

Recorded Map class 08

1st April, 2024 at 9:00 AM

RIVERS OF INDIA (05:14 PM)

- Two Drainage Systems in India-
- Himalayan Drainage || Peninsular Drainage
- Himalayan Drainage- Indus || Ganga || Brahmaputra
- These are fed by glaciers.
- Peninsular Drainage- East flowing || West flowing
- These are fed by rainfall and thus seasonal in nature.

INDUS RIVER SYSTEM (05:22 PM)

- **Indus-**
- Origin- Near Manasarovar
- It flows through Tibet and enters India near Demchok.
- Indus flows on the outskirts of Leh.
- It flows between Zaskar and Ladakh ranges.
- Indus R. flows between Pangong Tso and Tso Moriri.
- It is antecedent in nature.
- **Right Bank Tributaries-**
- **Shyok-**
- It takes a U-turn and joins Nubra R.
- It originates from the Rimo Glacier.
- Shyok flows between Karakoram and Ladakh.
- It joins Indus inside the POK.
- Hunder Sand Dunes are located in the Shyok Valley, which is formally called Nubra Valley.
- Galwan R. is a tributary of Shyok.
- **Nubra-**
- It originates from the Siachen Glacier and joins Shyok.
- **Gilgit-**
- It joins Indus after Shyok.
- The area of Gilgit- Baltistan is named after the R. Gilgit.
- **Kabul-**
- It joins Indus inside Pakistan.
- **Left Bank Tributaries-**
- **Zaskar-**
- First major left bank tributary of the Indus.
- It originates from the Great Himalayas.
- Hemis National Park is located around the river.

- **Jhelum-**
- It originates from Verinag in Pir Panjal.
- It flows between the Pir Panjal and the Great Himalayas.
- The river meanders in the Kashmir Valley.
- Dal Lake is located on the floodplains of Jhelum.
- **Chenab-**
- It originates from Bara Shigri, which is the actual origin of R. Chandra.
- R. Chandra and Bhaga meet to form Chenab.
- The region of Chandra and Bhaga has the Cold Desert.
- It originates from Himachal, enters J&K, and leaves India from J&K itself.
- While flowing through Jammu Hills, Ban Ganga meets R. Chenab.
- The highest railway bridge in India- Chenab Railway Bridge is being constructed.
- **Ravi- (05:52 PM)**
- It originates from Kullu Hills near Rohtang.
- It forms the border between India and Pakistan in Northern Punjab.
- It merges with Chenab, and so does Jhelum.
- Ujh Multipurpose Project is being constructed on R. Ravi.
- ***[*Run-off the river projects-***
- Dulhasti- Chenab
- Rattle- Chenab (yet to be operational)
- Baglihar- Chenab
- Kishan Ganga- Neelum (Tributary of Jhelum)
- Pakal Dul- Chenab (Under construction.
- **Beas-**
- It originates near the Rohtang Valley.
- The stretch of Beas inside Punjab is a Conservation Reserve as well as a Ramsar Site.
- **Satluj-**
- It originates from Rakas Lak.
- It is an antecedent river.
- It enters India through the Shipki La pass.
- It flows through Himachal.
- As it enters Punjab, Bhakra & Nangal Dams are constructed on the river.
- Govind Sagar Reservoir is made by the Bhakra Dam.
- Nangal- Ramsar Site
- Beas and Satluj meet each other at Harike.
- Harike is a bird sanctuary as well as a Ramsar Site.
- Satluj enters Pakistan.
- Satluj and Chenab merge together, and combined waters join R. Indus.
- The river from here onwards is called Sindh Sagar or Panjnad.

- **Doabs-**
- Beas- Satluj- BIST
- Ravi-Chenab- RACHNA
- Beas-Ravi- BARI
- Chenab-Jhelum- CHAJ
- Chenab-Indus- SINDH SAGAR

GANGA RIVER SYSTEM (06:17 PM)

- Confluence of Bhagirathi and Alaknanda (Devprayag)
- It flows through Uttarakhand, UP, Bihar, Jharkhand, and West Bengal and then enters Bangladesh.
- **Alaknanda-**
- It originates from Satopanth Glacier to the north of Badrinath.
- It further flows through Joshimath and Srinagar.
- Joshimath is located on a massive deposition of a moraine.
- **Bhagirathi-**
- Origin- Gaumukh
- Tehri Dam- Tallest Dam in India.
- **Panch-Prayag-**
- Vishnuprayag- Alaknanda & Dhaul Ganga
- Nandprayag- Alaknanda & Nandakini
- Karnaprayag- Alaknanda & Pindar Ganga
- Rudraprayag- Alaknanda & Mandakini
- Devprayag- Alaknanda & Bhagirathi
- Rishi Ganga is a tributary of Dhaul Ganga.
- Rishi Ganga originates from the Nanda Devi Biosphere Reserve.
- Tapovan Vishnugad Hydropower Project- Dhaul Ganga
- It forms a border between India and Bangladesh.
- Farakka Barrage is located on the R. Ganga.
- Hooghly is a distributary of R. Ganga.

- **Tributaries- (06:38 PM)**
- **Ram Ganga-**
- Origin- Uttrakhand (near Nainital)
- India's first national park- Jim Corbett National Park lies in the river basin of Ram Ganga.
- It joins Ganga near Kannauj.
- **Gomti-**
- It originates in Uttar Pradesh (Pilibhit).
- It flows through Lucknow.
- **Ghagra-**
- It originates from Manasarovar.
- It enters UP and further Bihar where it joins Ganga.
- Kali R./Sarda is a tributary of Ghagra.
- Kali R. originates from Kalapani, Lipulekh.
- Rapti R. is a left bank tributary of Ghagra from Nepal.
- **Gandak-**
- It originates near the border of Nepal and Tibet.
- It is antecedent in nature.
- It is also called Narayani R.
- It flows between Dhaulagiri & Annapurna.
- Gandak joins Ganga in Bihar.
- Between Ghagra and Gandak, the Son River joins Ganga.
- Bhuri Gandak R. comes from Nepal to join Ganga.
- **Kosi-**
- It is also called Saptkosi.
- It is an antecedent river.
- Saptkosi- Sun Kosi || Tamor Kosi || Amar Kosi
- It is often called the Sorrow of Bihar.
- **Mahananda-**
- It comes from the Darjeeling Hills.
- It passes through the Siliguri corridor.
- It joins Ganga in Bangladesh.
- Between Teesta and Mahananda- Mahananda Wildlife Sanctuary is located.

- **Right Bank Tributaries- (07:10 PM)**
- **Yamuna-**
- It flows through Uttarakhand, Himachal, Haryana, and UP.
- It originates from the Banderpunch glacier.
- It joins Ganga at Allahabad-Prayagraj.
- **Tributaries-**
- R. Tons (left bank)
- R. Giri (right bank- Himachal)
- Construction of Renuka Dam is undergoing on the Giri R.
- **Chambal-**
- It originates from Vindhya in MP (MP).
- It flows through MP, Rajasthan, and UP.
- It is a habitat for Gharial (Critically Endangered).
- It is also a home Gangetic Dolphin.
- It flows through Kota.
- Chambal- Parvati || Kali Sindh || Banas
- Banas originates from Aravali near Kumbalgarh.
- **Sindh, Betwa, and Ken-**
- Originate in Vindhya
- They join Yamuna in UP.
- Ken flows through Panna Tiger Reserve (UNESCO MAB).
- Betwa flows through the Bundelkhand region.
- Ken- Betwa- Daudhan Dam
- **Son-**
- It originates from Amarkantak.
- It flows through Chhattisgarh, Jharkhand, UP, Bihar, and MP.
- It flows parallel to Kaimur Hills.
- It joins Ganga at Patna.
- R. Rihand and R. North Koel are tributaries of Son.
- White Tigers are found near the region surrounding Rihand.
- Damodar- Sorrow of Bengal
- Damodar is the most polluted river in India.

BRAHAMPUTRA (07:31 PM)

- Tsangpo- Tibet
- Arunachal- Siang || Dihang
- Assam (Sadiya to Dhubri)- Brahmaputra
- Bangladesh- Jamuna
- Ganga+Brahmaputra- Padma
- Padma+Barak- Meghna
- It is an antecedent river.
- **Tributaries-**
- **Subansiri-**
- Ranganadi is a tributary of Subansiri.
- Brahmaputra, Subansiri, and Ranganadi surround Majuli Island.
- **Jia Bhareli/Kameng-**
- Pakhui Tiger Reserve- Arunachal (Kameng)
- Orang- Tiger Reserve- Assam (Jia Bhareli)
- **Manas-**
- It comes from Bhutan and joins in Assam.
- It flows through the Manas Biosphere Reserve.
- **Sankosh-** It joins the Brahmaputra inside Bangladesh.
- **Teesta-**
- It originates from the Zemu Glacier.
- Tso Lamho Lake is formed by the water from Zemu Glacier.
- Rangit is a tributary of Teesta and joins Teesta near Darjeeling Hills.
- **Left Bank Tributaries-**
- Dibang-
- Dihang-Dibang Biosphere Reserve
- Lohit-
- Dibru is a tributary of Lohit.
- Lohit- Dibru- Brahmaputra= Dibru-Saikhowa Biosphere Reserve.
- Dhansari- Originates in Nagaland
- Kopili- Originates in the Barail Range
- Barak- Originates from Manipur and flows in lower Assam.
- Barak enters Bangladesh as R. Surma.
- Surma and Khushiyara join to form Padma R.
- Barak R. is famous for the Siamese Crocodile.
- Bhupen Hazarika Bridge- Sadiya (Lohit R.)

SUBARNREKHA (08:02 PM)

- Originates- Chhotanagpur Plateau
- Gold Placer deposits
- It forms the border between Odisha and West Bengal.
- **Brahamani-**
- Originates- Odisha
- **Baitarni-**
- At the Delta, Brahamani and Baitarni form a common Delta channel.
- Bhitarkanika Mangroves are located on the Brahamani- Baitarni Delta.
- Bhitarkanika is a Ramsar site as well as a National Park.
- It is famous for Saltwater crocodiles.
- To the north of Bhitarkanika- Gahirmatha Beach is located known for Olive Riddley Turtles.

MAHANADI (08:06 PM)

- Origin- Dandkarnia (Chhattisgarh)
- Ong || Jonk || Hansdio || Ib || Mand
- Hansdio originates from Amarkantak.
- Hirakud is located on Mahanadi.
- Hirakud is the longest earthen dam in the world.
- Hirakud has been recently declared a Ramsar site.
- Rishikulya R. Delta is famous for Olive Riddley Turtle.
- L. Chikila is located between Mahanadi and Rishikulya.

VAMSADHARA (08:10 PM)

- Origin- Odisha
- Disputed between Odisha and Andhra Pradesh in the context of sharing of water.
- It passes through Northern Sarkars.
- Vamsadhara-Nagavali Interlinking Project- Andhra Pradesh

GODAVARI (08:12 PM)

- Origin- Traimbkeshwar
- States- Maharashtra, Telangana, Andhra Pradesh
- Tributary- Manjara (right bank) || Penganga || Wardha || Venganga
- Pranhita is a combination of Penganga, Wardha and Venganga.
- Kaleshwaram Project is being planned at the confluence of Pranhita and Godavari by Telangana.
- Pattisima Lift Irrigation Project- Polavaram Dam- To transfer water from Godavari to Krishna.
- Kolleru L. is located between Godavari and Krishna.
- Kolleru L. is a Ramsar site.
- Indravati and Sabri are left bank tributaries of Godavari.
- Indravati- Chitrakoot Waterfalls

KRISHNA (08:20 PM)

- Origin- Mahabaleshwar
- Boundary - Karnataka and Telangana || Telangana and Andhra Pradesh
- **Tributaries-** Bhima and Musi (Left bank)
- Right Bank- Koyna || Ghataprabha || Malaprabha
- Malaprabha- UNESCO Heritage sites- Badami, Aihole, Pattadakal (Vesara architecture)
- Mandavi R. - West flowing river, disputed between Karnataka & Goa.
- Mandavi R.- Doodhsagar Waterfalls
- Mandavi is called Mahadayi in Karnataka.
- Karnataka is planning a project to divert the waters of Kalasa and Banduri to Malprabha.
- **Tungabhadra- Tunga+Bhadra**
- Vijayanagar was established on the banks of Tungabhadra (Hampi).
- Bhadravati Iron and Steel Plants- Bhadra R.
- Krishna + Tungabhadra- Raichur Doab
- Nagarjuna Sagar Reservoir is built on Krishna R.
- Nagarjuna Sagar- Srisailem Tiger Reserve- Krishna R.

TOPICS TO BE DISCUSSED IN THE NEXT CLASS- RIVERS, ECOLOGICALLY IMPORTANT SITES