal Links
3	IMD	Climate	WCL00056	Monsoon	The dataset provides the information related to Progress and withdrawal of South West Monsoon at National Level	Monsoon Season	https://mausam.imd.gov.in/responsive/monsooninformation.php
4	IMD	Climate	WCL00057	Standard ized Precipitation Index (SPI)	This dataset provides the Pan india Daily Rainfall, temperature along with district level Standardized Precipitation Index (SPI), at monthly scale.	Daily and Monthly	https://mausam.imd.gov.in/responsive/climate_services.php
5	IMD	Climate	WCL00058	Urban Meteorological Data	This dataset provides the weather related 7 days forecasted data for individual cities/town such as Rainfall, Minimum and Maximum Temperature, Relative Humidity etc.	7 Days Forecast	https://internal.imd.gov.in/pages/city_weather_main_mausam.php
6	JJM	Infrastructure	WIN00002	Water Supply - JJM	The dataset provides realtime status of water supply to the house hold, Water Quality in terms of chlorination, pH, Niterate, Pressure and TDS.	Daily	https://ejalshakti.gov.in/jjmreport/lot/loTMonitoring.aspx

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7	IMD	Natural Hazard s	WNH00003	Cyclone Monitoring	Dataset provides the realtime time information on Interactive track on cyclone (Observed and forecasted track and Wind Speed), Warnings (storm surge and wind)	Daily	https://mausam.imd.gov.in/responsive/cycloneinformation.php
8	MoA&FW	Water Plannin g	WPL00030	Crop Producti on	This dataset provides Crop-wise estimated area and Yield	Variable	https://upag.gov.in/.
9	CPCB	Water quality	WQL00008	Real Time Water Quality - Ganga	The dataset provides the realtime monitoring of Physical, Chemical and Biological Parameters of Ganga River.	Daily	https://rtwqmsdb1.cpcb.gov.in/#/
10	CPCB	Water Quality	WQL00009	Suitabilit y of River Ganga Water	The dataset provides the water quality parameters DO, BOD, Coliform and pH wrt Drinking and Bathing purposes	Fortnight	http://ewqdes.cpcb.gov.in/wqi/
11	CPCB	Water Quality	WQL00010	Water Quality Monitori ng of Drains	This dataset provides the discharge, BOD Load data of trapped and untrapped drains in to Ganga River	Annual	https://cpb.nic.in/water-quality-monitoring-of-drain/

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12	JJM	Water Quality	WQL00011	Water Quality (JJM)	This dataset provides the Status of testing of drinking water samples and laboratory information	Daily	https://ejalshakti.gov.in/WQMIS/
13	SAC	Climate	WCL00059	Crop Sown Area	Dataset provides the information related to the Crop sown area	Quarterly	https://vedas.sac.gov.in/krishi/dashboard/index.html
14	SAC	Ecosystem & Wildlife	WEW00021	Potential Evapotranspiration (PET)	Dataset provides the potential evapotranspiration values with respect to time for pan India	10 Daily	https://vedas.sac.gov.in/vegetation-monitoring/index.html
15	SAC	Ecosystem & Wildlife	WEW00022	Wetlands Extent	Dataset contains the Geospatial layers of wetlands at different scale such as Wetland polygon 2006-07, 2017-18 at 1:50k; Wetlands points and Polygon 2019 at 1:10k.	Annual	https://vedas.sac.gov.in/wetlands/index.html
16	SAC	Ecosystem & Wildlife	WEW00023	Wetlands Water Quality	This dataset provides the physical water quality parameters monitoring of wetlands in the country such as; 1. Apparent water color,	5 days	https://vedas.sac.gov.in/vapps/wetlandinfo/index.html

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					aquatic Vegetation, Dominant Hue, Turbidity, Chlorophyll, suspended sediments etc.		
17	SAC	Energy	WEN0002	Energy Map of India	The Dataset provides the location of all type of power plants including hydro-electric power plants at India Level using GIS web Services	Static Data	https://vedas.sac.gov.in/energymap/view/powergis.jsp#
18	IMD	Natural Hazards	WNH00004	Extreme Events	Climate Hazards and Vulnerability Atlas of India for the thirteen most hazardous meteorological events, viz. Cold wave, Heat Wave, Flood, Lightning, Snowfall, Dust Storm, HailStorm, Thunderstorm, Fog, Strong winds, Extreme rainfall, Drought and Cyclone that cause loss of life and economic. The web Atlas is depicted using Geographic Information System (GIS) tools. The Atlas provides districts maps on Hazard events and vulnerability for all the calendar	Static Data	https://imdpune.gov.in/hazardatlas/atlas_summary.html

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					months and at annual scale. The Hazard maps are prepared based on the climatological data, census data on population and housing density and using different statistical and mathematical methods. Climate vulnerability maps are prepared based on the disaster data from the annual publication of India Meteorological Department "Annual Disastrous Weather Reports" for the climate hazardous events		
19	GSI	Natural Hazards	WNH00005	National Landslide Susceptibility Map (NLSM) and Landslide Inventory	NLSM are specialized map that identifies areas prone to landslides across a nation. It provides an assessment of the likelihood of landslide occurrences based on various factors such as terrain, geology, soil type, climate, land use, and historical landslide activity. The Historical landslide sites	Static Data	https://bhukosh.gsi.gov.in/Bhukosh/MapViewer.aspx

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					are marked with their details for the users.		
20	GSI	Natural Hazard s	WNH00006	Earthquake	An earthquake is the sudden release of energy within the Earth's crust that creates seismic waves. This release of energy typically occurs due to the movement of tectonic plates, resulting in a rupture along a fault line, although earthquakes can also be triggered by volcanic activity, human activities (such as mining or dam construction), or other causes. This layer gives the epicenter and magnitude of the Earthquakes.	One time	https://bhukosh.gsi.gov.in/Bhukosh/?MapQuickLink=Seismotectonic
21	World Resource Institute (WRI)	Natural Hazard s	WNH00007	Riverine Flood Risk	Riverine flood risk measures the percentage of population expected to be affected by Riverine flooding in an average year, accounting for existing flood-protection standards. Flood risk is assessed using hazard	Annual	https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=bws_cat&lat=22.167057857886153&lng=-278.74511718750006&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baselin

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					(inundation caused by river overflow), exposure (population in flood zone), and vulnerability.¹⁶ The existing level of flood protection is also incorporated into the risk calculation. It is important to note that this indicator represents flood risk not in terms of maximum possible impact but rather as average annual impact. The impacts from infrequent, extreme flood years are averaged with more common, less newsworthy flood years to produce the “expected annual affected population.” Higher values indicate that a greater proportion of the population is expected to be impacted by Riverine floods on average.		e&timeScale=annual&year=baseline&zoom=5

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22	World Resource Institute (WRI)	Natural Hazards	WNIH0008	Coastal Flood Risk	Coastal flood risk measures the percentage of the population expected to be affected by coastal flooding in an average year, accounting for existing flood protection standards. Flood risk is assessed using hazard (inundation caused by storm surge), exposure (population in flood zone), and vulnerability. ¹⁷ The existing level of flood protection is also incorporated into the risk calculation. It is important to note that this indicator represents flood risk not in terms of maximum possible impact but rather as average annual impact. The impacts from infrequent, extreme flood years are averaged with more common, less newsworthy flood years to produce the “expected annual affected population.”	Annual	https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=bws_cat&lat=22.167057857886153&lng=-278.74511718750006&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baseline&timeScale=annual&year=baseline&zom=5

S. No	Data Producer	Data Group	Dataset Code	Dataset Name	Description	Dataset Frequency	Portal Links
					Higher values indicate that a greater proportion of the population is expected to be impacted by coastal floods on average.		
23	World Resource Institute (WRI)	Natural Hazards	WNH00009	Drought Risk	Drought risk measures where droughts are likely to occur, the population and assets exposed, and the vulnerability of the population and assets to adverse effects. Higher values indicate higher risk of drought.	Annual	https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=bws_cat&lat=22.167057857886153&lng=-278.74511718750006&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baseline&timeScale=annual&year=baseline&zom=5
24	NRSC/GSI	Water Planning	WPL00031	Geomorphology	Geomorphology map is an important geoscientific data for applied geological investigations such as geo-hazard studies, geo-technical applications etc. Geomorphological mapping was taken up in association with Geological Survey of India under the NNRMS standing committee on	Static Data	https://bhuvan-app1.nrsc.gov.in/thematic/thematic/index.php

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					geology activities. The geomorphology map was prepared using satellite data and other collateral data sources with limited field work.		
25	NRSC	Water Plannin g	WPL000 32	Lineame nt	Lineament map is an important geoscientific data for applied geological investigations such as geo-hazard studies, geo-technical applications etc. Lineament mapping was taken up in association with Geological Survey of India under the NNRMS standing committee on geology activities. The lineament maps were prepared using satellite data and other collateral data sources with limited field work.	Static Data	https://bhuvan-app1.nrsc.gov.in/thematic/thematic/index.php
26	NRSC	Water Plannin g	WPL000 33	Snow Cover Fraction	Snow cover is dynamic in nature and melts based on local temperature variations in different time periods. Satellite sensors can provide	Fortnight	https://bhuvan-app3.nrsc.gov.in/data/download/index.php?c=p&s=NICES&g=CS&p=scf

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					synoptic coverage at frequent intervals which facilitates mapping, monitoring of dynamics of snow cover. Automated Snow Cover Extraction (ASCE) Algorithm developed is used for quick processing of satellite data and extraction of Snow Cover Area (SCA). Further Snow Cover Fraction (SCF) as fraction of snow cover area over 3'x3' grid area was estimated.		
27	NRSC	Water Plannin g	WPL000 34	Cartosat DEM	Rectified Cartosat DEM is a digital elevation model (DEM) that has been corrected for height accuracy and seams. It's derived from stereo data collected by the Cartosat-1 satellite, which was launched by the Indian Space Research Organization (ISRO) in 2005	Static Data	https://bhuvan-app3.nrsc.gov.in/data/download/index.php?c=p&s=NICES&p=ffc&g=TS

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28	GSI	Water Plannin g	WPL000 35	Glacial Retreat	Name of the Glacier and their retreat in meter during the period measured in years. (Images of the glaciers is also available.)	Static Data	https://bhukosh.gsi.gov.in/Bhukosh/MapViewer.aspx
29	GSI	Water Plannin g	WPL000 36	Paleo Channel	A paleo channel refers to the remnant of an ancient river or stream channel that has been buried or is no longer active.	Static Data	https://bhukosh.gsi.gov.in/Bhukosh/MapViewer.aspx
30	GSI	Water Plannin g	WPL000 37	Geologic al Maps	GIS layer containing spatial and attribute information about geological features, such as rock types, faults, mineral deposits, or structural formations etc.	Static Data	https://bhukosh.gsi.gov.in/Bhukosh/MapViewer.aspx
31	GSI	Water Plannin g	WPL000 38	Geother mal/ Hotsprin g	This dataset contains the Location, mass flow, geochemistry of those springs which are heated by geothermal energy from within the Earth	Static Data	https://bhukosh.gsi.gov.in/Bhukosh/?MapQuickLink=Seismotectonic

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32	GSI	Water Plannin g	WPL000 39	Basemen t Depth	Basement depth refers to the depth at which the crystalline basement rocks (igneous and metamorphic rocks) are located beneath the Earth's surface. These basement rocks are typically older and form the foundational layer of the Earth's crust, lying beneath younger sedimentary layers.	One time	https://bhukosh.gsi.gov.in/Bhukosh/?MapQuickLink=Seismotectonic
33	GSI	Water Plannin g	WPL000 40	Structura l Discontin uity	Structural discontinuity refers to a break, gap, or interruption in the continuity of a geological structure, and significantly influence the behavior of groundwater movement.	One time	https://bhukosh.gsi.gov.in/Bhukosh/?MapQuickLink=Seismotectonic
34	GSI	Water Plannin g	WPL000 41	Sea Bathyme try	This dataset provides the measurement of the depth and topography of underwater terrain	One time	https://bhukosh.gsi.gov.in/Bhukosh/?MapQuickLink=Seismotectonic
35	JJM	Water Plannin g	WPL000 42	Tap Water	GIS enabled dashboard providing the village	Daily	https://ejalshakti.gov.in/jjmreport/JJMIndia.aspx

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				Supply Network	level tap connection status		
36	SAC	Water Plannin g	WPL000 43	Glacier Inventory	Glacier Inventory parameters include geographic location, morphology, Lakes, snout, outline and subbasins	Static Data	https://vedas.sac.gov.in/snow-cover/index.html
37	SAC	Water Plannin g	WPL000 44	Snow Cover	This dataset contains the snow cover area for the Himalayan region using sentinel data and Model output	Daily	https://vedas.sac.gov.in/snow-cover/index.html
38	World Resource Institute (WRI)	Water Plannin g	WPL000 45	Water Stress Map	This dataset provides Baseline water stress measures the ratio of total water demand to available renewable surface and groundwater supplies. Water demand includes domestic, industrial, irrigation, and livestock uses. Available renewable water supplies include the impact of upstream consumptive water users and large dams on downstream water	One time	https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=bws_cat&lat=22.167057857886153&lng=-278.74511718750006&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baseline&timeScale=annual&year=baseline&zom=5

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					availability. Higher values indicate more competition among users.		
39	World Resource Institute (WRI)	Water Plannin g	WPL000 46	Water Depletio n	This dataset provides baseline water depletion measures the ratio of total water consumption to available renewable water supplies. Total water consumption includes domestic, industrial, irrigation, and livestock consumptive uses. Available renewable water supplies include the impact of upstream consumptive water users and large dams on downstream water availability. Higher values indicate larger impact on the local water supply and decreased water availability for downstream users. Baseline water depletion is similar to baseline water stress; however, instead of looking at total water demand	One time	https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=bws_cat&lat=22.167057857886153&lng=-278.74511718750006&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baseline&timeScale=annual&year=baseline&zom=5

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					(consumptive plus nonconsumptive), baseline water depletion is calculated using consumptive withdrawal only		
40	World Resource Institute (WRI)	Water Plannin g	WPL000 47	Water Supply Variabilit y map	This dataset measures the average between year variability of available water supply, including both renewable surface and groundwater supplies. Higher values indicate wider variations in available supply from year to year.	One time	https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=bws_cat&lat=22.167057857886153&lng=-278.74511718750006&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baseline&timeScale=annual&year=baseline&zom=5
41	World Resource Institute (WRI)	Water Plannin g	WPL000 48	Water Supply - Seasonal Variabilit y	Seasonal variability measures the average within-year variability of available water supply, including both renewable surface and groundwater supplies. Higher values indicate wider variations of available supply within a year.	One Time	https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=bws_cat&lat=22.167057857886153&lng=-278.74511718750006&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baseline&timeScale=annual&year=baseline&zom=5

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42	World Resource Institute (WRI)	Water Plannin g	WPL000 49	Groundw ater Table Depletio n	Groundwater table decline measures the average decline of the groundwater table as the average change for the period of study (1990–2014). The result is expressed in centimeters per year (cm/yr). Higher values indicate higher levels of unsustainable groundwater withdrawals.	One Time	https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=bws_cat&lat=22.167057857886153&lng=-278.74511718750006&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baseline&timeScale=annual&year=baseline&zoom=5
43	IWMI	Water Plannin g	WPL000 50	Irrigated Single Crop	This dataset contains area extent having one cultivated crop in a year on a piece of land using artificial irrigation systems (e.g., canals, sprinklers, or drip systems) to supplement water requirements.	One time	http://waterdata.iwmi.org/applications/irri_area/
44	IWMI	Water Plannin g	WPL000 51	Irrigated Double Crop	This dataset contains area extent having two cultivated crops sequentially on the same land within a year artificial irrigation	One time	http://waterdata.iwmi.org/applications/irri_area/

S. No	Data Producer	Data Group	Dataset Code	Dataset Name	Description	Dataset Frequency	Portal Links
					systems (e.g., canals, sprinklers, or drip systems) to supplement water requirements. for both crops.		
45	IWMI	Water Plannin g	WPL000 52	Irrigated Triple/Co ntinuous Crop	This dataset contains area extent having three or more cultivated crops sequentially on the same land within a year artificial irrigation systems (e.g., canals, sprinklers, or drip systems) to supplement water requirements. for both crops.	One time	http://waterdata.iwmi.org/applications/irri_area/
46	IWMI	Water Plannin g	WPL000 53	Rainfed Single Crop	This dataset contains area extent having one cultivated crop in a year relying solely on natural rainfall for water, without artificial irrigation.	One time	http://waterdata.iwmi.org/applications/irri_area/
47	IWMI	Water Plannin g	WPL000 54	Rainfed Double Crop	This dataset contains area extent having two cultivated crop sequentially in a year relying only on rainfall for water.	One time	http://waterdata.iwmi.org/applications/irri_area/

S. No	Data Producer	Data Group	Dataset Code	Dataset Name	Description	Dataset Frequency	Portal Links
48	IWMI	Water Plannin g	WPL000 55	Water Managed Non- Irrigated Single Crop	This dataset contains area extent having one cultivated crop in a year using water management strategies to conserve and optimize natural water resources like water harvesting, mulching, or moisture conservation, without direct irrigation.	One time	http://waterdata.iwmi.org/applications/irri_area/
49	IWMI	Water Plannin g	WPL000 56	Water Managed Non- Irrigated Double Crop	This dataset contains area extent having two cultivated in a year using water management strategies to conserve and optimize natural water resources like water harvesting, mulching, or moisture conservation, without direct irrigation.	One time	http://waterdata.iwmi.org/applications/irri_area/
50	GSI	Water Quality	WQL000 012	Quarry Sites	A site where extraction of materials such as stone, gravel, sand, or slate are extracted, from the earth is done.	Static Data	https://bhukosh.gsi.gov.in/Bhukosh/MapViewer.aspx

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51	NMCG and ISRO	Water quality	WQL000 013	Ganga Water Quality (Bhuvan)	The dataset provides various physical layers of Ganga basin, Water Quality Monitoring, Water Treatment Plants information etc.	Monthly	https://bhuvan-app1.nrsc.gov.in/mowr_ganga/
52	NRSC	Water Quantity	WQT000 36	Snow Melt	This dataset provides the quantity of snow melt generated and freeze	2 Days	https://bhuvan-app3.nrsc.gov.in/data/download/index.php?c=p&s=NICES&g=CS&p=scf
53	SAC	Water Quantity	WQT000 37	Satellite Derived Hydrological Data	These datasets provide satellite derived hydrological information (using certain algorithms) such as : 1. Water Level 2. Flood Forecast 3. Water Spread 4. Flood Index	Daily	https://vedas.sac.gov.in/hydro/index.html
54	SAC	Water Quantity	WQT000 38	Hydro - Model Forecast	This dataset contains Hydro model forecast for Surface runoff depth, River Discharge, Soil Moisture content, Daily Precipitation, Actual Evapotranspiration	Daily	https://vedas.sac.gov.in/hydro/index.html

S. No	Data Producer	Data Group	Dataset Code	Dataset Name	Description	Dataset Frequency	Portal Links
55	IWMI	Water Quantity	WQT00039	Environmental Flow (Percentage)	This dataset contains the percentage of natural flow required to maintain the Environmental Flow	One Time	https://eflows.iwmi.org/
56	IWMI	Water Quantity	WQT00040	Total Environmental Flow (Million Cubic Meter)	This dataset contains the Flow (in mcm) required to maintain the Environmental Flow in rivers	One Time	https://eflows.iwmi.org/
57	IWMI	Water Quantity	WQT00041	Sustainable Groundwater Abstraction	This dataset contains the quantity of groundwater (in mcm) that can be abstracted without impacting the Environmental Flow	One Time	https://eflows.iwmi.org/