The river systems provide irrigation, drinking water, economical transportation, power, as well as grant livelihoods to a large number of population. This straightforwardly demonstrates why all the major cities of India are positioned by the banks of the river.

River basin is considered as the basic hydrological unit for planning and development of water resources. There are 12 major river basins with catchment area of 20000 km2 and above. The total catchment area of these rivers is 25.3 lakh km2 . The major river basin is the Ganga-Brahmaputra-Meghna , which is the largest with catchment area of about 11.0 lakh km2 (more than 43% of the catchment area of all the major rivers in the country). The other major river basins with catchment area more than 1.0 lakh km2 are Indus, Mahanadi, Godavari and Krishna. There are 46 medium river basins with catchment area between 2000 and 20000 km2 . The total catchment area of medium river basins is about 2.5 lakh km2 . All major river basins and many medium river basins are inter-state in nature which cover about 81% of the geographical area of the country.

Classification of Basin

* India WRIS Basin
* CWC Basin
* NCIWRDP Basin
* AISLUS Basin
* CGWB Basin

India WRIS

Using the SRTM DEM data of NASA, having a spatial resolution of 90 meters, the basin ans sub-basin boundaries for the Indian subcontinent have been delineated. As per this information, the country has been divided into 25 Major River Basins and 103 sub-basins.The names of the basins are given in the table:

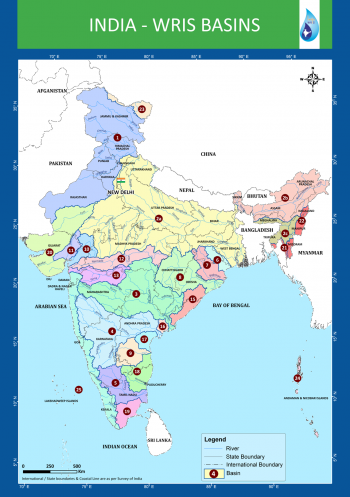
[](https://indiawris.gov.in/wiki/lib/exe/fetch.php?media=iwrisbasins.png)

Table 1: List of Basin Name and Area

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No | Basin Code | Basin Name | Area(sq.km) |
| 1 | 1 | [Indus (Up to border) Basin](https://indiawris.gov.in/wiki/doku.php?id=indus_up_to_border) | 453931.87 |
| 2 | 2a | [Ganga Basin](https://indiawris.gov.in/wiki/doku.php?id=ganga) | 808334.44 |
| 3 | 2b | [Brahmaputra Basin](https://indiawris.gov.in/wiki/doku.php?id=brahmaputra) | 186421.6 |
| 4 | 2c | [Barak and others Basin](https://indiawris.gov.in/wiki/doku.php?id=barak_and_others) | 45622.41 |
| 5 | 3 | [Godavari Basin](https://indiawris.gov.in/wiki/doku.php?id=godavari) | 302063.93 |
| 6 | 4 | [Krishna Basin](https://indiawris.gov.in/wiki/doku.php?id=krishna) | 254743.31 |
| 7 | 5 | [Cauvery Basin](https://indiawris.gov.in/wiki/doku.php?id=cauvery) | 85624.44 |
| 8 | 6 | [Subarnarekha Basin](https://indiawris.gov.in/wiki/doku.php?id=subarnarekha) | 25792.16 |
| 9 | 7 | [Brahmani and Baitarni Basin](https://indiawris.gov.in/wiki/doku.php?id=brahmani_and_baitarni) | 51893.68 |
| 10 | 8 | [Mahanadi Basin](https://indiawris.gov.in/wiki/doku.php?id=mahanadi) | 139659.15 |
| 11 | 9 | [Pennar Basin](https://indiawris.gov.in/wiki/doku.php?id=pennar) | 54243.43 |
| 12 | 10 | [Mahi Basin](https://indiawris.gov.in/wiki/doku.php?id=mahi) | 38336.8 |
| 13 | 11 | [Sabarmati Basin](https://indiawris.gov.in/wiki/doku.php?id=sabarmati) | 30678.59 |
| 14 | 12 | [Narmada Basin](https://indiawris.gov.in/wiki/doku.php?id=narmada) | 92670.51 |
| 15 | 13 | [Tapi Basin](https://indiawris.gov.in/wiki/doku.php?id=tapi) | 63922.91 |
| 16 | 14 | [West flowing rivers South of Tapi Basin](https://indiawris.gov.in/wiki/doku.php?id=west_flowing_rivers_south_of_tapi) | 111643.87 |
| 17 | 15 | [East flowing rivers between Mahanadi and Godavari Basin](https://indiawris.gov.in/wiki/doku.php?id=east_flowing_rivers_between_mahanadi_and_godavari) | 46243.06 |
| 18 | 16 | [East flowing rivers between Godavari and Krishna Basin](https://indiawris.gov.in/wiki/doku.php?id=east_flowing_rivers_between_godavari_and_krishna) | 10345.16 |
| 19 | 17 | [East flowing rivers between Krishna and Pennar Basin](https://indiawris.gov.in/wiki/doku.php?id=east_flowing_rivers_between_krishna_and_pennar) | 23335.82 |
| 20 | 18 | [East flowing rivers between Pennar and Cauvery Basin](https://indiawris.gov.in/wiki/doku.php?id=east_flowing_rivers_between_pennar_and_cauvery) | 63646.21 |
| 21 | 19 | [East flowing rivers South of Cauvery Basin](https://indiawris.gov.in/wiki/doku.php?id=east_flowing_rivers_south_of_cauvery) | 38646.11 |
| 22 | 20 | [West flowing rivers of Kutch and Saurashtra including Luni Basin](https://indiawris.gov.in/wiki/doku.php?id=west_flowing_rivers_of_kutch_and_saurashtra_including_luni) | 184441.06 |
| 23 | 21 | [Minor rivers draining into Bangladesh Basin](https://indiawris.gov.in/wiki/doku.php?id=minor_rivers_draining_into_bangladesh) | 5453.23 |
| 24 | 22 | [Minor rivers draining into Myanmar Basin](https://indiawris.gov.in/wiki/doku.php?id=minor_rivers_draining_into_myanmar_basin) | 24731.08 |
| 25 | 23 | [Area of North Ladakh not draining into Indus Basin](https://indiawris.gov.in/wiki/doku.php?id=area_of_north_ladakh_not_draining_into_indus_basin) | 29238.78 |
| 26 | 24 | [Drainage Area of Andaman and Nicobar Islands Basin](https://indiawris.gov.in/wiki/doku.php?id=drainage_area_of_andaman_and_nicobar_islands) | 6918.2 |
| 27 | 25 | [Drainage Area of Lakshadweep Islands Basin](https://indiawris.gov.in/wiki/doku.php?id=drainage_area_of_lakshadweep_islands_basin) | 462.59 |
| 28 |  | [Island Basin](https://indiawris.gov.in/wiki/doku.php?id=island_basin) | 371.4 |

Table 2: List of Sub Basin Name and Area

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No | Sub-Basin Code | Sub-Basin Name | Area(sq.km) |
| 1 | 1 | Barmer Sub Basin | 21646.88 |
| 2 | 1 | Beas Sub Basin | 19138.22 |
| 3 | 1 | Chautang and others Sub Basin | 27543.74 |
| 4 | 1 | [Chenab Sub Basin](https://indiawris.gov.in/wiki/doku.php?id=chenab) | 29974.29 |
| 5 | 1 | Churu Sub Basin | 66890.7 |
| 6 | 1 | Ghaghar and others Sub Basin | 49984.26 |
| 7 | 1 | Gilgit Sub Basin | 27101.85 |
| 8 | 1 | [Jhelum Sub Basin](https://indiawris.gov.in/wiki/doku.php?id=jhelum) | 29196.01 |
| 9 | 1 | Lower Indus Sub Basin | 23891.72 |
| 10 | 1 | Ravi Sub Basin | 13566.95 |
| 11 | 1 | Shyok Sub Basin | 38724.57 |
| 12 | 1 | Sutlaj Lower Sub Basin | 38578.38 |
| 13 | 1 | Sutlaj Upper Sub Basin | 21425.47 |
| 14 | 1 | Upper Indus Sub Basin | 46268.85 |
| 15 | 2a | Above Ramganga Confluence Sub Basin | 38792.4 |
| 16 | 2a | Banas Sub Basin | 51639.43 |
| 17 | 2a | Bhagirathi and others (Ganga Lower) Sub Basin | 63059.31 |
| 18 | 2a | Chambal Lower Sub Basin | 11067.89 |
| 19 | 2a | Chambal Upper Sub Basin | 25511.32 |
| 20 | 2a | Damodar Sub Basin | 42050.58 |
| 21 | 2a | Gandak and others Sub Basin | 56573.83 |
| 22 | 2a | Ghaghara Confluence to Gomti confluence Sub Basin | 26403.75 |
| 23 | 2a | Ghaghara Sub Basin | 58728.53 |
| 24 | 2a | Gomti Sub Basin | 29618.82 |
| 25 | 2a | Kali Sindh and others up to Confluence with Parbati Sub Basin | 48511.99 |
| 26 | 2a | Ramganga Sub Basin | 30811.48 |
| 27 | 2a | [Sone Sub Basin](https://indiawris.gov.in/wiki/doku.php?id=sone_basin) | 64789.32 |
| 28 | 2a | Tons Sub Basin | 16857.08 |
| 29 | 2a | Upstream of Gomti confluece to Muzaffarnagar Sub Basin | 29381.01 |
| 30 | 2a | Yamuna Lower Sub Basin | 125084.38 |
| 31 | 2a | Yamuna Middle Sub Basin | 34830.46 |
| 32 | 2a | Yamuna Upper Sub Basin | 35584.95 |
| 33 | 2a | [Kosi Sub Basin](https://indiawris.gov.in/wiki/doku.php?id=kosi_basin) | 19037.96 |
| 34 | 2b | Brahmaputra Lower Sub Basin | 87381.27 |
| 35 | 2b | Brahmaputra Upper Sub Basin | 99040.33 |
| 36 | 2c | Barak Sub Basin | 27615.78 |
| 37 | 2c | Kynchiang and other south flowing rivers Sub Basin | 10310.93 |
| 38 | 2c | Naoch chara and others Sub Basin | 7695.69 |
| 39 | 3 | Godavari Lower Sub Basin | 43821.19 |
| 40 | 3 | Godavari Middle Sub Basin | 36289.01 |
| 41 | 3 | Godavari Upper Sub Basin | 21469.99 |
| 42 | 3 | Indravati Sub Basin | 38974.42 |
| 43 | 3 | Manjra Sub Basin | 29485.75 |
| 44 | 3 | Pranhita and others Sub Basin | 36108.58 |
| 45 | 3 | Wardha Sub Basin | 46237.65 |
| 46 | 3 | Weinganga Sub Basin | 49677.35 |
| 47 | 4 | Bhima Lower Sub Basin | 23649.56 |
| 48 | 4 | Bhima Upper Sub Basin | 44807.62 |
| 49 | 4 | Krishna Lower Sub Basin | 39438.74 |
| 50 | 4 | Krishna Middle Sub Basin | 22286.59 |
| 51 | 4 | Krishna Upper Sub Basin | 54498.4 |
| 52 | 4 | Tungabhadra Lower Sub Basin | 41542.29 |
| 53 | 4 | Tungabhadra Upper Sub Basin | 28520.15 |
| 54 | 5 | Cauvery Lower Sub Basin | 17378.51 |
| 55 | 5 | Cauvery Middle Sub Basin | 57284.09 |
| 56 | 5 | Cauvery Upper Sub Basin | 10961.84 |
| 57 | 6 | Subarnarekha Sub Basin | 25792.16 |
| 58 | 7 | Baitarni Sub Basin | 14244.22 |
| 59 | 7 | Brahmani Sub Basin | 37649.47 |
| 60 | 8 | Mahanadi Lower Sub Basin | 57987.1 |
| 61 | 8 | Mahanadi Middle Sub Basin | 51877.65 |
| 62 | 8 | Mahanadi Upper Sub Basin | 29794.4 |
| 63 | 9 | Pennar Lower Sub Basin | 17992.3 |
| 64 | 9 | Pennar Upper Sub Basin | 36251.13 |
| 65 | 10 | Mahi Lower Sub Basin | 13379.26 |
| 66 | 10 | Mahi Upper Sub Basin | 24957.54 |
| 67 | 11 | Sabarmati Lower Sub Basin | 10825.49 |
| 68 | 11 | Sabarmati Upper Sub Basin | 19853.1 |
| 69 | 12 | Narmada Lower Sub Basin | 8897.8 |
| 70 | 12 | Narmada Middle Sub Basin | 40580.48 |
| 71 | 12 | Narmada Upper Sub Basin | 43192.22 |
| 72 | 13 | Tapi Lower Sub Basin | 4110.13 |
| 73 | 13 | Tapi Middle Sub Basin | 31759.69 |
| 74 | 13 | Tapi Upper Sub Basin | 28053.09 |
| 75 | 14 | Vasishti and others Sub Basin | 27477.72 |
| 76 | 14 | Netravati and others Sub Basin | 18759.52 |
| 77 | 14 | Periyar and others Sub Basin | 21893.97 |
| 78 | 14 | Varrar and others Sub Basin | 14163.19 |
| 79 | 14 | Bhatsol and others Sub Basin | 29349.48 |
| 80 | 15 | Nagvati and other Sub Basin | 24375.66 |
| 81 | 15 | Vamsadhara and other Sub Basin | 21867.4 |
| 82 | 16 | East flowing rivers between krishna and Godavari Sub Basin | 10345.11 |
| 83 | 17 | East flowing rivers between krishna and Pennar Sub Basin | 23335.82 |
| 84 | 18 | Palar and other Sub Basin | 35385.35 |
| 85 | 18 | Ponnaiyar and other Sub Basin | 28260.85 |
| 86 | 19 | Pamba and others Sub Basin | 18302.72 |
| 87 | 19 | Vaippar and others Sub Basin | 20343.39 |
| 88 | 20 | Bhadar and other west flowing rivers Sub Basin | 17936.32 |
| 89 | 20 | Drainage of Ran Sub Basin | 21035.42 |
| 90 | 20 | Luni Lower Sub Basin | 19735.35 |
| 91 | 20 | Luni Upper Sub Basin | 79886.74 |
| 92 | 20 | Saraswati Sub Basin | 27674.11 |
| 93 | 20 | Shetranjuli and other east flowing rivers Sub Basin | 18173.13 |
| 94 | 21 | Karnaphuli and Others Sub Basin | 3776.84 |
| 95 | 21 | Muhury and Others Sub Basin | 1676.39 |
| 96 | 22 | Imphal and others Sub Basin | 16754.9 |
| 97 | 22 | Mangpui Lui and others Sub Basin | 7976.18 |
| 98 | 23 | Shaksgam Sub Basin | 6523.5 |
| 99 | 23 | Sulmar Sub Basin | 22715.52 |
| 100 | 24 | Drainage Area of Andaman and Nicobar Islands Sub Basin | 7577.85 |
| 101 | 25 | Drainage Area of Lakshadweep Islands Sub Basin | 669.81 |
| 102 |  | Island Sub Basin | 371.4 |

CWC Basin

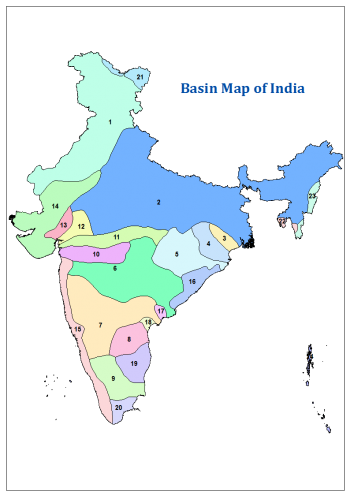
The entire country has been divided into 22 basins as per Central Water Commission. The names of the basins along with their id and area are given in the table.

[](https://indiawris.gov.in/wiki/lib/exe/fetch.php?media=cwcbasinindiasmall.png)

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No | Basin Code | Basin Name | Area (sq.km) |
| 1 | 01 | [Indus (Up to border)](https://indiawris.gov.in/wiki/doku.php?id=indus_up_to_border) | 321289 |
| 2 | 2A | [Ganga](https://indiawris.gov.in/wiki/doku.php?id=ganga) | 861452 |
| 3 | 2B | [Brahmaputra](https://indiawris.gov.in/wiki/doku.php?id=brahmaputra) | 194413 |
| 4 | 2C | [Barak and others](https://indiawris.gov.in/wiki/doku.php?id=barak_and_others) | 41723 |
| 5 | 03 | [Godavari](https://indiawris.gov.in/wiki/doku.php?id=godavari) | 312812 |
| 6 | 04 | [Krishna](https://indiawris.gov.in/wiki/doku.php?id=krishna) | 258948 |
| 7 | 05 | [Cauvery](https://indiawris.gov.in/wiki/doku.php?id=cauvery) | 81155 |
| 8 | 06 | [Subernarekha](https://indiawris.gov.in/wiki/doku.php?id=subernarekha) | 29196 |
| 9 | 07 | [Brahmani and Baitarni](https://indiawris.gov.in/wiki/doku.php?id=brahmani_and_baitarni) | 51822 |
| 10 | 08 | [Mahanadi](https://indiawris.gov.in/wiki/doku.php?id=mahanadi) | 141589 |
| 1 | 09 | [Pennar](https://indiawris.gov.in/wiki/doku.php?id=pennar) | 55213 |
| 12 | 10 | [Mahi](https://indiawris.gov.in/wiki/doku.php?id=mahi) | 34842 |
| 13 | 11 | [Sabarmati](https://indiawris.gov.in/wiki/doku.php?id=sabarmati) | 21674 |
| 14 | 12 | [Narmada](https://indiawris.gov.in/wiki/doku.php?id=narmada) | 98796 |
| 15 | 13 | [Tapi](https://indiawris.gov.in/wiki/doku.php?id=tapi) | 65145 |
| 16 | 14 | [West flowing rivers from Tapi to Tadri](https://indiawris.gov.in/wiki/doku.php?id=west_flowing_rivers_from_tapi_to_tadri) | 55940 |
| 17 | 15 | [West flowing rivers from Tadri to Kanyakumari](https://indiawris.gov.in/wiki/doku.php?id=west_flowing_rivers_from_tadri_to_kanyakumari) | 56177 |
| 18 | 16 | [East flowing rivers between Mahanadi and Pennar](https://indiawris.gov.in/wiki/doku.php?id=east_flowing_rivers_between_mahanadi_and_pennar) | 86643 |
| 19 | 17 | [East flowing rivers between Pennar and Kanyakumari](https://indiawris.gov.in/wiki/doku.php?id=east_flowing_rivers_between_pennar_and_kanyakumari) | 100139 |
| 20 | 18 | [West flowing rivers of Kutch and Saurashtra including Luni](https://indiawris.gov.in/wiki/doku.php?id=west_flowing_rivers_of_kutch_and_saurashtra_including_luni) | 321851 |
| 21 | 19 | [Area of inland drainage in Rajasthan](https://indiawris.gov.in/wiki/doku.php?id=area_of_inland_drainage_in_rajasthan) |  |
| 22 | 20 | Minor rivers draining into Myanmar & Bangladesh | 36202 |

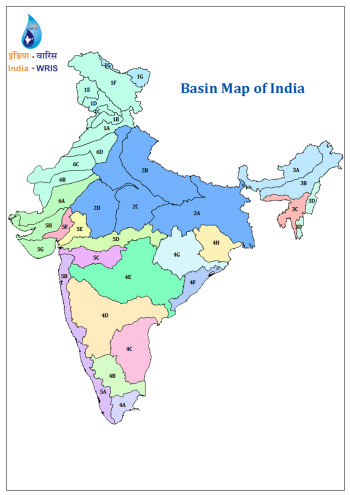
NCIWRDP

The entire country has been divided into 24 basins as per National Commission for Integrated Water Resources Development Plan(India). The names of the basins and area are given in the table.

[](https://indiawris.gov.in/wiki/lib/exe/fetch.php?media=350px-basin_nciwrdp.png)

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No | Basin Code | Basin Name | Area(sq.km) |
| 1 | 1 | Indus | 321289 |
| 2 | 2 | Ganga-Brahmaputra-Meghna | 1101242 |
| 3 | 3 | Subarnarekha | 29196 |
| 4 | 4 | Brahmani-Baitarani | 51822 |
| 5 | 5 | Mahanadi | 141589 |
| 6 | 6 | Godavari | 312812 |
| 7 | 7 | Krishna | 258948 |
| 8 | 8 | Pennar | 55213 |
| 9 | 9 | Cauvery | 87900 |
| 10 | 10 | Tapi | 65145 |
| 11 | 11 | Narmada | 98796 |
| 12 | 12 | Mahi | 34842 |
| 13 | 13 | Sabarmati | 21674 |
| 14 | 14 | West Flowing Rivers of Kutch and Saurashtra Including Luni | 334390 |
| 15 | 15 | West Flowing Rivers South of Tapi | 113057 |
| 16 | 16 | East Flowing Rivers between Mahanadi and Godavari | 49570 |
| 17 | 17 | East Flowing Rivers between Godavari and Krishna | 12289 |
| 18 | 18 | East Flowing Rivers between Krishna and Pennar | 24649 |
| 19 | 19 | East Flowing Rivers between Pennar and Cauvery | 64751 |
| 20 | 20 | East Flowing Rivers South of Cauvery | 35026 |
| 21 | 21 | Area of North Ladakh Not draining into Indus | 28478 |
| 22 | 22 | Rivers draining into Bangladesh | 10031 |
| 23 | 23 | Rivers draining into Myanmar | 26271 |
| 24 | 24 | Drainage Area of Andaman and Nicobar and Lakshadweep | 8280 |

AISLUS

[](https://indiawris.gov.in/wiki/lib/exe/fetch.php?media=aislus.png)

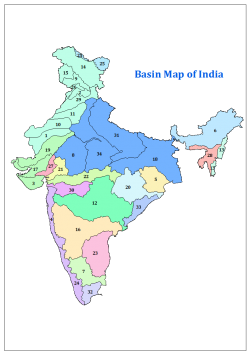
The AISLUS organization of the departments of agriculture and co-operation has been engaged in conducting rapid reconnaissance surveys for prioritization of smaller Hydrologic units within catchment areas of river valley projects and flood prone rivers.it has developed a system for delineating and codifying the catchment areas into smaller Hydrologic units i.e. sub watersheds following the 4 stage delineation. through the methodology developed has been serving the requirement of prioritization , a need for national level framework of watersheds, was always felt by the user agencies. the present bulletin on watershed atlas of india is an endeavor in that direction wherein the entire country has been divided into:

* 6 Major Water Resources Region
* 35 River Basin
* 112 Catchments
* 500 Sub-catchments
* 3237 Watersheds following a 5 stage delineation approach

|  |  |  |  |
| --- | --- | --- | --- |
| Sl.No | Basin Code | Basin Name | Area(sq.km) |
| 1 | 1A | Sutlej | 53108 |
| 2 | 1B | Beas | 20187 |
| 3 | 1C | Ravi | 13626 |
| 4 | 1D | Chenab | 29945 |
| 5 | 1E | Jhelum | 29513 |
| 6 | 1F | Indus | 138613 |
| 7 | 1G | Ephemeral incipient drainge not flowing into Indus | 28676 |
| 8 | 2A | Lower Ganges | 296614 |
| 9 | 2B | Upper Ganges above confluence with Ghaghra | 207557 |
| 10 | 2C | Yamuna | 212829 |
| 11 | 2D | Chambal | 136593 |
| 12 | 3A | Brahmaputra right bank upto Lohit confluence | 105416 |
| 13 | 3B | Left bank ok of Brahmaputra | 107133 |
| 14 | 3C | Brahmaputra tributaries that flow into Bangladesh | 56093 |
| 15 | 3D | Eastern parts Manipur and Mizoram draining into Chidwim(Burma) | 28320 |
| 16 | 4A | Cape Comorin to Cauvery | 37564 |
| 17 | 4B | Cauvery | 84654 |
| 18 | 4C | Between Cauvey and Krishna | 143845 |
| 19 | 4D | Krishna | 271444 |
| 20 | 4E | Godavari | 315076 |
| 21 | 4F | Between Godavari and Mahanadi | 53949 |
| 22 | 4G | Mahanadi | 141875 |
| 23 | 4H | Mahanadi to Ganges water resource region | 84326 |
| 24 | 5A | Cape Comorin to Sheravati | 54771 |
| 25 | 5B | Sharavati to Tapi | 58146 |
| 26 | 5C | Tapi | 66652 |
| 27 | 5D | Narmada | 95879 |
| 28 | 5E | Mahi | 39712 |
| 29 | 5F | Sabarmati | 26967 |
| 30 | 5G | Southern Kathiawar | 39322 |
| 31 | 5H | Draining into gulf of Kutch | 58257 |
| 32 | 6A | Luni and other drainage into Rann of Kutch | 92518 |
| 33 | 6B | From luni to Jaisalmer | 58489 |
| 34 | 6C | Jaisalmer and Bikaner | 69697 |
| 35 | 6D | Rohtali to Ambala on east and Ganganagar in west | 52582 |

**CGWB**

In this Atlas, the entire river system of the country have been divided into 34 basins as per central ground water board.

[](https://indiawris.gov.in/wiki/lib/exe/fetch.php?media=basin_cgwb.png)

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No | Basin Code | Basin Name | Area(sq.km) |
| 1 | 1 | Barmer | 58163 |
| 2 | 2 | Beas | 19562 |
| 3 | 3 | Bhadar | 36502 |
| 4 | 4 | Bhatsol | 54878 |
| 5 | 5 | Brahmani | 79815 |
| 6 | 6 | Brahmputra | 186873 |
| 7 | 7 | Cauvery | 85457 |
| 8 | 8 | Chambal | 130665 |
| 9 | 9 | Chenab | 29937 |
| 10 | 10 | Churu | 66316 |
| 11 | 11 | Ghaghar | 51438 |
| 12 | 12 | Godavari | 301888 |
| 13 | 13 | Imphal | 24476 |
| 14 | 14 | Indus | 137655 |
| 15 | 15 | Jhelum | 29231 |
| 16 | 16 | Krishna | 265505 |
| 17 | 17 | Kutch | 52880 |
| 18 | 18 | Lower Ganga | 249661 |
| 19 | 19 | Luni | 87393 |
| 20 | 20 | Mahanadi | 133665 |
| 21 | 21 | Mahi | 3870 |
| 22 | 22 | Narmada | 93398 |
| 23 | 23 | Pennar | 139463 |
| 24 | 24 | Periyar | 54580 |
| 25 | 25 | Qura-qush | 29683 |
| 26 | 26 | Ravi | 13230 |
| 27 | 27 | Sabarmati | 24995 |
| 28 | 28 | Surma | 50278 |
| 29 | 29 | Sutlej | 54458 |
| 30 | 30 | Tapi | 63347 |
| 31 | 31 | Upper Ganga | 231127 |
| 32 | 32 | Vaippar | 38565 |
| 33 | 33 | Vamsadhara | 50792 |
| 34 | 34 | Yamuna | 203641 |

Background

[Our National Water Policy](https://indiawris.gov.in/wiki/doku.php?id=national_water_policy) recommends that resource planning in the case of water has to be done for a hydrological unit such as a basin or sub-basin. This means that all developmental projects in a basin should be formulated within the framework of an overall plan for a basin/sub-basin. The National Water Policy further lays down that there should be an integrated and multidisciplinary approach to the planning, formulation, clearance and implementation of projects, including catchment and management, environmental and ecological aspects, rehabilitation of affected people and command area development. Such an integrated, multidisciplinary and basin-wise approach to river basin planning and management requires the establishment of an appropriate organization at the river basin level for ensuring optimum, all round and balanced development of the water resources of a river basin. River basin organizations envisaged above said function as a planning, co-ordination and management organization for the basin. It will combine various disciplines related to water resources development, drawing expertise from these disciplines in order to achieve optimal and integrated development of the water resources of the basin. It shall be charged with the authority for storage apportionment, regulation and control at various points in the river basin, publishing statistics or other information relating to various aspects of the regulation and development of the inter-state rivers and undertaking investigations, surveys etc. as found necessary. The Government, as early as 1956, had enacted the River Boards Act, recognizing the necessity of some organization for the control and regulation of interstate river basins. The Act authorizes the Union Government to establish River Boards, on a request received in this behalf from a State Government or otherwise, for advising the Government bodies interested in relation to such matters concerning the regulation or development of an interstate river or river valley or any specified part thereof and for performing such other functions as may be specified in the notification. So far, no effective river basin authority or organization has been established in the country for the integrated and optimum development of the water resources of basins. However, over the years since independence, a number of basin organizations have been created for limited purposes such as speedy implementation of master plans for specific purposes. An overview of the existing organizations is given below:

Existing Organizations

1. [Damodar Valley Corporation](https://indiawris.gov.in/wiki/doku.php?id=basins#damodar_valley_corporation)
   1. [Bhakra-Beas Management Board](https://indiawris.gov.in/wiki/doku.php?id=basins#bhakra-beas_management_board)
   2. [Tungabhadra Board](https://indiawris.gov.in/wiki/doku.php?id=basins#tungabhadra_board)
   3. [Ganga Flood Control Commission](https://indiawris.gov.in/wiki/doku.php?id=basins#ganga_flood_control_commission)
   4. [Betwa River Board](https://indiawris.gov.in/wiki/doku.php?id=basins#betwa_river_board)
   5. [Bansagar Control Board](https://indiawris.gov.in/wiki/doku.php?id=basins#bansagar_control_board)
   6. [Brahmaputra Board](https://indiawris.gov.in/wiki/doku.php?id=basins#brahmaputra_board)
   7. [Narmada Control Authority](https://indiawris.gov.in/wiki/doku.php?id=basins#narmada_control_authority)
   8. [Sardar Sarovar Construction Advisory Committee](https://indiawris.gov.in/wiki/doku.php?id=basins#sardar_sarovar_construction_advisory_committee)
   9. [Upper Yamuna River Board](https://indiawris.gov.in/wiki/doku.php?id=basins#upper_yamuna_river_board)

**Damodar Valley Corporation**

[The establishment of Damodar Valley Corporation (DVC) by an Act of Parliament in 1948](http://indiawris.gov.in/downloads/wiki/Damodar_valley.pdf) marks the beginning of an authority with the responsibilities for designing and administering comprehensive programme of development of river basin. The DVC was modeled on the lines of Tennessee Valley Authority (TVA ) of the United States. The principal objectives of the DVC as laid down in the DVC Act, 1948 are promotion and operation of schemes for irrigation, water supply and drainage, generation, transmission and distribution of electrical energy, flood control and navigation, promotion of afforestation, control of soil erosion, promotion of public health and the agricultural, industrial, economic and general well beings in the valley and its area of operation. The DVC is headed by a Chairman and has two full-time members. The Secretary and the Financial Adviser works directly under the Chairman. The DVC has under its authority four dams namely at Tilaiya, Konar, Maithon and Panchet. Irrigation system from Durgapur barrage is with West Bengal Government since 1964.

**Bhakra-Beas Management Board**

[The Bhakra Control Board and the Bhakra Advisory Board were constituted in 1950 by the Ministry of Works, Mines and Power for ensuring efficient, economical and early execution of the Bhakra-Nangal Project.On Reorganisation of the erstwhile state of Punjab on 1st November, 1966, Bhakra Management Board (BMB) was constituted under section 79 of the Punjab Reorganisation Act, 1966](http://indiawris.gov.in/downloads/wiki/Punjab_reorganization_act.pdf).The administration, maintenance and operation of Bhakra Nangal Project were handed over to Bhakra Management Board w.e.f. 1st October 1967. Similar functions with regard to the Beas Project were also subsequently entrusted to the Bhakra Management Board which was renamed as [Bhakra-Beas Management Board](http://indiawris.gov.in/downloads/wiki/Bhakra_beas.pdf). The Board is entrusted with the task of administration, maintenance and operation of the two reservoirs for irrigation and power generation and regulation of supply of water to the States of Punjab, Haryana and Rajasthan and UT of Chandigarh and Delhi. The Board comprises of a Chairman, with two full time members. In addition, the Joint Secretary (Hydro), Ministry of Power, Govt of India, Commissioner (Indus), MoWR, Govt of India and the Secretaries of irrigation and Power Ministries of Punjab, Haryana,Rajasthan and Himachal Pradesh.

**Tungabhadra Board**

[The Tungabhadra Board](http://indiawris.gov.in/downloads/wiki/Notification-the_Tungabhadra_Board.pdf) was constituted by the President in exercise of the power vested under the Andhra State Act,1953 for completion of the Tungabhadra Project and for its operation and maintenance. The Board is in-charge of the common portions of the Tungabhadra Project which comprises of Tungabhadra Dam and reservoirs, low level canal, high level canal and right bank power houses. The Krishna Water Disputes Tribunal has made specific provisions in the Award for the use of Tungabhadra Waters by the States of Karnataka and Andhra Pradesh. The responsibility for carrying out these specific provisions relating to the use of Tungabhadra waters has been entrusted to the Tungabhadra Board by the Tribunal. At present the Board consists of a Chairman appointed by the Government of India, a Finance Member also from Government of India and Members representing Andhra Pradesh and Karnataka, all working part time on the Tungabhadra Board.

**Ganga Flood Control Commission**

The Ganga Flood Control Commission was constituted in 1972 by the erstwhile Ministry of Irrigation and Power through a Government resolution. The Commission serves as the executive limb and secretariat of the Ganga Flood Control Board, which is a body headed by the Union Minister of Water Resources as Chairman and Chief Ministers or their representatives of the basin-states and Lt. Governor of Delhi or his representative as members. The Commission is responsible for preparing a comprehensive plan of flood control in the Ganga basin and drawing out a phased programme of implementation of works to proper standards besides examinations of various schemes from techno-economic angle, monitoring of important flood management schemes and providing other technical guidance to the basin-states. The GFCCC is headed by a chairman appointed by the Govt. of India who also acts as the Member-Secretary of the Ganga Flood Control Board, and is assisted by two full-time Members. The representatives of the concerned Central Ministries/Departments as well as the Chief Engineers of the basin-states are either part-time members or permanent invitees of the Commission. The Commission’s function is restricted to only flood control projects and has jurisdiction over the Ganga basin.

**Betwa River Board**

[Betwa River Board was constituted by the Union Ministry of Water Resources under the Betwa River Board Act, 1976](http://indiawris.gov.in/downloads/wiki/Betwa_board.pdf). This was in accordance with the provisions of the interstate agreement reached in 1973 between the states of U.P. and M.P. regarding construction of Rajghat dam project and is responsible for the early, efficient and economical execution of the project. The Board is headed by Union Minister of Water Resources as Chairman. The Union Minister of Energy, Chief Ministers and the ministers in charge of Finance, Irrigation and Power of the States of UP and MP are members of the Board. The activities of the Board are managed by an Executive Committee under the chairmanship of the Chairman, Central Water Commission.

**Bansagar Control Board**

[Bansagar Control Board](http://indiawris.gov.in/downloads/wiki/Bansagar_control_board.pdf) was constituted in 1976 in pursuance of an interstate agreement between the states of Mahya Pradesh, Uttar Pradesh and Bihar regarding construction of Bansagar dam on Sone. The Board is in overall charge of the Bansagar dam, and its appurtenant structures and is responsible for the early, efficient and economical execution of the project. The Board is headed by Union Minister of Water Resources as its Chairman. The Union Minister of Energy, Chief Ministers and Ministers in charge of Irrigation and Finance of three states of UP, MP and Bihar and the Minister in charge of Electricity of Madhya Pradesh are its members. The affairs of the Board are managed by an Executive Committee under the Chairmanship of Chairman, Central Water Commission.

**Brahmaputra Board**

[Brahmaputra Board was established by the Govt. of India under the Brahmaputra Board Act, 1980](http://indiawris.gov.in/downloads/wiki/Brahmaputra_Board.pdf). The Board was set up with the objective of carrying out surveys and investigations and preparing a master plan for the control of flood and bank erosion and improvement of drainage of the Brahmaputra Valley. In preparing the master plan, the Board shall have regard for the development and utilization of the water resources for irrigation, hydropower, navigation and other beneficial purposes. The Board is headed by a Chairman, appointed by the Govt. of India and has 20 members of whom 3 are appointed by the Govt. of India and 17 are members representing States of the North-Eastern Region, North-Eastern Council, concerned ministries and other agencies of the Govt. of India. Apart from Brahmaputra Valley, the Board has jurisdiction over the adjacent Barak Valley also. There is provision for the Board to take up construction of multipurpose projects in the approved master plan with the approval of the Central Government.

**Narmada Control Authority**

Narmada Control Authority was set up in 1980 by the Government of India in pursuance of the final orders of the Narmada Water Disputes Tribunal(NWDT ). It is an inter-state high level administrative authority, charged with the responsibility of securing compliance with the implementation of decisions and directions of the NWDT by the four party states of Gujarat, Maharashtra, Madhya Pradesh and Rajasthan. The Authority is headed by the Secretary, Union Ministry of Water Resources as Chairman. It has seven engineering members, three appointed by the Govt. of India, one of whom is the executive member and four appointed by the basin states among the Engineer-in-Chief/ Chief Engineer/Additional Chief Engineer of Irrigation of Power Department of State Electricity Board. In addition, Secretaries of the Union Ministries of Energy, Environment and Forests and Welfare and Chief Secretaries of the basin states are also members of the Authority. The Authority is meat only for the compliance of the Award of the Tribunal.

**Sardar Sarovar Construction Advisory Committee**

Sardar Sarovar Construction Advisory Committee was set up in 1980 by Government of India in pursuance of the final orders of NWDT. The Committee is responsible for the efficient, economical and early execution of the dam and appurtenant works and the power complex of the inter state Sardar Sarovar Project. The Committee scrutinizes the technical features, designs and estimates and also the annual works programme of the project. The Committee is headed by the Secretary, Union Ministry of Water Resources as Chairman and has members representing Government of India, four party states of Gujarat, Maharashtra, Madhya Pradesh and Rajasthan and the Narmada Control Authority.

**Upper Yamuna River Board**

Closed Organizations

1. [Sone River Commission](https://indiawris.gov.in/wiki/doku.php?id=basins#sone_river_commission)
   1. [Gandak Control Board](https://indiawris.gov.in/wiki/doku.php?id=gandak_control_board)
   2. [Chambal Control Board](https://indiawris.gov.in/wiki/doku.php?id=chambal_control_board)
   3. [Indira Gandhi Nahar Board](https://indiawris.gov.in/wiki/doku.php?id=indira_gandhi_nahar_board)
   4. [Beas Control Board](https://indiawris.gov.in/wiki/doku.php?id=beas_control_board)
   5. [Bhakra Control Board](https://indiawris.gov.in/wiki/doku.php?id=bhakra_control_board)
   6. [Mahi Control Board](https://indiawris.gov.in/wiki/doku.php?id=mahi_control_board)

**Sone River Commission**

Sone River Commission was set up by the Government of India in 1989 in pursuance of the agreement of Bansagar Project between the states of Bihar, Madhya Pradesh and Uttar Pradesh. The objective of the Commission was to prepare and present a comprehensive basin plan for optimum use of Sone waters for irrigation and multipurpose uses. The Commission, after submission of its final report, was wound up in August 1988.

Committee

1. [Damodar Valley River Regulation Committee (DVRR)](https://indiawris.gov.in/wiki/doku.php?id=damodar_valley_river_regulation_committee_dvrr)
   1. [Rihand Regulation Committee](https://indiawris.gov.in/wiki/doku.php?id=rihand_regulation_committee)

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1. Water Year Book,2008
2. Central Water Commission,1989.Major River Basins of India-An Overview, Minister of water Resources, Government of India,New Delhi
3. AIS&LUS Watershed Atlas
4. CGWB Report
5. NCIWRDP Report

**List of Major Indian River Systems- Rivers and their Origin**

Most of the rivers discharge their waters into the Bay of Bengal. Some of the rivers flow through the western part of the country and merge into the Arabian Sea. The northern parts of the Aravalli range, some parts of Ladakh, and arid regions of the Thar Desert have inland drainage. All major rivers of India originate from one of the three main watersheds-

* The Himalaya and the Karakoram range
* The Chota Nagpur plateau and Vindhya and Satpura range
* The Western Ghats

Given below are the major river systems in India:

|  |  |  |
| --- | --- | --- |
| **Indian River Systems** | | |
| **River System** | **Total length** | **Length in  India** |
| Indus River System | 3180  km | 1114 km |
| Brahmaputra River System | 2900 km | 916 km |
| Ganga River System | 2510 km | 2510 km |
| Yamuna river System | 1376 km | 1376 km |
| Narmada River System | 1312 km | 1312 km |
| Tapi River System | 724 km | 724 km |
| Godavari River System | 1465 km | 1465 km |
| Krishna River System | 1400 km | 1400 km |
| Cauvery River System | 805 km | 805 km |
| Mahanadi River System | 851 km | 851 km |

**Major River System – The Indus River System**

The Indus arises from the northern slopes of the Kailash range in Tibet near Lake Mansarovar.

* It has a large number of tributaries in both India and Pakistan and has a total length of about 2897 km from the source to the point near Karachi where it falls into the Arabian Sea out of which approx 700km lies in India.
* It enters the Indian Territory in Jammu and Kashmir by forming a picturesque gorge.
* In the Kashmir region, it joins with many tributaries – the Zaskar, the Shyok, the Nubra and the Hunza.
* It flows between the Ladakh Range and the Zaskar Range at Leh.
* It crosses the Himalayas through a 5181 m deep gorge near Attock, which is lying north of Nanga Parbat.

The major tributaries of the Indus River in India are Jhelum, Ravi, Chenab, Beas, and Sutlej.

**Major River System – The Brahmaputra River System**

The Brahmaputra originates from Mansarovar Lake, which is also a source of the Indus and Sutlej.

* It is 3848kms long, a little longer than the Indus River.
* Most of its course lies outside India.
* It flows parallel to the Himalayas in the eastward direction. When it reaches Namcha Barwa, it takes a U-turn around it and enters India in the state of Arunachal Pradesh.
* Here it is known as the **Dihang River**. In India, it flows through the states of Arunachal Pradesh and Assam and is connected by several tributaries.
* The Brahmaputra has a braided channel throughout most of its length in Assam.

The river is known as the **Tsangpo in Tibet**. It receives less volume of water and has less silt in the Tibet region. But in India, the river passes through a region of heavy precipitation, and as such, the river carries large amounts of water during rainfall and a significant amount of silt. It is considered one of the largest rivers in India in terms of volume. It is known for creating calamities in Assam and Bangladesh.

Similar to major river systems in India, you can check more[static GK topics](https://byjus.com/govt-exams/static-gk/) for UPSC exams on the linked page.

**Major River System – Ganga River System**

* The Ganga originates as the Bhagirathi from the Gangotri glacier.
* Before it reaches Devprayag in the Garhwal Division, the Mandakini, Pindar, the Dhauliganga and the Bishenganga rivers merge into the Alaknanda and the Bheling drain into the Bhagirathi.
* The Pindar River rises from East Trishul and Nanda Devi unite with the Alaknanda at Karan Prayag. The Mandakini meets at Rudraprayag.
* The water from both Bhagirathi and the Alaknanda flows in the name of the Ganga at Devprayag.

The concept of Panch Prayag

1. **Vishnuprayag**: where the river Alaknanda meets river Dhauli Ganga
2. **Nandprayag**: where river Alaknanda meets river Nandakini
3. **Karnaprayag**: where river Alaknanda meets river Pinder
4. **Rudraprayag**: where river Alaknanda meets river Mandakini
5. **Devprayag**: where river Alaknanda meets river Bhagirathi -GANGA

The principal tributaries of the Ganga are Yamuna, Damodar, Sapta Kosi, Ram Ganga, Gomati, Ghaghara, and Son. The river after travelling a distance of 2525 km from its source meets the Bay of Bengal.

**Yamuna River System**

* The Yamuna River is the largest tributary of the Ganga River.
* It originates from the **Yamunotri**glacier, at the Bandarpoonch peak in Uttarakhand.
* The main tributaries joining the river include the Sin, Hindon, Betwa Ken, and Chambal.
* The **Tons**is the largest tributary of the Yamuna.
* The catchment of the river extends to the states of Delhi, Himachal Pradesh, Uttar Pradesh, Haryana, Rajasthan, and Madhya Pradesh.

**The Narmada River System**

* The Narmada is a river located in central India.
* It rises to the summit of the Amarkantak Hill in Madhya Pradesh state.
* It outlines the traditional frontier between North India and South India.
* It is one of the major rivers of peninsular India. Only the Narmada, the Tapti, and the Mahi rivers run from east to west.
* The river flows through the states of Madhya Pradesh, Gujarat, and Maharashtra.
* It drains into the Arabian Sea in the Bharuch district of Gujarat.

**The Tapi River System**

* It is a central Indian river. It is one of the most important rivers of peninsular India with the run from east to west.
* It originates in the Eastern Satpura Range of southern Madhya Pradesh state.
* It flows in a westward direction, draining some important historic places like Madhya Pradesh’s Nimar region, East Vidarbha region and Maharashtra’s Khandesh in the northwest corner of the Deccan Plateau and South Gujarat before draining into the Gulf of Cambay of the Arabian Sea.
* The River Basin of Tapi River lies mostly in eastern and northern districts Maharashtra state.
* The river also covers some districts of Madhya Pradesh and Gujarat as well.
* The principal tributaries of Tapi River are Waghur River, Aner River, Girna River, Purna River, Panzara River and Bori River.

**The Godavari River System**

* The Godavari River is the second-longest course in India with brownish water.
* The river is often referred to as the Dakshin (South) Ganga or Vriddh (Old) Ganga.
* It is a seasonal river, dried during the summers, and widens during the monsoons.
* This river originates from **Trimbakeshwar**, near Nasik in Maharashtra.
* It flows southeast across south-central India through the states of Madhya Pradesh, Telangana, Andhra Pradesh, and Orissa, and drains into the Bay of Bengal.
* The river forms a fertile delta at Rajahmundry.
* The banks of this river have many pilgrimage sites, Nasik(MH), Bhadrachalam(TS), and Trimbak. Some of its tributaries include Pranahita (Combination of Penuganga and Warda), Indravati River, Bindusara, Sabari, and Manjira.
* Asia’s largest rail-cum-road bridge which links Kovvur and Rajahmundry is located on the river Godavari.

**The Krishna River System**

* Krishna is one of the longest rivers of India, which originates from Mahabaleshwar in Maharashtra.
* It flows through Sangli and drains the sea in the Bay of Bengal.
* The river flows through the states of Maharashtra, Karnataka, Telangana and Andhra Pradesh.
* **Tungabhadra River** is the main tributary which itself is formed by the Tunga and Bhadra rivers that originate in the Western Ghats.
* Dudhganga Rivers, Koyna, Bhima, Mallaprabha, Dindi, Ghataprabha, Warna, Yerla, and Musi are some of the other tributaries.

**The Cauvery River System**

* It originates from Talakaveri located in the Western Ghats.
* It is a famous pilgrimage and tourist place in the Kodagu district of Karnataka.
* The headwaters of the river are in the Western Ghats range of Karnataka state, and from Karnataka through Tamil Nadu.
* The river drains into the Bay of Bengal. The river supports irrigation for agriculture and is considered as a means of support of the ancient kingdoms and modern cities of South India.
* The river has many tributaries called Arkavathy, Shimsha, Hemavati, Kapila, Shimsha, Honnuhole, Amaravati, Lakshmana Kabini, Lokapavani, Bhavani, Noyyal, and Tirtha.

**The Mahanadi River System**

* The Mahanadi originates from the Satpura Range of central India and it is a river in eastern India.
* It flows east to the Bay of Bengal. The river drains of the state of Maharashtra, Chhattisgarh, Jharkhand, and Orissa.
* The largest dam, the Hirakud Dam is built on the river.