Rural water Resources Management
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Centre for Technology Alternatives for Rural Areas
Indian Institute of Technology, Bombay
Week 12-Lecture 01
Rural Water Databses – River Discharge

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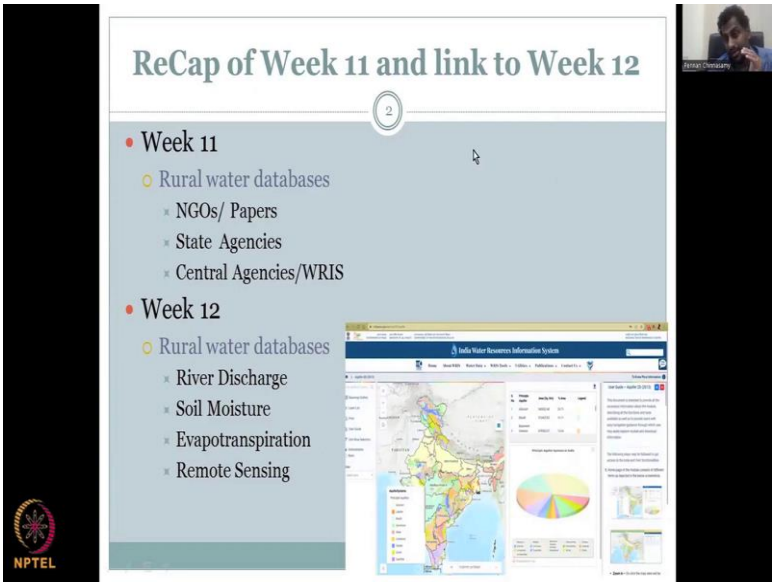

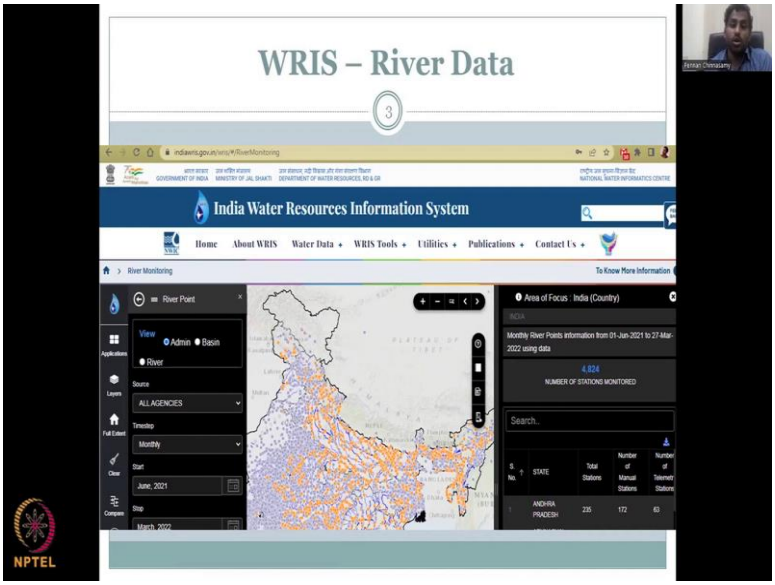

Hello, welcome to Rural Water Resources Management course, this is the last NPTEL course for this Rural Water Resource Management, this is week 12, and lecture one. The past weeks, we have been looking at how to understand the rural water resource management team. We also looked at different datasets that can help us to monitor this precious water resource in rural settings. And we also looked at some datasets in the previous week. Let us look at some more datasets that are very important for the weeks to come.

Before that, I would like to do a recap of week 11 and how it is linked to week 12. We have been doing these recaps every class or at least by every week, but last week, we did not do it because of lot of data information that we were discussing. So, let us do that this week so that we have the continuity, so in week 11, we looked at rural water databases, which can be coming from published literature, and that literature can come from NGOs or scientific papers, journal articles.

I explained how to cite them how to use these data, and then we had the state agencies and central agencies housed in different databases. Of the databases, we were looking at WRIS database and then we looked at rainfall and then storage capacity to be in particular. So, as per the equation we had for water balance, there are some more data that is important for understanding the rural water management and that is where we would be focusing on today.

For example, in week 11, we looked at the central agencies data bases, we looked at week 11 rainfall from IMD, ISRO database and the state agencies, but in week 12 we will look at rural water databases under which we will look at river discharge, soil moisture evapo transpiration, and remote sensing data. These are all clubbed together in the water balance equation and net water availability is measured. How do you measure it? In this class, I will also show you that you measure it using a hydrological model. There are multiple models but because of the time crunch we will only look at one model and an introduction to the model called SWOT.

So, we have been using this WRIS website so far to look at the data set for different teams, surface water storage, Groundwater River, all these are coming from the WRIS website. On the same note we will be looking at India WRIS for ruraldischarge. So, I will show you now how to go about in selecting this website and getting into the river database.

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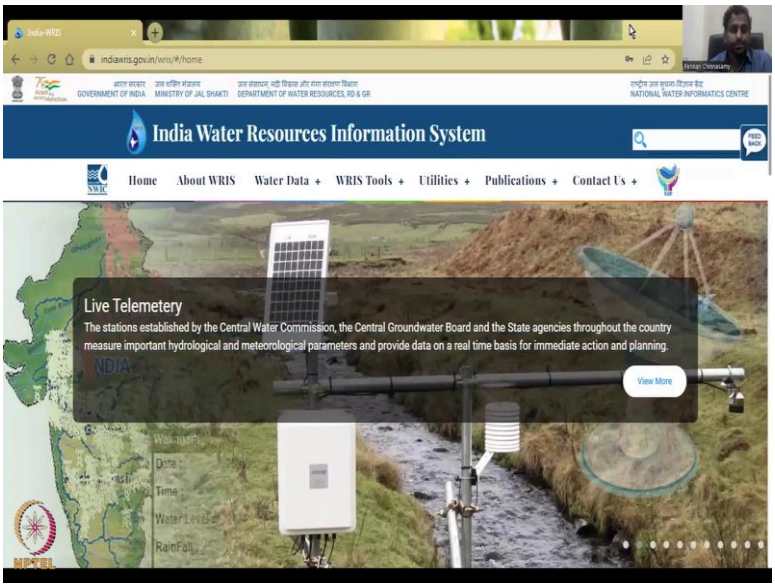
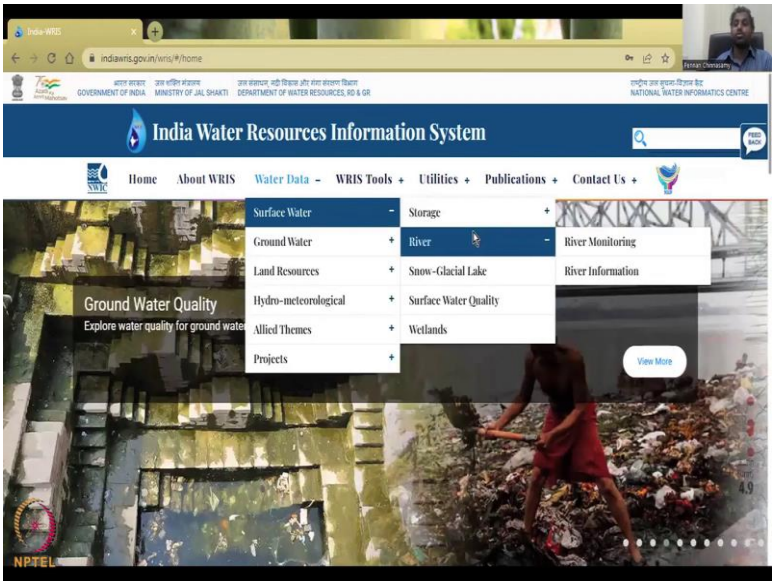
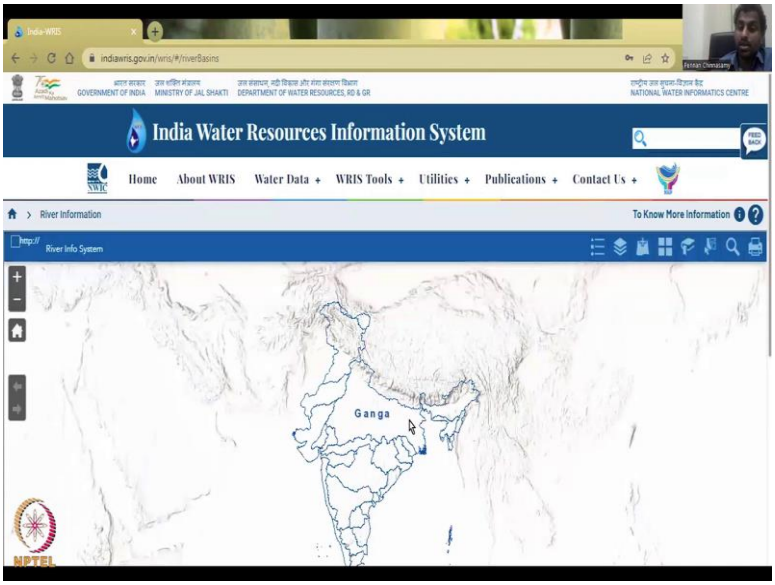
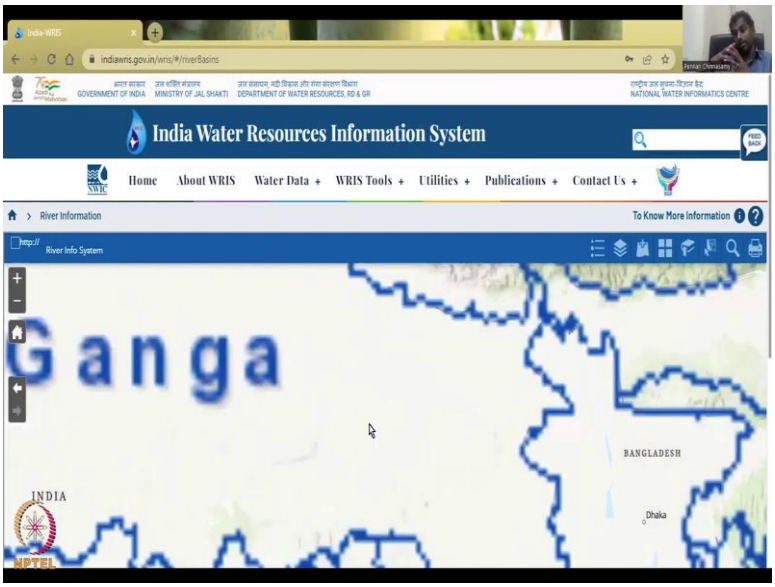
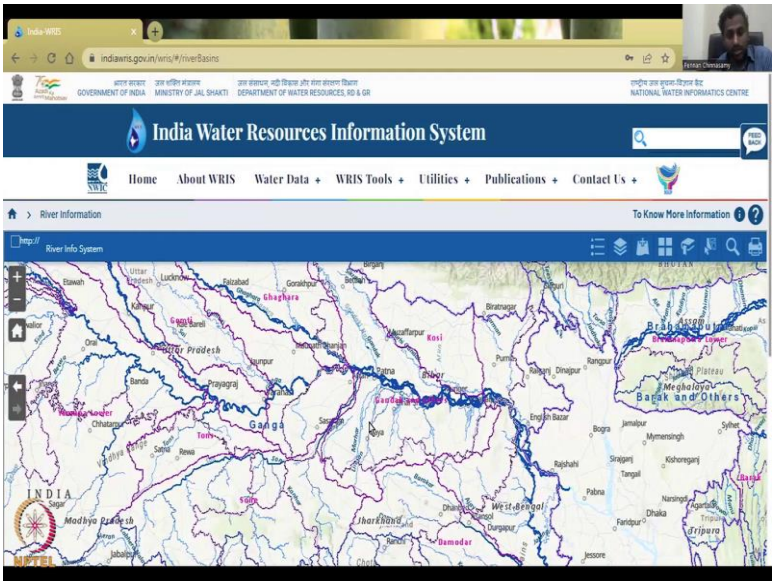







India Water Resources Information System
Home
About WRIS
Water Data
WRIS Tools
Utilities
Publications
Contact Us
River Information
To Know More Information
River Info System
Ganga
BANGLADESH
Dhaka
INDIA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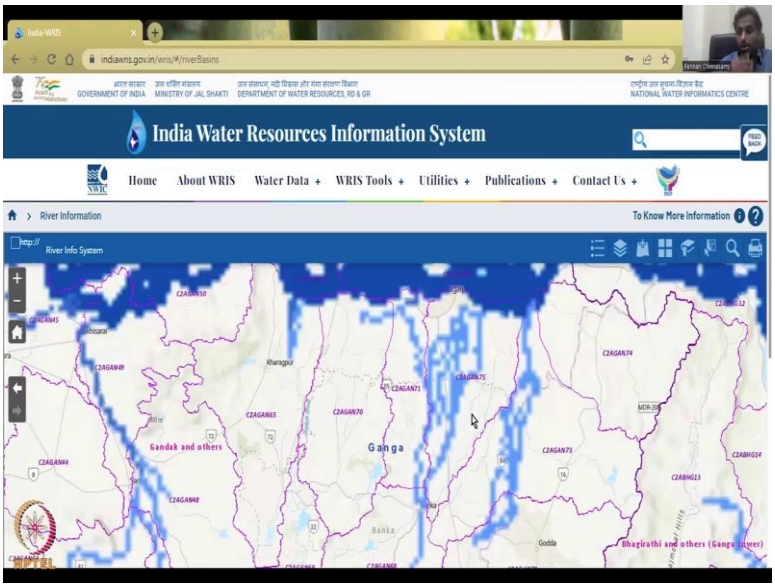
To Know More Information
River Info System
Ganga
Uttar Pradesh
Madhya Pradesh
Jharkhand
West Bengal
Meghalaya
Barak and Others
Tripura
Dhaka
INDIA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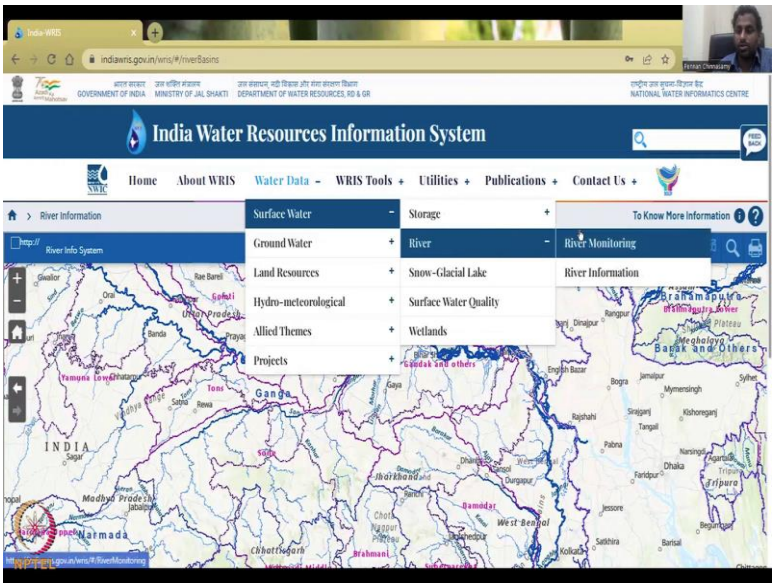
To Know More Information
River Info System
Gandak and others
Ganga
Bhagirathi and others (Ganga River)



I hope the screen is visible with the India WRIS. What you see in the homepage is again all the data sources. We will go to water data, surface water, storage we have already looked at data coming to river. In the river data there is river information, so basically what this river information database has is the names and shapes of different river networks in India. Close this X mark, and these are the bigger basins. So, when you zoom in, just double click it you can slowly see the Ganges main river networks coming up and then the tributaries also come up. So, you see the main river channel which is dark blue, and then you have these small tributary trees which are forming around.

If you go zoom in further, you can see more bifurcation of this river in those smaller components. You see now these small small lines are coming and then they come in. So, this has been very accurately and deeply monitored and measured using multiple methods by the government and they stack it here as a database. It is more to visualize and to understand the river and that is why it is called a river infosystem. Let us now get back to the river data. So, you have to go to river and river monitoring.

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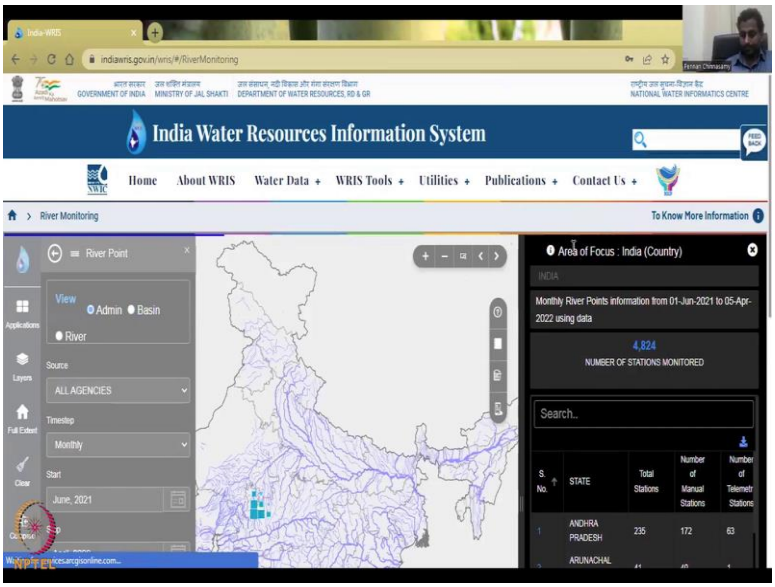
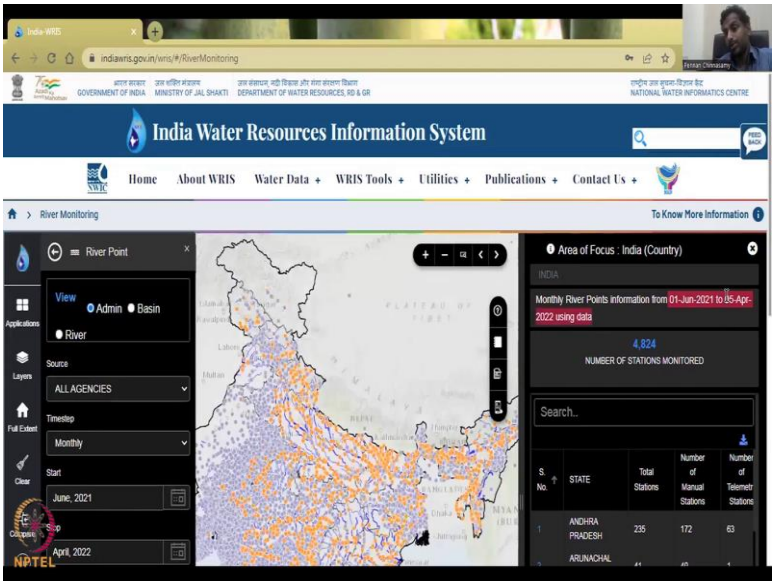
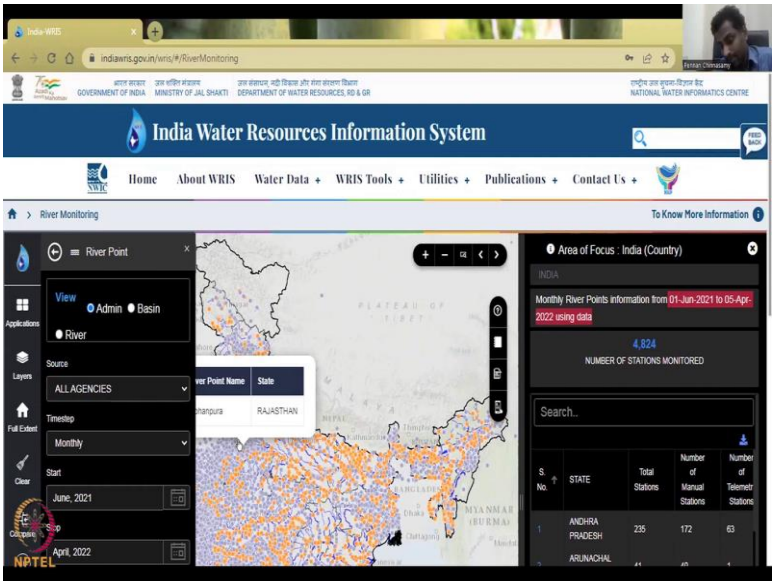
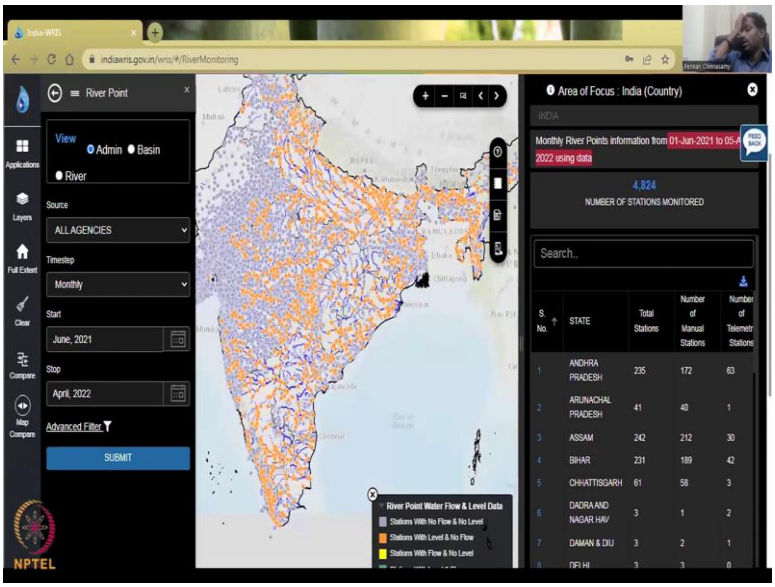
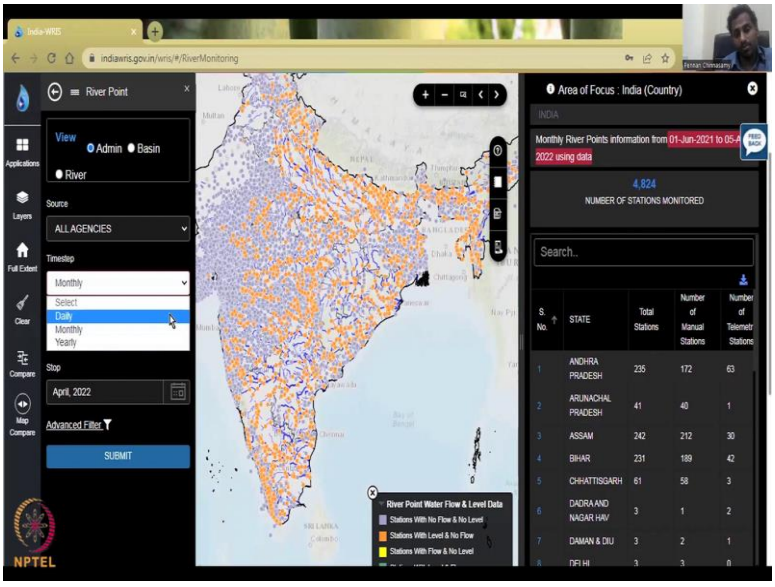







India-WRIS
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Monthly
Start
June, 2021
Stop
April, 2022
Advanced Filter
SUBMIT
Area of Focus : India (Country)
INDIA
Monthly River Points information from 01-Jun-2021 to 05-A
2022 using data
4,824
NUMBER OF STATIONS MONITORED
Search..
S. No.
STATE
Total Stations
Number of Manual Stations
1 ANDHRA PRADESH 235 172 63
2 ARUNACHAL PRADESH 41 40 1
3 ASSAM 242 212 30
4 BIHAR 231 189 42
5 CHHATTISGARH 61 58 3
6 DADRA AND NAGAR HAV 3 1 2
7 DAMAN & DIU 3 2 1
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL


India-WRIS
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
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Basin
River
Source
ALL AGENCIES
Timestep
Monthly
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Daily
Monthly
Yearly
Stop
April, 2022
Advanced Filter
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Area of Focus : India (Country)
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Monthly River Points information from 01-Jun-2021 to 05-A
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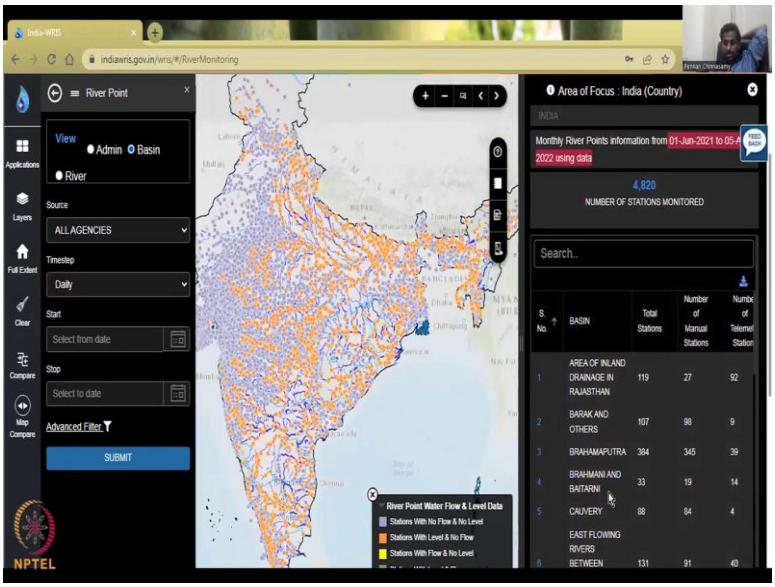
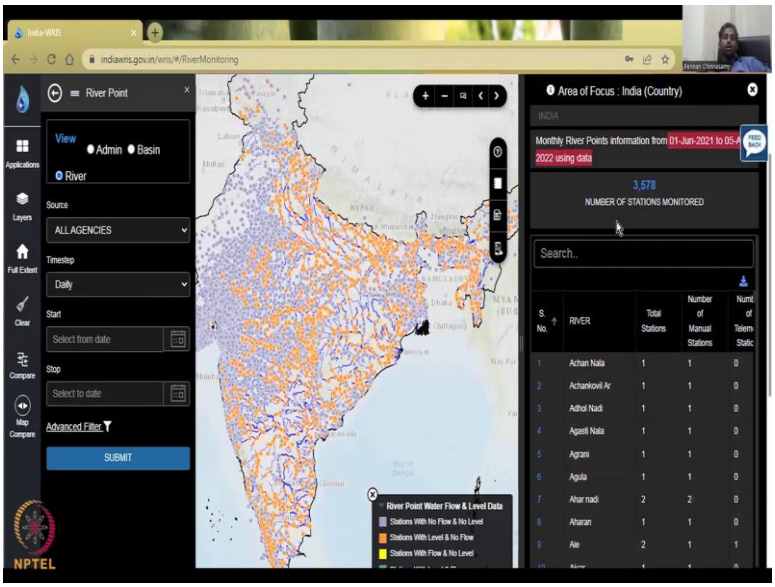
NPTEL


India-WRIS
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
Select from date
Stop
Select to date
Advanced Filter
SUBMIT
Area of Focus : India (Country)
INDIA
Monthly River Points information from 01-Jun-2021 to 05-A
2022 using data
4,820
NUMBER OF STATIONS MONITORED
Search..
S. No.
BASIN
Total Stations
Number of Manual Stations
1 AREA OF INLAND DRAINAGE IN RAJASTHAN 119 27 92
2 BARAK AND OTHERS 107 98 9
3 BRAHAMAPUTRA 384 345 39
4 BRAHMANI AND BAITARNI 33 19 14
5 CAUVERY 88 84 4
6 EAST FLOWING RIVERS BETWEEN 131 91 40
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL



When you click river monitoring again based on your internet and your computing speed, you will see the same dashboard that we have been seeing always for all the other parameters so, first India map opens and then slowly it has a default time, here the default time is first June 2021 to 5th April today's date 2022.

And across India, where is the data available, you could see that the coloring has come up. And what does this color refer to? The color is you have greater means there is no data. So, each point is a station, monitoring station. And when it is gray color, it has no data and when it is orange color, it has only the level no flow, and then where is green has level and flow and yellow means it has flow but no level.

So, most probably we cannot do much with this data to see here the coloring scheme is gray color is no data, whereas your stations with level and no flow are orange stations with flow and no level is yellow, which means it has flow coming in but no level and the green is the best scenario which we have both. So, why is this because the fifth is not still over, so let us change the thing to daily and you will see more coloring happen? But before that, let me walk you through the other part of the right side you have the date information and you have the stations, for that particular date you have 4800 stations that are monitoring the data.

And it has given us states because here we have admin as the view boundary, if you change it to basin, then here here it will be as Ganges basin, Kaveri basin etc. I am just going to click it so as you can see, so within the basin how the data is organized, you can see here you see that the Brahmaputra basin, Kaveri basin then you have the river network along each river how much data is there and that is going to be again populated here and you can see the number of stations also change.

I am going to keep it as admin again because in admin view, you have the state boundaries and the state agencies also play a vital role. So, that is how you could tweak the right-hand side or to showcase what you want to look at in terms of the boundaries. And what do you see is total number of stations and number of manual stations and telemetry stations. Telemetry means it relays the information at once whereas manual, you have to go and collect the data.

The Telemetry is kind of expensive and energy consumptive also because it has to have monitoring networks placed within the system to relay the data. So, I am going to do the right side is done almost because you have the number of stations and stuff. And if I go to one, let us say Chattisgarh, you have 61 stations out of which 58 are manual, 3 are telemetry.

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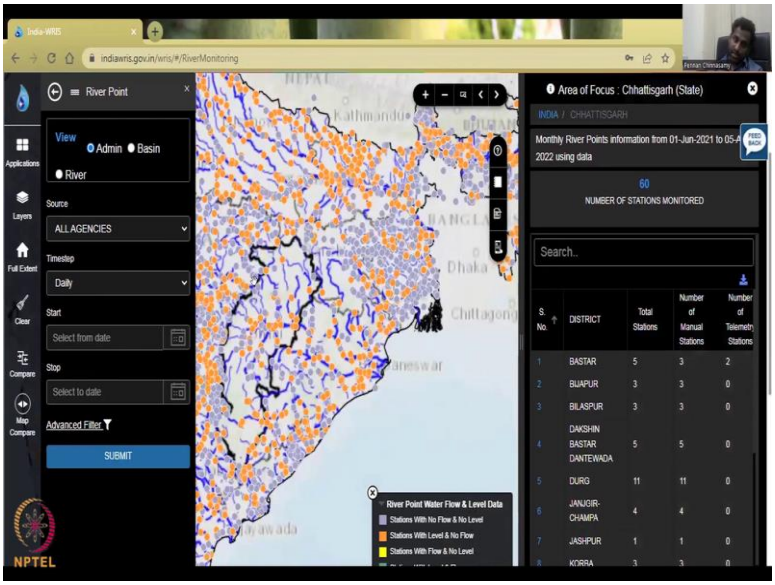
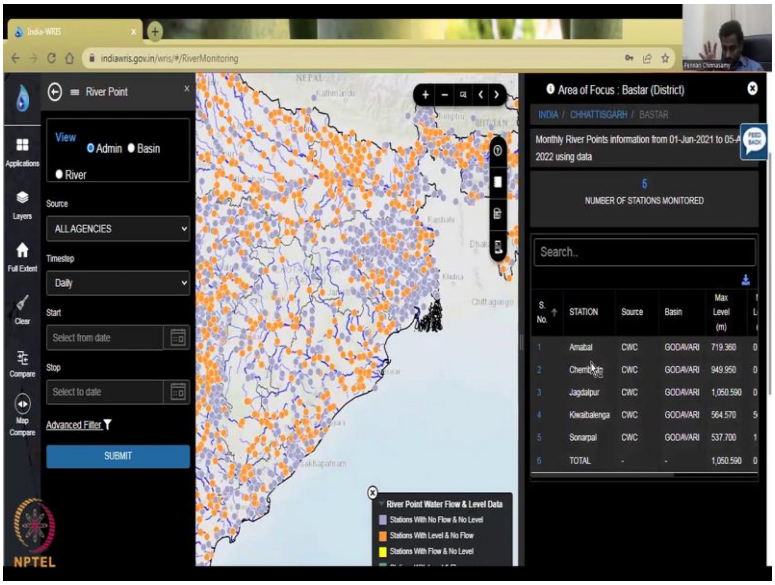
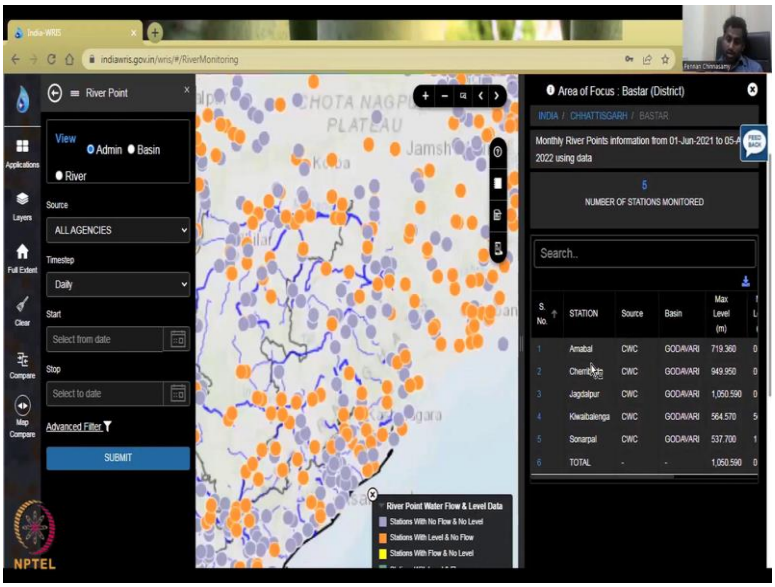
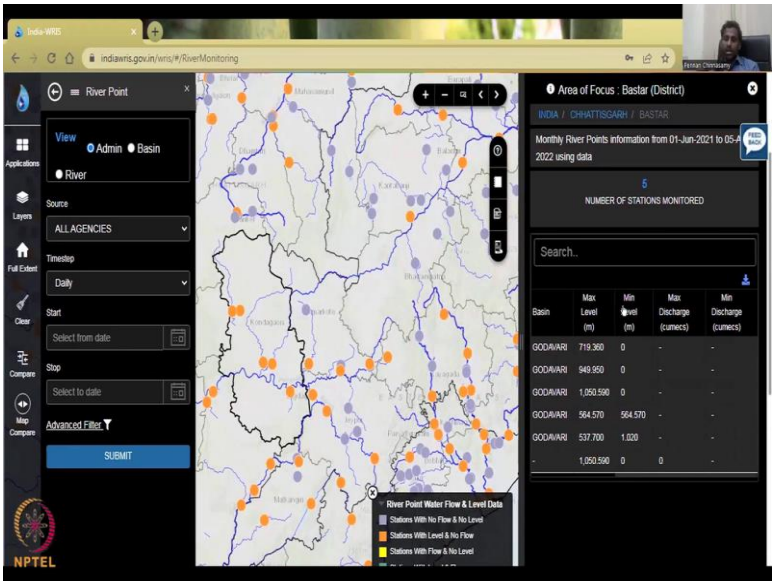





India-WRIS
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
Select from date
Stop
Select to date
Advanced Filter
SUBMIT
Area of Focus : Bastar (District)
INDIA / CHHATTISGARH / BASTAR
Monthly River Points information from 01-Jun-2021 to 05-A
2022 using data
5
NUMBER OF STATIONS MONITORED
Search..
S. No.
STATION
Source
Basin
Max Level (m)
1 Amabal CWC GODAVARI 719.360
2 Chemtalur CWC GODAVARI 949.950
3 Jagdalpur CWC GODAVARI 1,050.590
4 Kiwabalenga CWC GODAVARI 564.570
5 Sonarpal CWC GODAVARI 537.700
6 TOTAL - - 1,050.590
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL


India-WRIS
indiawris.gov.in/wris/#/RiverMonitoring
River Point
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ALL AGENCIES
Timestep
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Start
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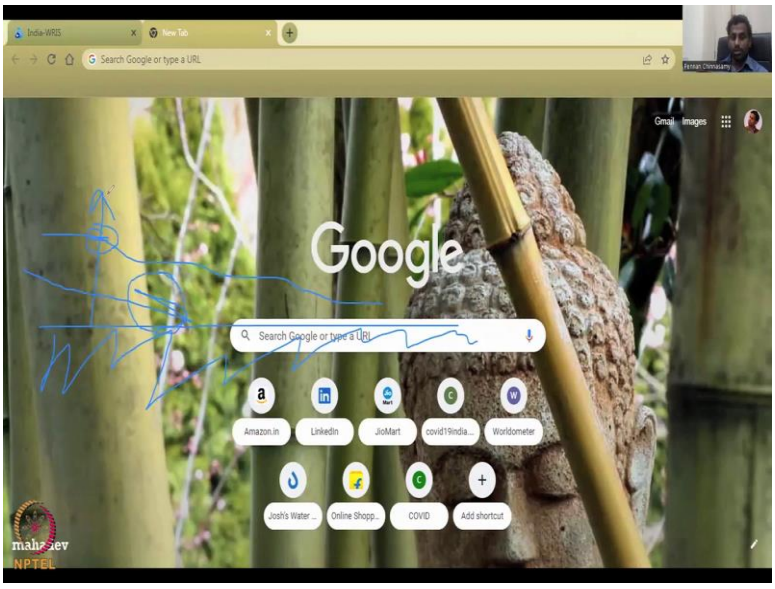
Advanced Filter
SUBMIT
Area of Focus : Bastar (District)
INDIA / CHHATTISGARH / BASTAR
Monthly River Points information from 01-Jun-2021 to 05-A
2022 using data
5
NUMBER OF STATIONS MONITORED
Search..
Basin
Max Level (m)
Min Level (m)
Max Discharge (cumecs)
Min Discharge (cumecs)
GODAVARI 719.360 0 - -
GODAVARI 949.950 0 - -
GODAVARI 1,050.590 0 - -
GODAVARI 564.570 564.570 - -
GODAVARI 537.700 1.020 - -
- 1,050.590 0 0 -
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL


India-WRIS
New Tab
Search Google or type a URL
Gmail
Images
Google
Search Google or type a URL
Amazon.in
LinkedIn
JioMart
covid19india...
Worldometer
Josh's Water ...
Online Shopp...
COVID
Add shortcut
mahadev
NPTEL

When you click a particular state on the right-hand side, that state zooms in. And then you could see that the different regions Basar, for example click Basar, and only the Basar stations are shown. Now, when you click the district then you will see the source of the stations CWC, state agencies etc. And then when you can pull the slider to the right you can see the data, max discharge all these things.

So, right now you will see that there is no discharge data or low-level data. Level data is not enough for you because how do we know where the level is and how much discharge is coming? Let me draw it in a blank page if possible. So, here is a river which flows, and this is the ground level, which is straight, and then I am going to just crack it so that you can see bedrock, the river bank, and yes, we have the flow.

So, now if I just have the level, what is it tell me about the river, we do not know how fast it is flowing, how slow is flowing, we only know the level whereas your discharge is how much water comes in. And that flow is very important it is a ray it is a meter cube per second or per day per hour. And that data is then later converted to a volume because per day, you can multiply it per day and then volume remains. So, this is how you should look at that the station can monitor the level or can monitor the discharge, it is okay to monitor level but without discharge, it is not useful, you need to know the discharge.

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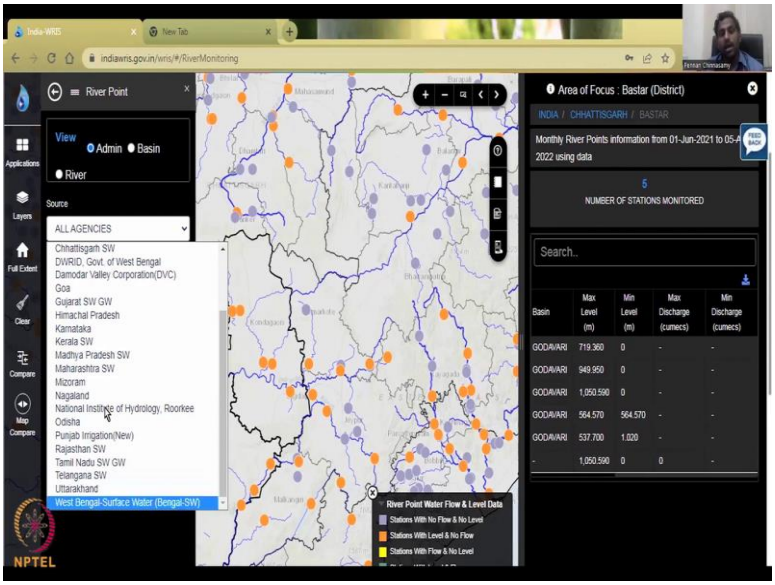

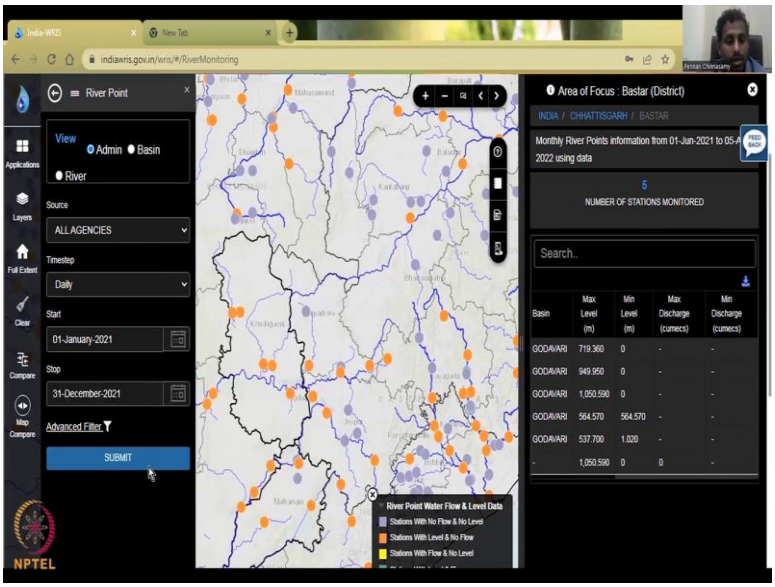
India-WRIS
New Tab
indiawris.gov.in/wris/#/RiverMonitoring
River Point
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Basin
River
Source
ALL AGENCIES
Timestep
Daily
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01-January-2021
Stop
31-December-2021
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SUBMIT
Area of Focus : Bastar (District)
INDIA / CHHATTISGARH / BASTAR
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Min Level (m)
Max Discharge (cumecs)
Min Discharge (cumecs)
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GODAVARI 949.950 0 - -
GODAVARI 1,050.590 0 - -
GODAVARI 564.570 564.570 - -
GODAVARI 537.700 1.020 - -
- 1,050.590 0 0 -
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Stations With No Flow & No Level
Stations With Level & No Flow
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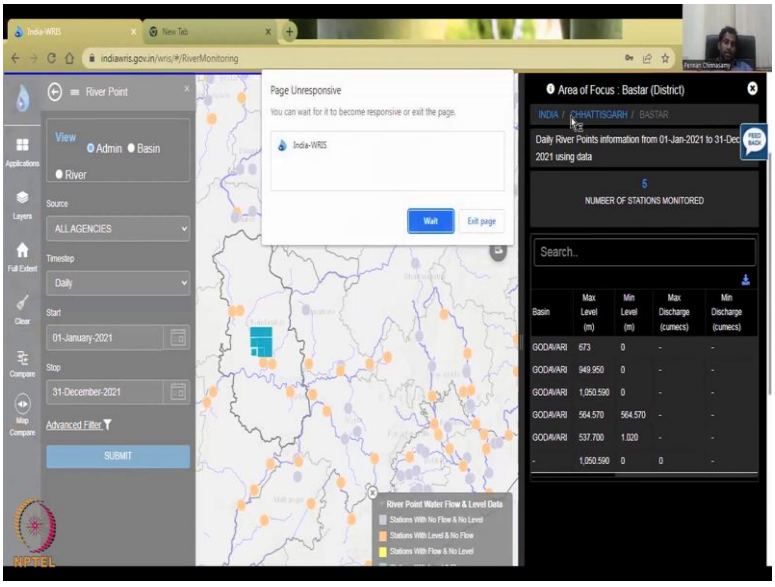
NPTEL


India-WRIS
New Tab
indiawris.gov.in/wris/#/RiverMonitoring
Page Unresponsive
You can wait for it to become responsive or exit the page.
India-WRIS
Wait
Exit page
River Point
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Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
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Area of Focus : Bastar (District)
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2021 using data
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NUMBER OF STATIONS MONITORED
Search..
Basin
Max Level (m)
Min Level (m)
Max Discharge (cumecs)
Min Discharge (cumecs)
GODAVARI 673 0 - -
GODAVARI 949.950 0 - -
GODAVARI 1,050.590 0 - -
GODAVARI 564.570 564.570 - -
GODAVARI 537.700 1.020 - -
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Stations With No Flow & No Level
Stations With Level & No Flow
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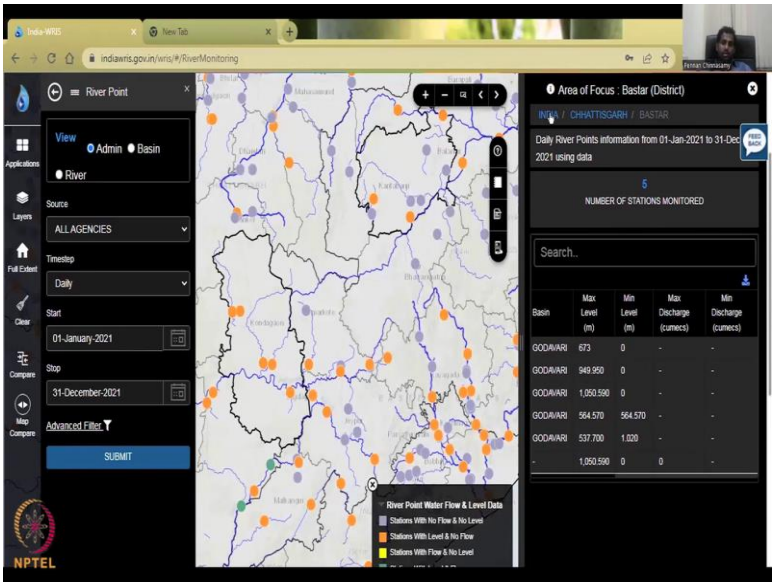
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Min Level (m)
Max Discharge (cumecs)
Min Discharge (cumecs)
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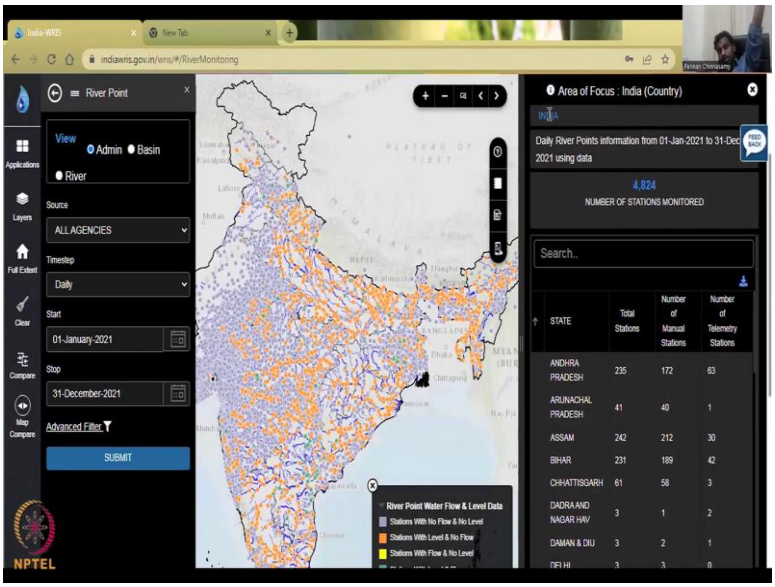
GODAVARI 949.950 0 - -
GODAVARI 1,050.590 0 - -
GODAVARI 564.570 564.570 - -
GODAVARI 537.700 1.020 - -
- 1,050.590 0 0 -
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL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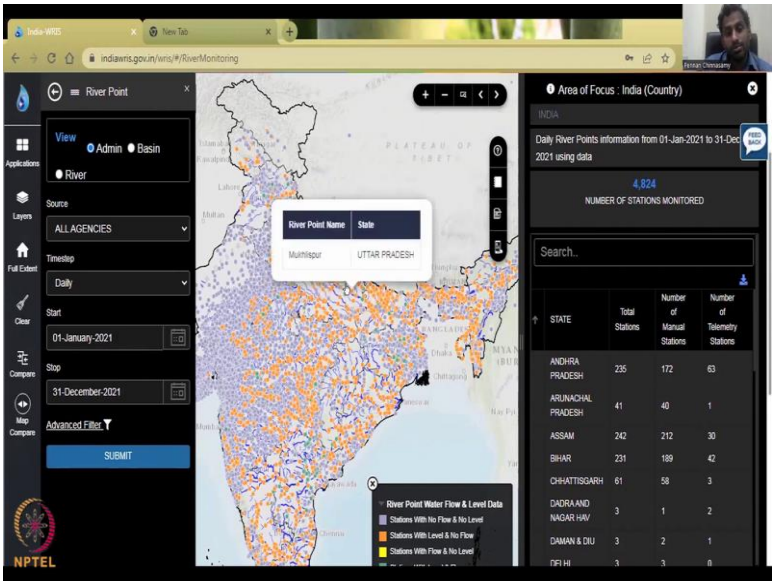
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
Area of Focus : India (Country)
INDIA
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
4,824
NUMBER OF STATIONS MONITORED
Search..
STATE
Total Stations
Number of Manual Stations
Number of Telemetry Stations
ANDHRA PRADESH 235 172 63
ARUNACHAL PRADESH 41 40 1
ASSAM 242 212 30
BIHAR 231 189 42
CHHATTISGARH 61 58 3
DADRA AND NAGAR HAV 3 1 2
DAMAN & DIU 3 2 1
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL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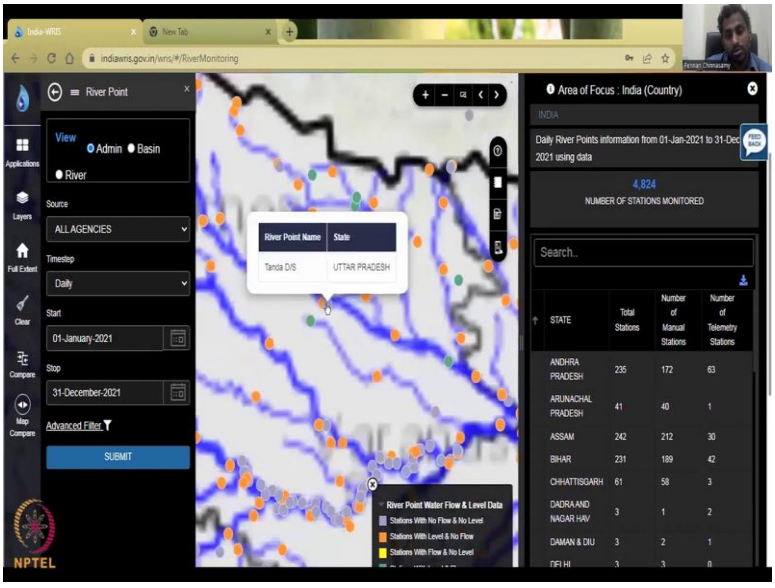
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
River Point Name
State
Mukhlispur
UTTAR PRADESH
Area of Focus : India (Country)
INDIA
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
4,824
NUMBER OF STATIONS MONITORED
Search..
STATE
Total Stations
Number of Manual Stations
Number of Telemetry Stations
ANDHRA PRADESH 235 172 63
ARUNACHAL PRADESH 41 40 1
ASSAM 242 212 30
BIHAR 231 189 42
CHHATTISGARH 61 58 3
DADRA AND NAGAR HAV 3 1 2
DAMAN & DIU 3 2 1
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL


India-WRIS
New Tab
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
River Point Name
State
Tanda D/S
UTTAR PRADESH
Area of Focus : India (Country)
INDIA
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
4,824
NUMBER OF STATIONS MONITORED
Search..
STATE
Total Stations
Number of Manual Stations
Number of Telemetry Stations
ANDHRA PRADESH 235 172 63
ARUNACHAL PRADESH 41 40 1
ASSAM 242 212 30
BIHAR 231 189 42
CHHATTISGARH 61 58 3
DADRA AND NAGAR HAV 3 1 2
DAMAN & DIU 3 2 1
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL

Let us go back to India WRIS, we have done the right-hand side. Now, let us look at the left-hand side to see what we have. We have all agencies and as I said, there are state agencies and central agencies. State is like for example, Damodar Valley Corporation, DWRID, SWRID and your PWDS from southern regions Tamil Nadu SW surface water.

And then there is the Punjab, new irrigation Rajastan surface water, all these different different agencies are there and there is a research entity which is NIH. So, NIH was given the duty to do a lot of research on these water issues in India, and also the hydrology pattern. So, that is why it is called National Institute of Hydrology, which is located in Roorkee. And they also with government agencies, especially CWC, they monitor these kinds of rivers, the level the quality, etc.

So, now we are going to do our daily timestamp to show you how the data is. So, I am going to click a data from last year because this year's data is still coming, so let us not push the database to give us the state and that is why you do not see any green color for this data range. So, the default data range is first June to 5th April, which is still today, and you do not see any green color because the data is still coming in.

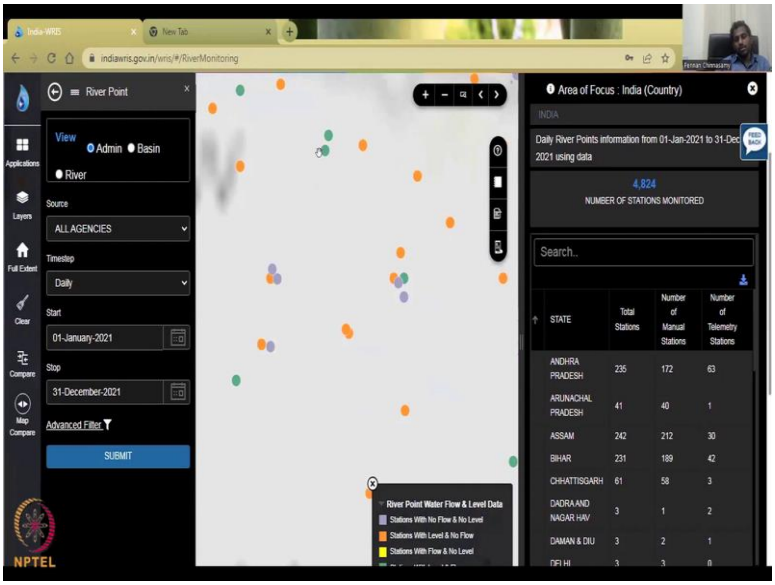
So, I am going to go 2021 Jan first to December 31. Why is it daily, because when rainfall happens, and you do not capture it daily, then what is the use of it looking at it in a monthly timescale, you do not see that discharged in a monthly timescale, rainfall would have come and left the system before a month, so it is very important to have the daily average or daily total values for discharge and I am going to go December 31 and I click.

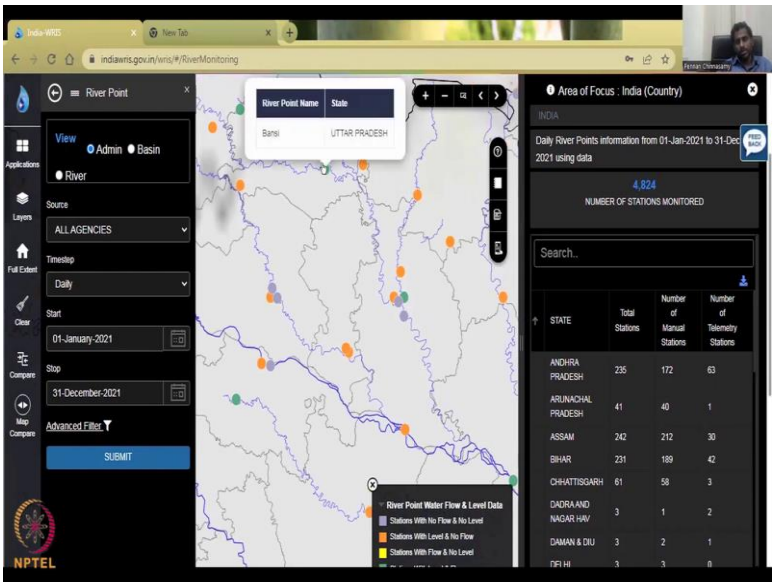
So, we have 1 year in total, still in Chattisgarh Bastar region, but I will click India to zoom out. You can see here, if you want it is good, I can click Chattisgarh to zoom into Chattisgarh, but I am going to go to India level to show how the data is there, and remember, most of these data are, it does ask should I read or exit the page; I am just going to say wait, I know it is slow.

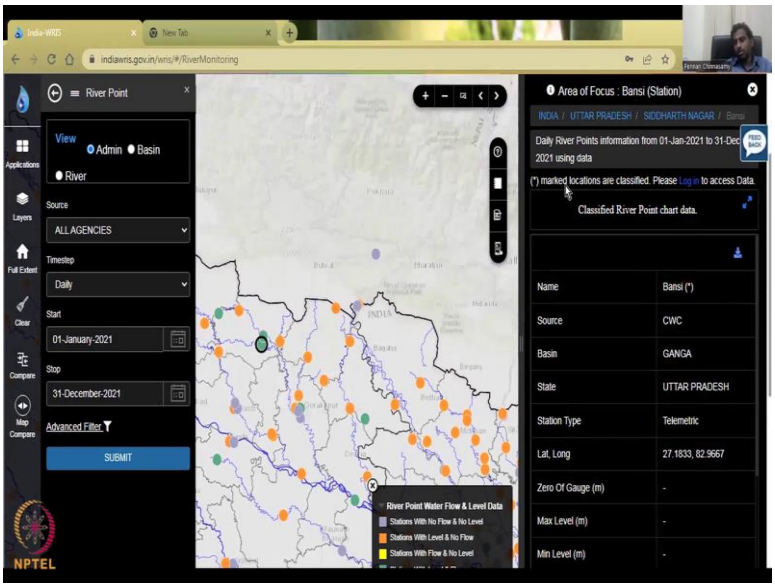
So, I am just going to say let us wait for it. It has come. So, I am going to click India and let us see how it goes out. What I said is, since a lot of these river databases are transboundary, because you have, for example, the Ganges, it starts in China, Tibet, and then comes down to Nepal, and then it goes to India and flows on. So, when you monitor this kind of Transboundary Rivers, it is a very sensitive data. One government does not release the data, so the all the other governments does not release the data. So, it comes to a sensitive point in

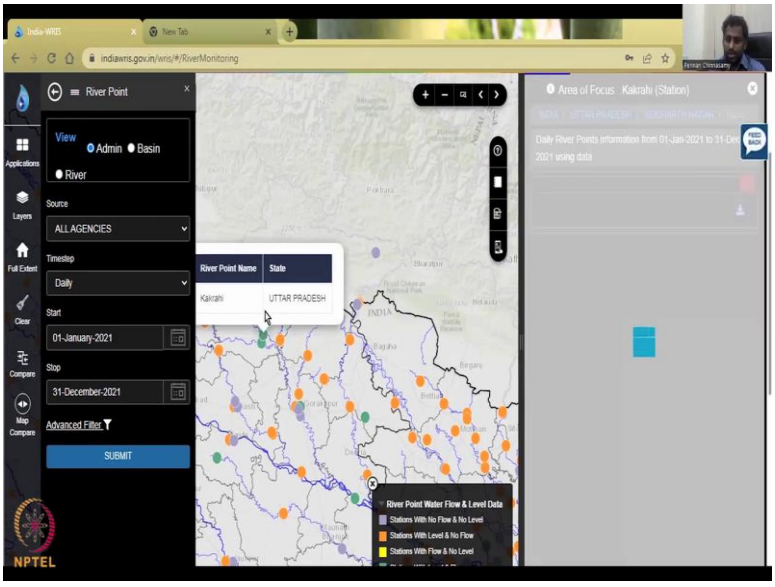
a classified data. So, let me show you, for example what I mean. I am just going to go here and click this green dot.

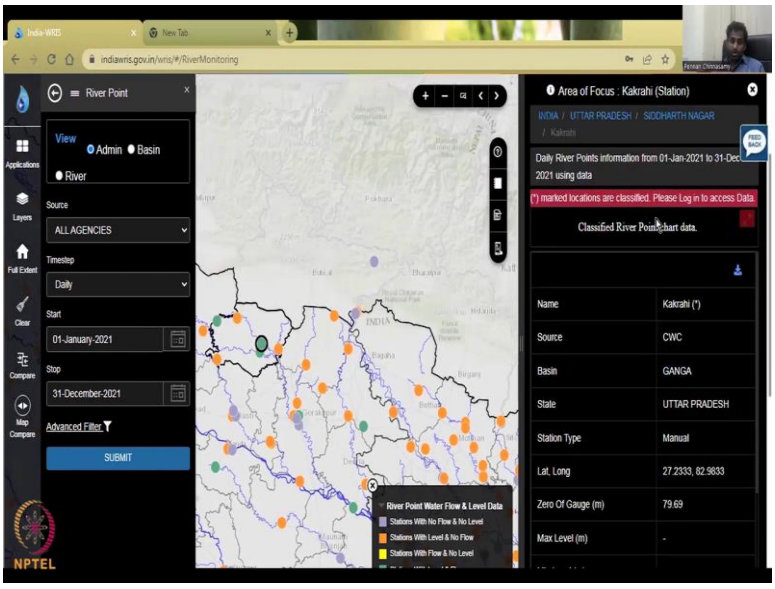
(Refer Slide Time: 15:10)

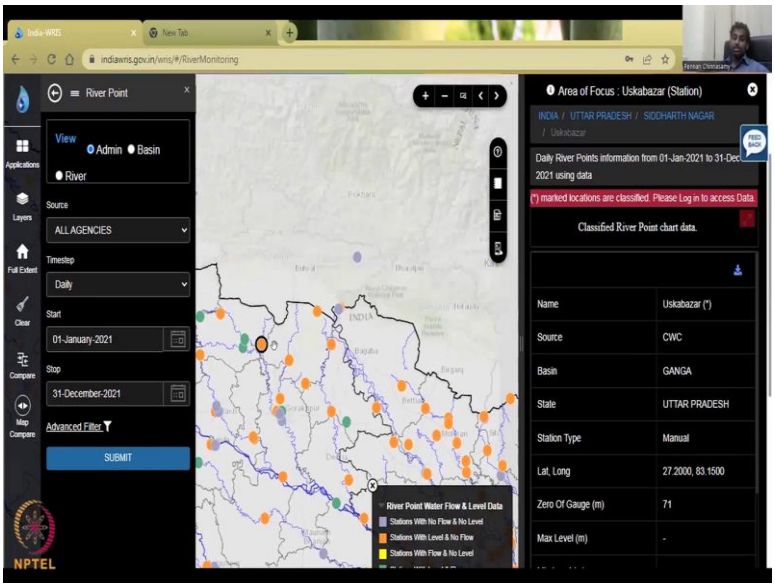


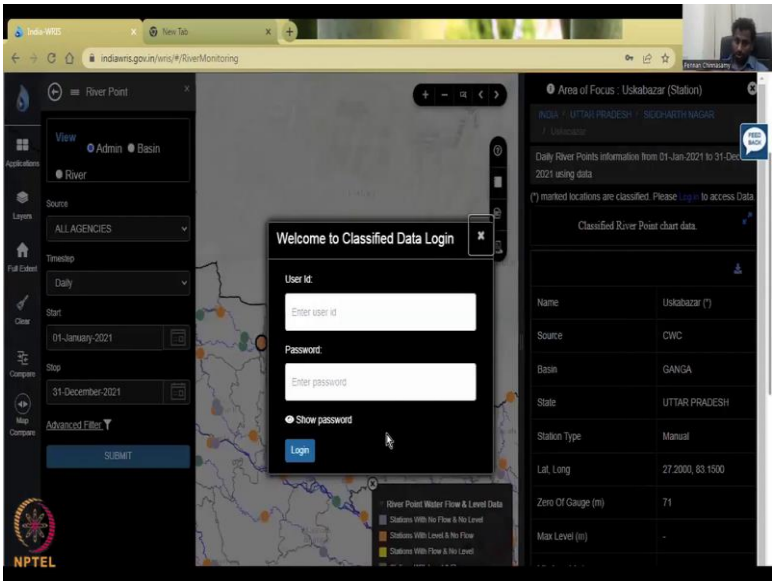



India-WRIS
New Tab
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
Area of Focus : Bansi (Station)
INDIA / UTTAR PRADESH / SIDDHARTH NAGAR / Bansi
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
(*) marked locations are classified. Please Log in to access Data.
Classified River Point chart data.
Name
Bansi (*)
Source
CWC
Basin
GANGA
State
UTTAR PRADESH
Station Type
Telemetric
Lat, Long
27.1833, 82.9667
Zero Of Gauge (m)
-
Max Level (m)
-
Min Level (m)
-
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL


India-WRIS
New Tab
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
River Point Name
State
Kakrahi
UTTAR PRADESH
Area of Focus : Kakrahi (Station)
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL


India-WRIS
New Tab
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
Area of Focus : Kakrahi (Station)
INDIA / UTTAR PRADESH / SIDDHARTH NAGAR / Kakrahi
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
(*) marked locations are classified. Please Log in to access Data.
Classified River Point chart data.
Name
Kakrahi (*)
Source
CWC
Basin
GANGA
State
UTTAR PRADESH
Station Type
Manual
Lat, Long
27.2333, 82.9833
Zero Of Gauge (m)
79.69
Max Level (m)
-
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL



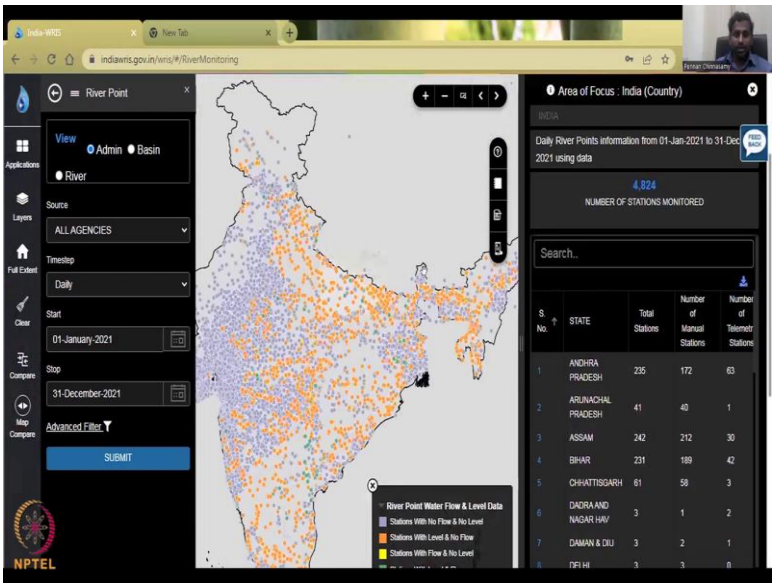


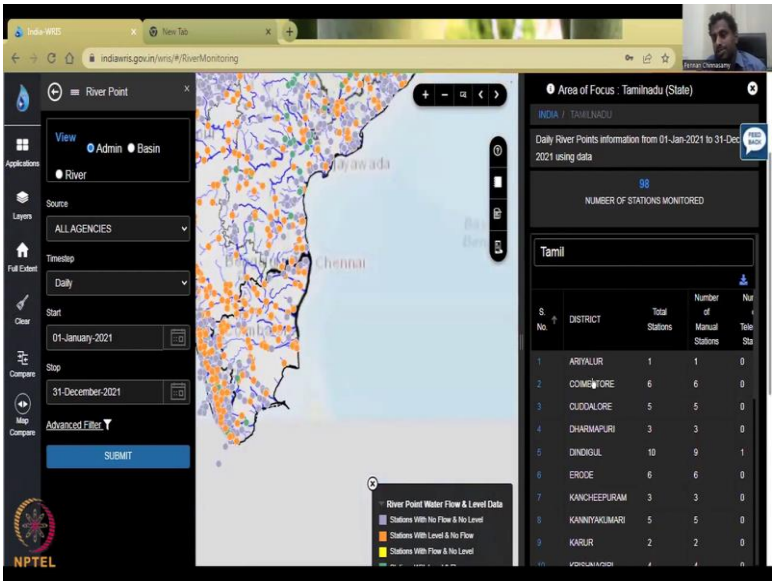
So, I am in the Ganges basin and if you do not know where that location is, you can just zoom over and it will tell you the click on it to tell you the name. It is Bansi in Uttar Pradesh. I click the data and it is trying to populate, but it does not populate. So, see this is Napal, this is India's right near the border, you can see that Bansi asterisk, means locations are classified, please login to access it, I can click here, set up an account and log in most of the data, you can still get it. But if it is too sensitive, or they say even blog and you cannot get then you will have to communicate with NIH on this data and get it. So, for now, I am just going to say that there is no data here because saying it is classified and sensitive is equivalent to say there is no data for you to use it in their assessment.

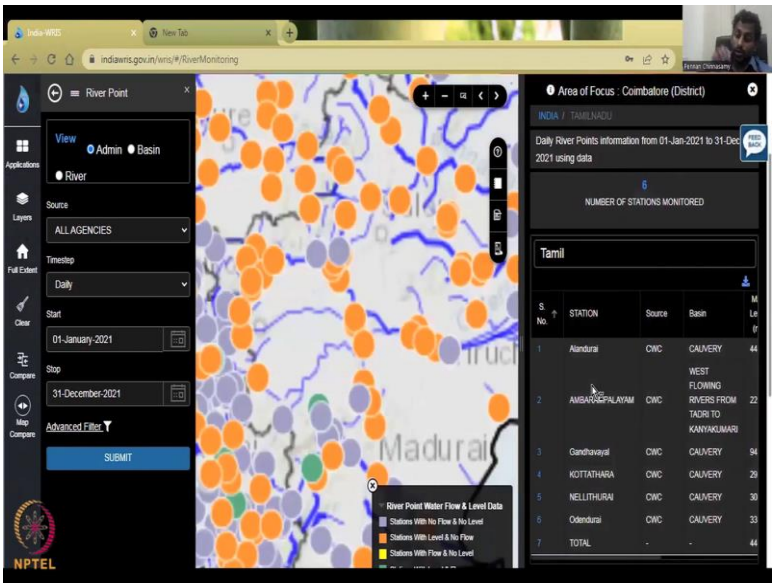
So, that is one point, but all you can do is you can click the next point and you can see another Katari, Uttar Pradesh, let us see if they have declassified it but no it is also classified. I am going to an orange level which has only the level and no flow not much useful but since

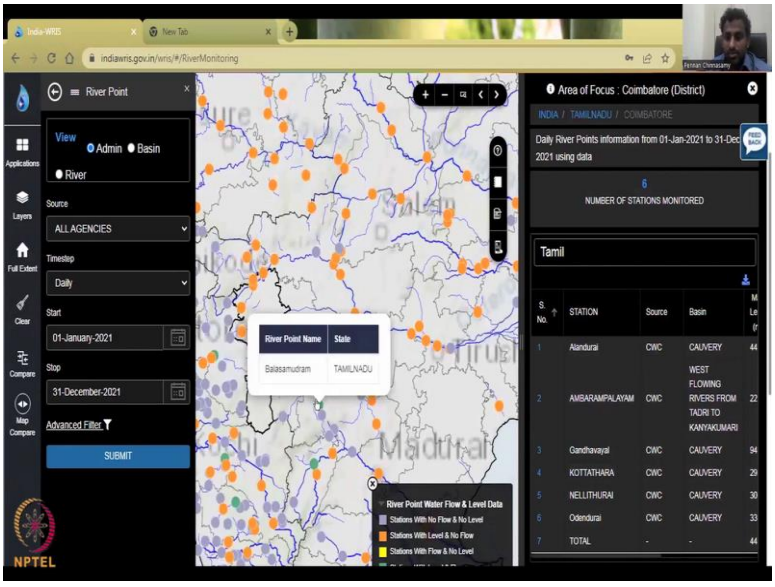
that is also not freely available, there is lot of sensitive data that is going around, which cannot be accessed. So, it says please log in, you can click here login, and then access the data. But again, I will leave it to you if you want to do your login or not.

(Refer Slide Time: 16:44)






India-WRIS
New Tab
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
Area of Focus : Coimbatore (District)
INDIA / TAMILNADU
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
6
NUMBER OF STATIONS MONITORED
Tamil
S. No.
STATION
Source
Basin
1 Alandurai CWC CAUVERY
2 AMBARAMPALAYAM CWC WEST FLOWING RIVERS FROM TADRI TO KANYAKUMARI
3 Gandhavayal CWC CAUVERY
4 KOTTATHARA CWC CAUVERY
5 NELLITHURAI CWC CAUVERY
6 Odendurai CWC CAUVERY
7 TOTAL
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL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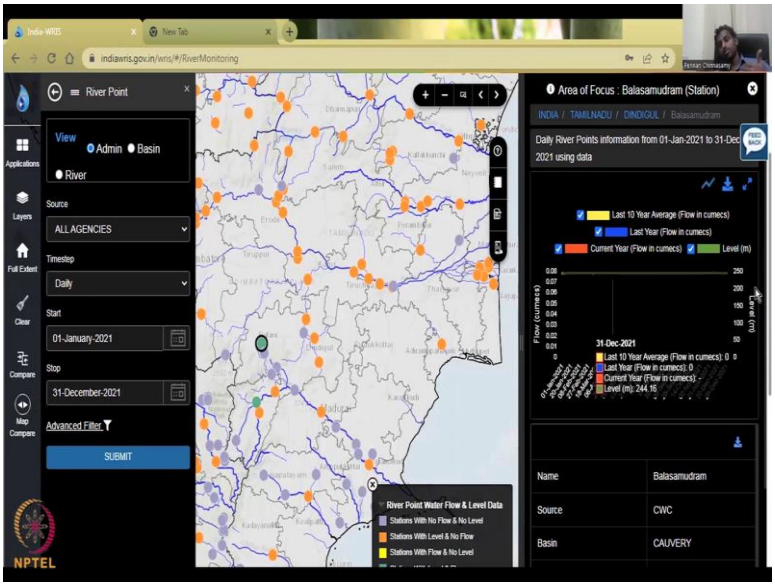
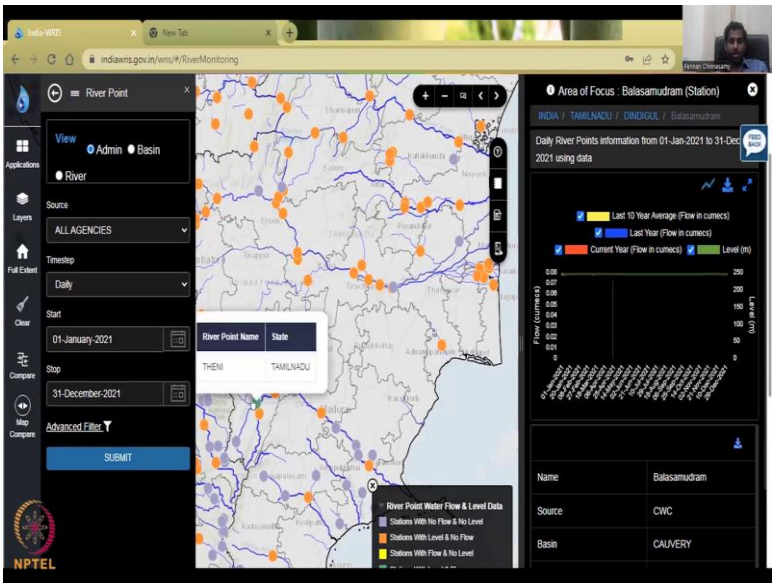
New Tab
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
River Point Name
State
Balasamudram
TAMILNADU
Area of Focus : Coimbatore (District)
INDIA / TAMILNADU / COIMBATORE
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
6
NUMBER OF STATIONS MONITORED
Tamil
S. No.
STATION
Source
Basin
1 Alandurai CWC CAUVERY
2 AMBARAMPALAYAM CWC WEST FLOWING RIVERS FROM TADRI TO KANYAKUMARI
3 Gandhavayal CWC CAUVERY
4 KOTTATHARA CWC CAUVERY
5 NELLITHURAI CWC CAUVERY
6 Odendurai CWC CAUVERY
7 TOTAL
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL


India-WRIS
New Tab
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
Area of Focus : Balasamudram (Station)
INDIA / TAMILNADU / DINDIGUL / Balasamudram
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
Last 10 Year Average (Flow in cumecs)
Last Year (Flow in cumecs)
Current Year (Flow in cumecs)
Level (m)
Flow (cumecs)
Level (m)
31-Dec-2021
Last 10 Year Average (Flow in cumecs): 0
Last Year (Flow in cumecs): 0
Current Year (Flow in cumecs) :
Level (m): 244.16
Name
Balasamudram
Source
CWC
Basin
CAUVERY
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL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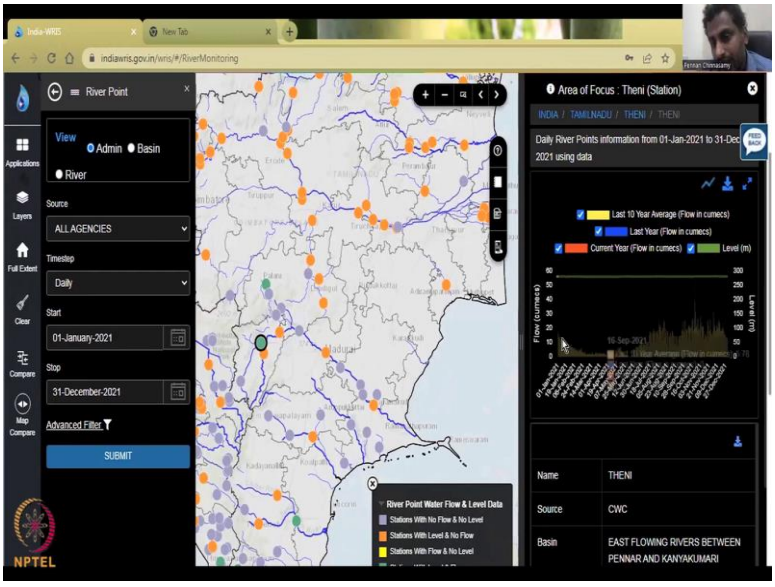
indiawris.gov.in/wris/#/RiverMonitoring
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
River Point Name
State
THENI
TAMILNADU
Area of Focus : Balasamudram (Station)
INDIA / TAMILNADU / DINDIGUL / Balasamudram
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
Last 10 Year Average (Flow in cumecs)
Last Year (Flow in cumecs)
Current Year (Flow in cumecs)
Level (m)
Flow (cumecs)
Level (m)
Name
Balasamudram
Source
CWC
Basin
CAUVERY
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL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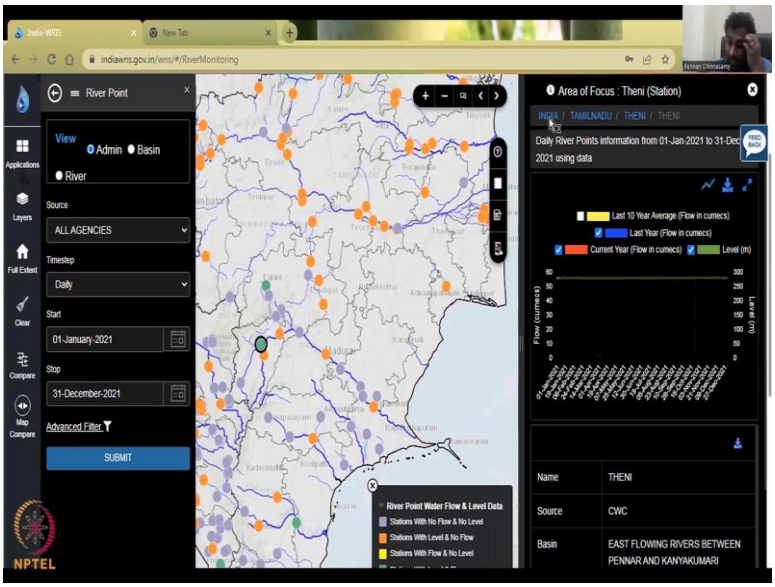
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
Area of Focus : Theni (Station)
INDIA / TAMILNADU / THENI / THENI
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
Last 10 Year Average (Flow in cumecs)
Last Year (Flow in cumecs)
Current Year (Flow in cumecs)
Level (m)
Flow (cumecs)
Level (m)
16-Sep-2021
Name
THENI
Source
CWC
Basin
EAST FLOWING RIVERS BETWEEN PENNAR AND KANYAKUMARI
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL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River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
Area of Focus : Theni (Station)
INDIA / TAMILNADU / THENI / THENI
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
Last 10 Year Average (Flow in cumecs)
Last Year (Flow in cumecs)
Current Year (Flow in cumecs)
Level (m)
Flow (cumecs)
Level (m)
Name
THENI
Source
CWC
Basin
EAST FLOWING RIVERS BETWEEN PENNAR AND KANYAKUMARI
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL

The other datasets which I am going to show you do not have login. So, let me go to India level, so the date is going to be same. Now, I am going to go to the India level, which will take some time. And you see more and more green color coming up, so now again, it is back to the States. So, I am going to click a particular state, let us say Tamil Nadu and Coimbatore has a lot of good manual stations. So, let us say 6 stations in Coimbatore, I hope we can get one with level and the stage and discharge. So, each time I click it goes and now I do not know which one this green one is. So, I can just go here it says Balasamudram and then I just clicked the Balasamudram and then slowly the data is populating.

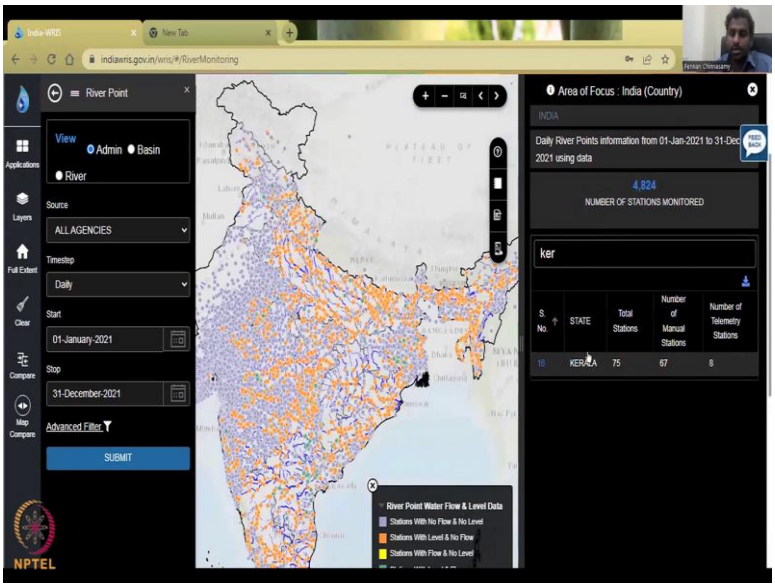
Now, it is not turning into classified or read and again it is integral part of India, there is no transboundary nature to it. So, it can still be collected. So, within India also we do have some data which is classified and that could be near the dam site or the dam data and or between the states which is under litigation.

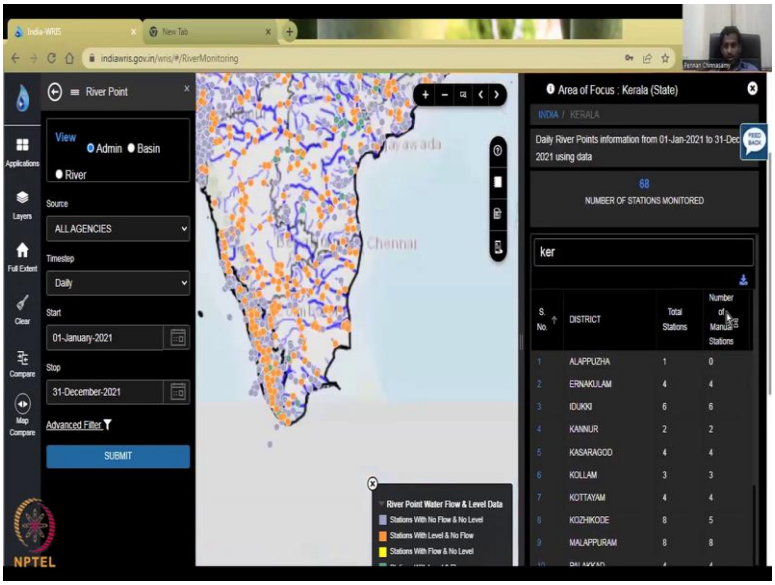
So, here it says green, which means both level and flow should be there. But there is no flow, it is only level you could see it is a very straight level. And this is where sometimes your data is said that it is having data, but it is not enough data. So, you should just ignore that point, so I am going to Theni, actually in Kerala, there is a lot of good data that has been supported.

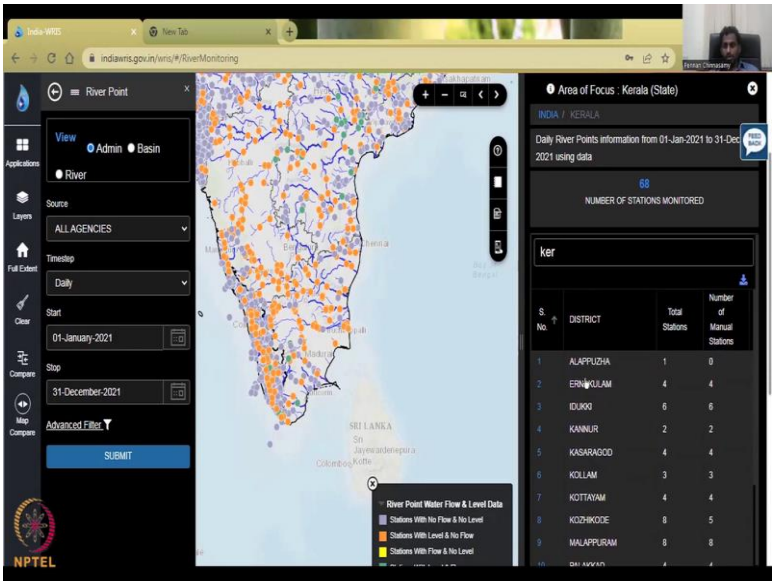
And you can see the agencies are the same, it is just a CWC, but just in some locations, the data has been collected well, whereas in other locations, maybe it is not coming in good fashion. So, click the data to show you how the data looks like and it is just getting populated. So, you can see here every day, the yellow line is the last 10-year average flow in Q max.

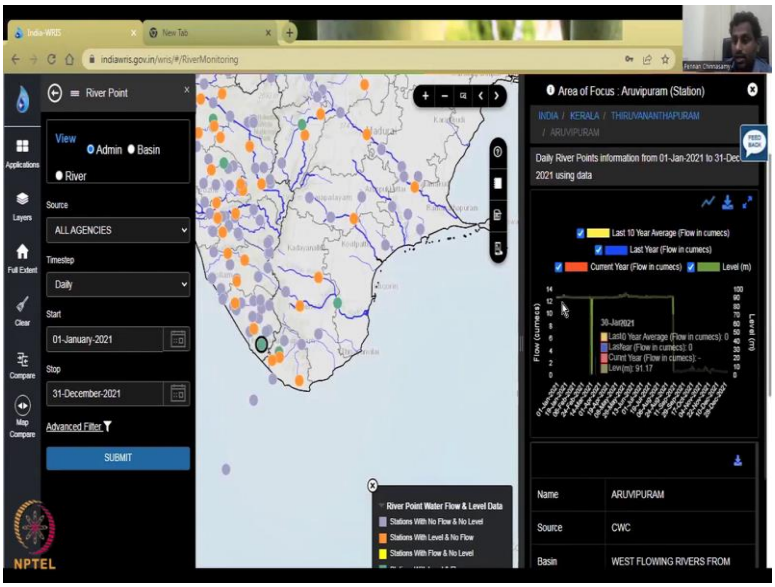
So, I am just going to click this out, because I want to see the current flow and the current flow is very less, which means only 2 days in that particular year there has been flow recorded, you can have the last 10-year average, but does not make sense for you, we want the current flow. And so that is how you should look into each station and remove the station from your research if it does not have the data. So, all you have is the level and current flow. What I am going to do is I am just going to click to India back and then click Kerala because I did find a lot of stations as I said with flow and discharge levels.

(Refer Slide Time: 19:50)





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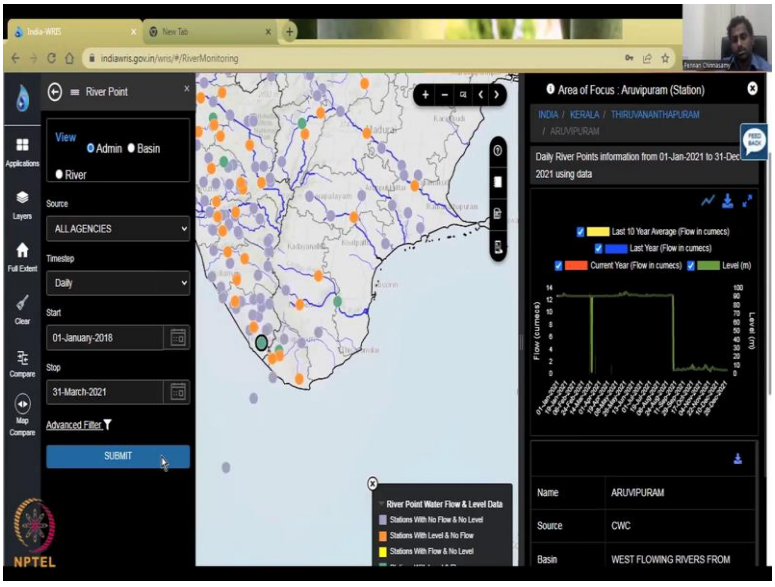
River Point
View
Admin
Basin
River
Source
ALL AGENCIES
Timestep
Daily
Start
01-January-2021
Stop
31-December-2021
Advanced Filter
SUBMIT
Area of Focus : Aruvipuram (Station)
INDIA / KERALA / THIRUVANANTHAPURAM / ARUVIPURAM
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
Last 10 Year Average (Flow in cumecs)
Last Year (Flow in cumecs)
Current Year (Flow in cumecs)
Level (m)
Flow (cumecs)
Level (m)
Name
ARUVIPURAM
Source
CWC
Basin
WEST FLOWING RIVERS FROM
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL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River Point
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ALL AGENCIES
Timestep
Daily
Start
01-January-2018
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31-March-2021
Advanced Filter
SUBMIT
Area of Focus : Aruvipuram (Station)
INDIA / KERALA / THIRUVANANTHAPURAM / ARUVIPURAM
Daily River Points information from 01-Jan-2021 to 31-Dec-2021 using data
Last 10 Year Average (Flow in cumecs)
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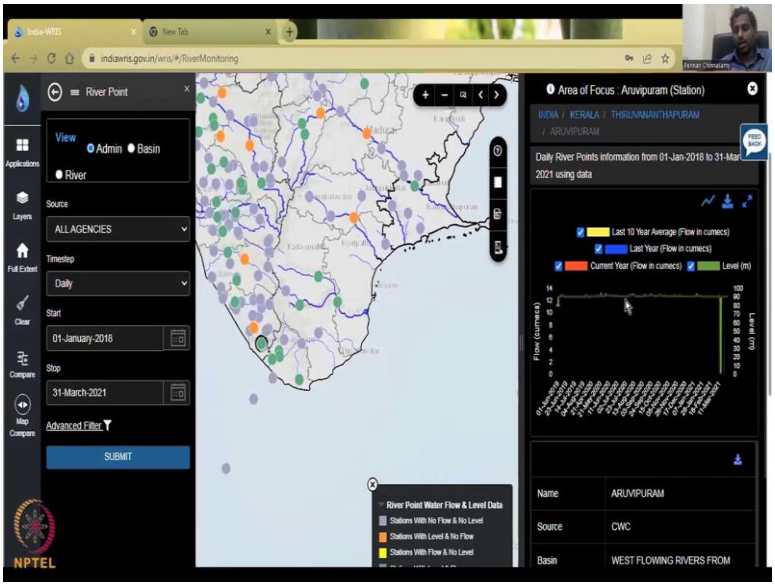
NPTEL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Last Year (Flow in cumecs)
Current Year (Flow in cumecs)
Level (m)
Flow (cumecs)
Level (m)
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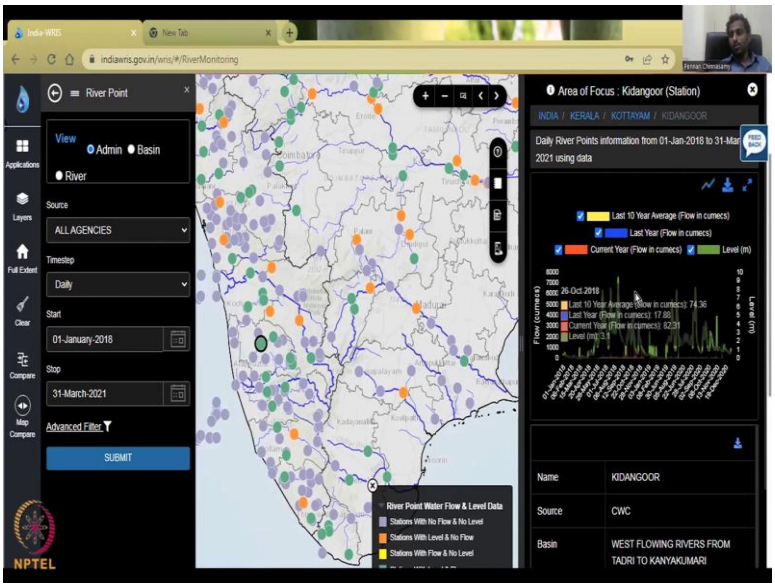
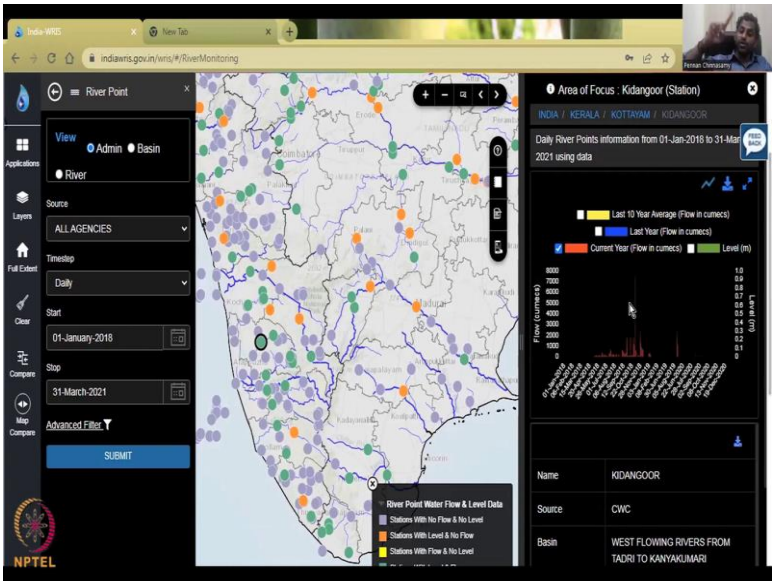
Source
CWC
Basin
WEST FLOWING RIVERS FROM
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
NPTEL





And most of the telemetry stations have both the manual stations have very limited data. So, for example, here you go to settings and then go to number of manual. So, there is a big difference that we have telemetry. So, here for example Aappuzha, there is one station and that one station is telemetry, so hopefully it has the data, so it is taking some time to load.

So, what do you see here is all most of these agencies are CWC because the river is still a central, government property, then you can, you can have state agencies build dams and other structures. But at the end of the day, it is still integral part of the central government's exercise. So, that is where you could see some data still being monitored whereas, other data are not showing up in this page, like your level and the discharge should show that only level is showing.

Maybe I think we should just go back further, they have not processed it. So from level, they will process it into discharge. So maybe the data is not processed, so we can go back again to see if they have some older data that can be processed. So, for example, if this does not come up, I wanted to show you a live exercise of this data, here, and you can see that this is a big error.

How can flow be so high the level and suddenly jumped to 0, it was 90, and then suddenly 0, maybe it got fully depleted but still that cannot explain such a big jump. I am going to click continue at the same date, so 3-4 years back and a shorter date so that we could look at the flow. So, I am taking a very short time see this is the other thing when when you run the whole date scenario that the whole of India the map is running and it is fetching the data. That is why you see a big time to see the blue line crossing.

And when it crosses to here to 0, if you do not see the blue line moving, then you should better stop the program and then refresh it. so now it is stopped, but I will give it a minute. Because it might be ending the thing so it says, wait, I will go to go to wait because I know it has been working from today, you some data point is not working.

So, I am just going to wait for it little more seconds and then you will see the data coming up. There it is and you can see the data and more green color. So, I am just going to click one more green agency and it would not take time it just quickly come because the number of days is minimum, just pick 3 months. So, daily data for three months, so this is how you should look at data for your work. And trust me even though your 3000, 4000 stations not all stations will have all the data.

So, you will have to find the payer for example your district or village one data point from the government which is good and from that you should build a story or go to the NIH or other agencies, CWC agency offers and you could write a letter to your educational institution and collect the data data collection is another game.

So, here this level is given which looks fine, it looks fine as in you know that this level is trustworthy, because it fluctuates and level has to fluctuate because it can be only a straight line when it does not that. ast 10 years I do not need and then last 10-year flow also. Now, you could see the flow, the current year flow is going up and then beautifully coming down at zero and then a small blip. So, which means it has been moving across and then coming down.

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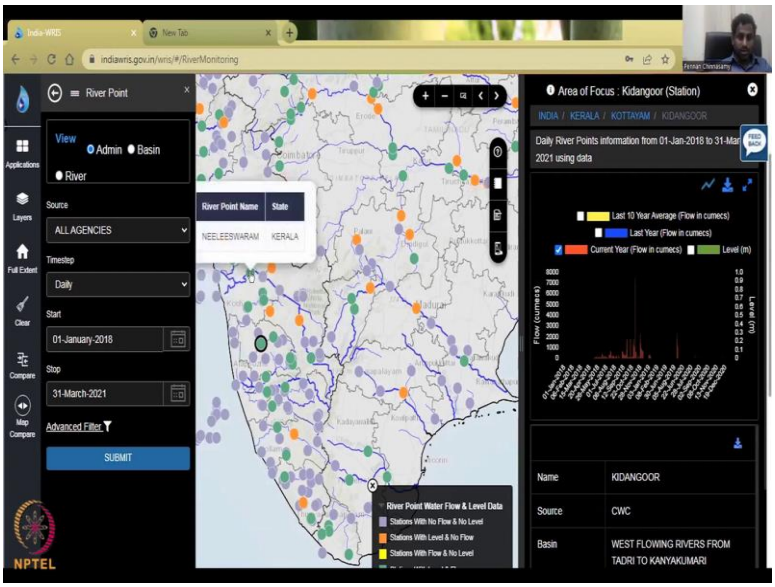
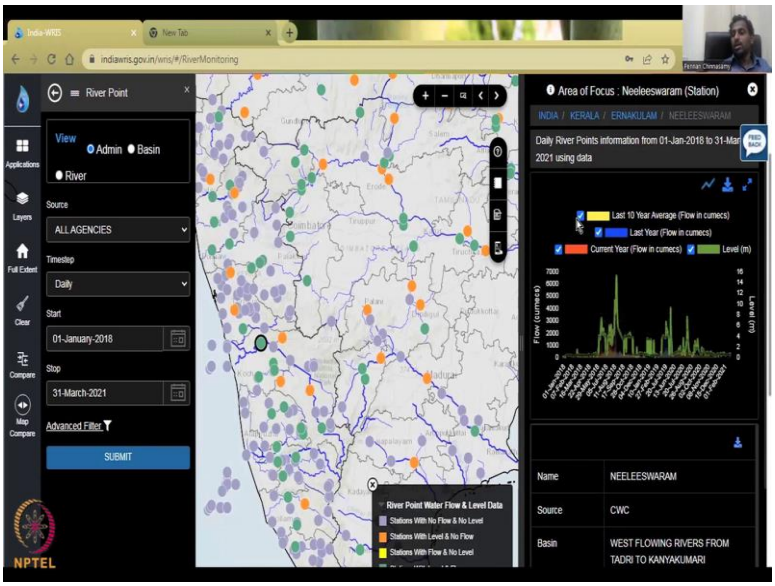
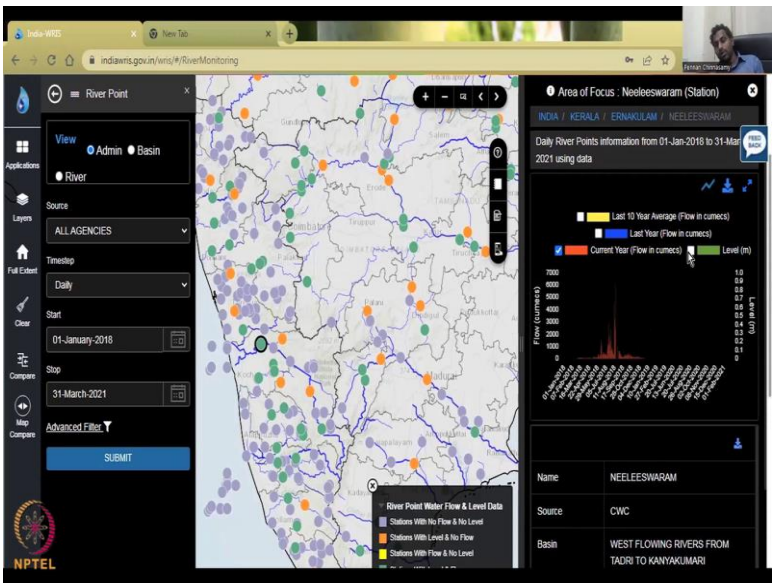
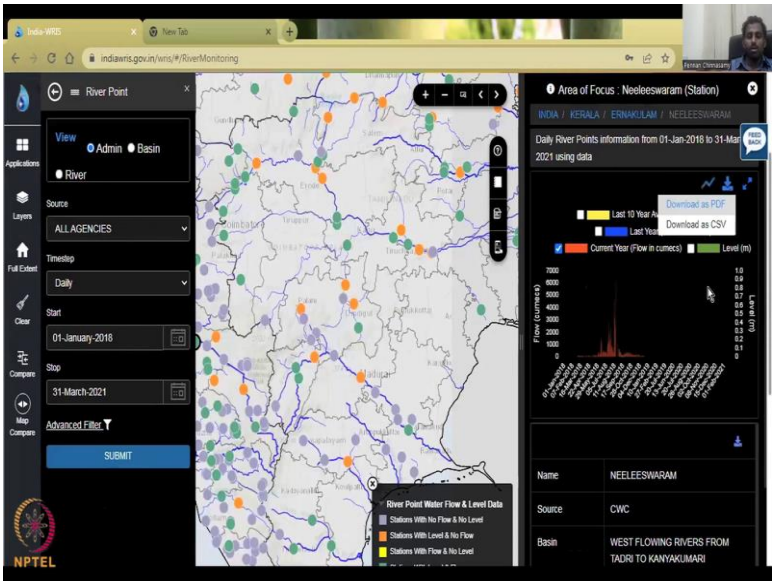






India-WRIS
New Tab
indiawris.gov.in/wris/#/RiverMonitoring
River Point
Area of Focus : Neeleeswaram (Station)
Daily River Authority trends for Neeleeswaram from 01-Jan-2018 to 31-Mar-2021
Source
Time Step
Start
Stop
ALLAGENCIES
Daily
01-January-2018
31-March-2021
GO
Show Grids
Last 10 Year Average (Flow in cumecs)
Last Year (Flow in cumecs)
Current Year (Flow in cumecs)
Level (m)
Flow (cumecs)
Level (m)
17-Jul-2020
Current Year (Flow in cumecs) -
Level (m): 1.25
NPTEL


India-WRIS
New Tab
indiawris.gov.in/wris/#/RiverMonitoring
River Point
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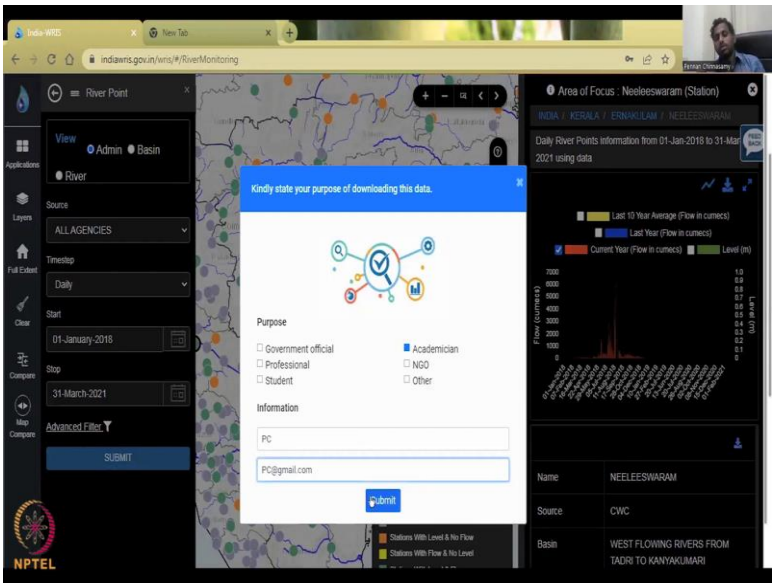
Advanced Filter
SUBMIT
Area of Focus : Neeleeswaram (Station)
INDIA / KERALA / ERNAKULAM / NEELEESWARAM
Daily River Points information from 01-Jan-2018 to 31-Mar-2021 using data
Download as PDF
Download as CSV
Current Year (Flow in cumecs)
Level (m)
Flow (cumecs)
Level (m)
River Point Water Flow & Level Data
Stations With No Flow & No Level
Stations With Level & No Flow
Stations With Flow & No Level
Name
NEELEESWARAM
Source
CWC
Basin
WEST FLOWING RIVERS FROM TADRI TO KANYAKUMARI
NPTEL


India-WRIS
New Tab
indiawris.gov.in/wris/#/RiverMonitoring
River Point
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ALLAGENCIES
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01-January-2018
Stop
31-March-2021
Advanced Filter
SUBMIT
Area of Focus : Neeleeswaram (Station)
Daily River Points information from 01-Jan-2018 to 31-Mar-2021 using data
Kindly state your purpose of downloading this data.
Purpose
Government official
Academician
Professional
NGO
Student
Other
Information
PC
PC@gmail.com
Submit
Last 10 Year Average (Flow in cumecs)
Last Year (Flow in cumecs)
Current Year (Flow in cumecs)
Level (m)
Flow (cumecs)
Level (m)
Name
NEELEESWARAM
Source
CWC
Basin
WEST FLOWING RIVERS FROM TADRI TO KANYAKUMARI
NPTEL

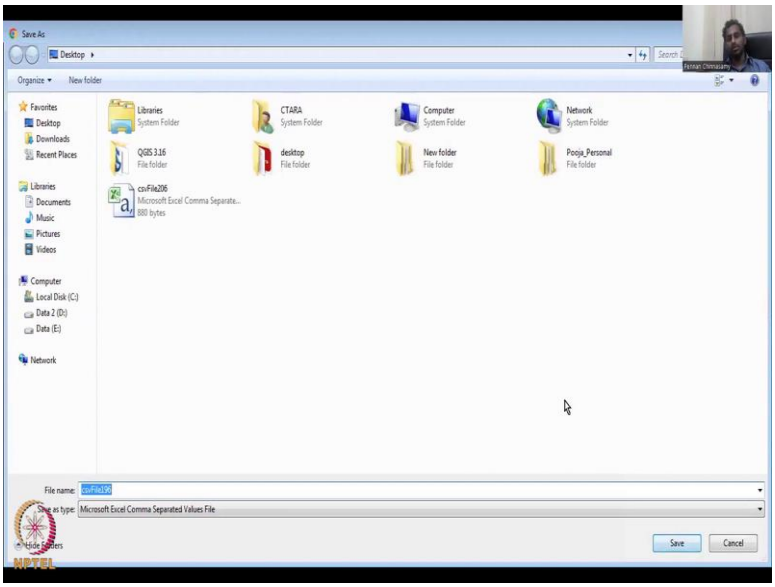
So, which which is kind of agreeable, and Neeleeswaram is a good station. There has been a paper from our group on Neeleeswaram water station. So, only some stations are good and they collect data for a longer time. and then I will just now complete the exercise by showing how to download it, which all of you know by now you just click the arrow mark which is pointing down symbol saying the download option and then it will ask you your email, name and then your academy qualification or why you want to use the data. So, you could say that I am using it for research academic or I can government or non-government that is fine. If it is non-government, it might ask you some more data on why you need the data. So, same here you could see the jumping of river patterns which is very important and needed for this kind of exercise.

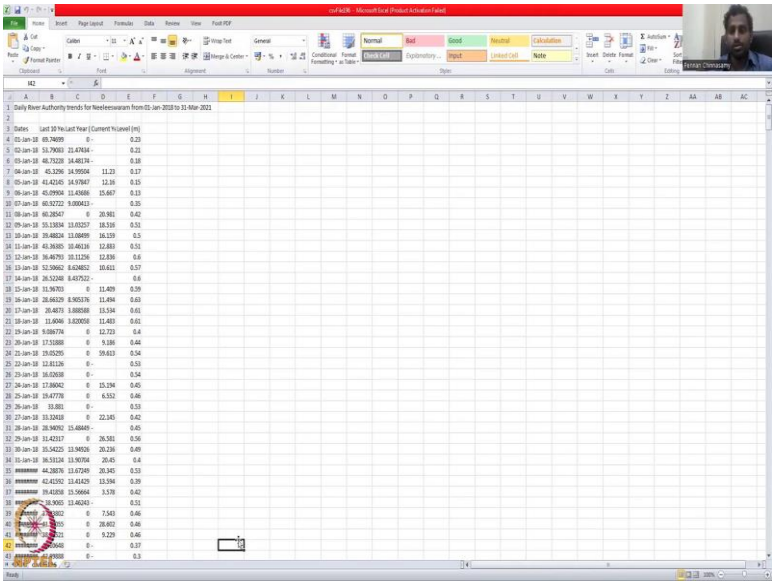
So, I am moving the level of it is kind of slow not allowing me to do it. But again, you could see the point, so now the blue line is coming, which is last year flow I do not need the last year flow, I need the current year flow and the level the level is converted to a flow, remember?

So, when there is 0 for example, I am just going to pull it back and 0 or negligible level there is no flow according to this model and no flow a very less flow which cannot be captured because of the high access but when you download the data, you could for sure look at the changes. So, now we will see in much better as I said I do not need the last 10 year, I do not need the las year flow, I need the current tier flow and how that relates to the level so the level is going like this and for the level you have a flow so this is being modeled into the system, so that you could use it for the hydrological water balance.

So, I am just going to close this and then show you how to download the data. Click on download on a CSV and it asks you this academic and information so I will say PC is my name, pc at gmail dot com and submits. In between columns you can take the data all these things will come here last year, last year flow, etc. Let me show you again, you can download and then get it as a CSV.

(Refer Slide Time: 28:05)





So is asking me to save a file, let me save the file and open it for you. Now, it is opening up, does take some time, but yes, so I am going to share the screen. So, now you could see my excel sheet and you could see how the river authority name, suppose given the date range is given. And you should know that the lat long was not given all these can be taken from the bottom menu which we had earlier.

And then you have the data on one thing the last 10-year average, last in year flow, and then currently are average, and current year flow. So, all there is lot of data apps which is from our user end, but also there are some zeros which is not true, because it could be an error or just the flow did not happened.

Thinking that the flow did not having dug into 0 in the last 10 years or the last year is not correct, these averages and the current year shows a different pattern which is happening. So now you can show that the send yours and all the data flow in your database. With this I will conclude today's class. I will see you in the next class. Thank you.