2026

IoT Data Integration

IOT BASED MODELLING

NIC, DDWS CELL

Published: 2026

Introduction

This operational manual introduces a concerned user with the following digital application related to **Internet of Things (IoT)** systems. These are being implemented by Department of Drinking Water Sanitation, Ministry of Jal Shakti/ Government of India.

- ***Workflow:*** The workflow section describes various steps in step-by-step manner that should be followed by user of the application to work with IoT systems. *(Refer to Section I: Workflow here)*. A user can access this web application using the URL given below:

https://ejalshakti.gov.in/IoT_Web/

- ***Dashboard:*** The dashboard application provides insights for the progress made using IoT systems across the nation in context of water schemes under Jal Jeevan Mission. *(Refer to Section II: Dashboard here)*.
- You can access using the URL given below:

https://ejalshakti.gov.in/jjmreport_hi/iot/iotindia.aspx

Section I:
IoT Workflow

https://ejalshakti.gov.in/IoT_Web

1. Workflow

IoT Agency Registration

- Create new account for login

Sensor Registration

- Enter/ Submit Sensor devices details

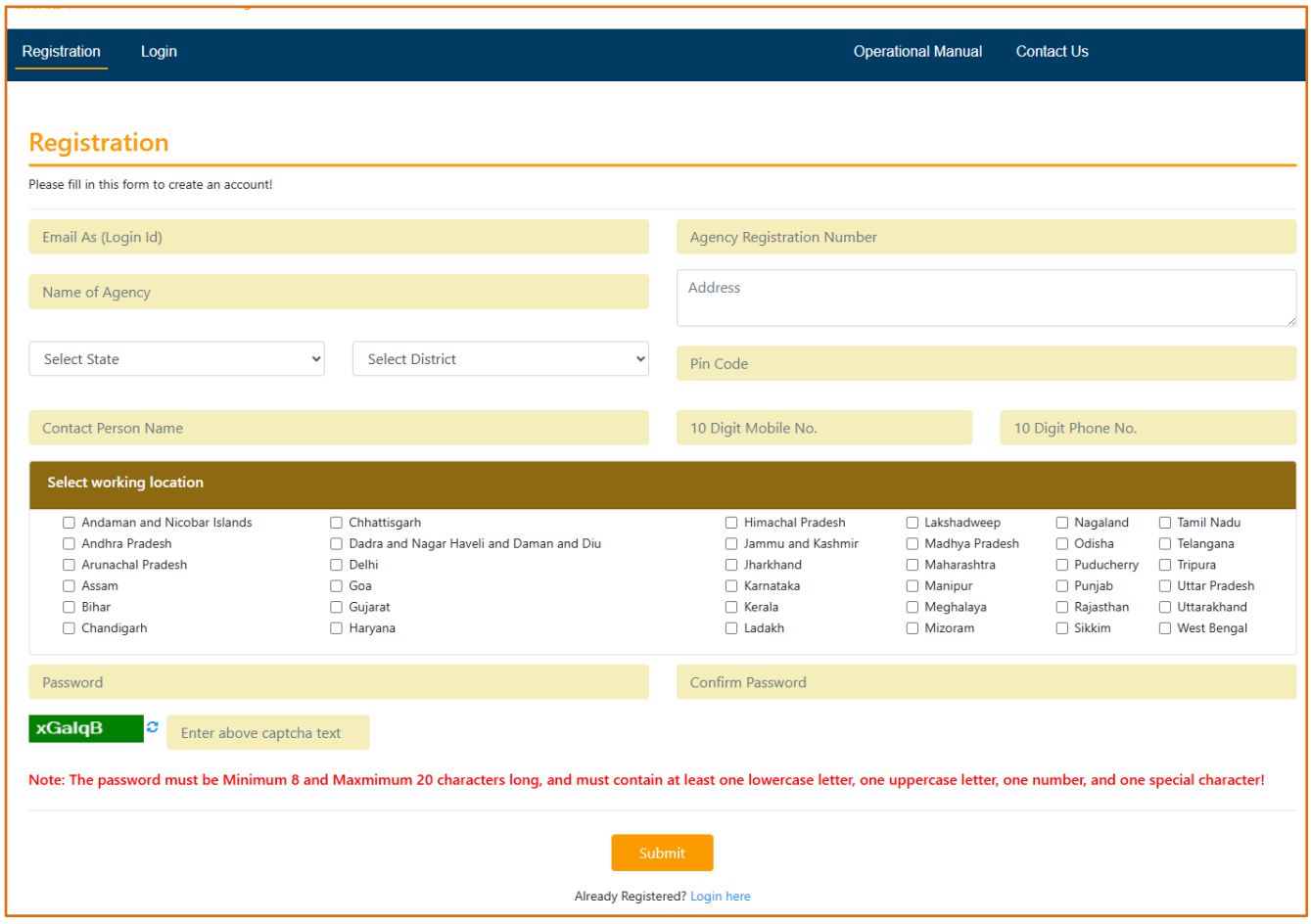
Data Synchronization using Web API POST Method

- Flow Meter
- Chlorine Analyzer
- ph Level
- Turbidity
- LevelSensor

2. Agency Registration

Fill out the registration form for the following fields to create a new user account.

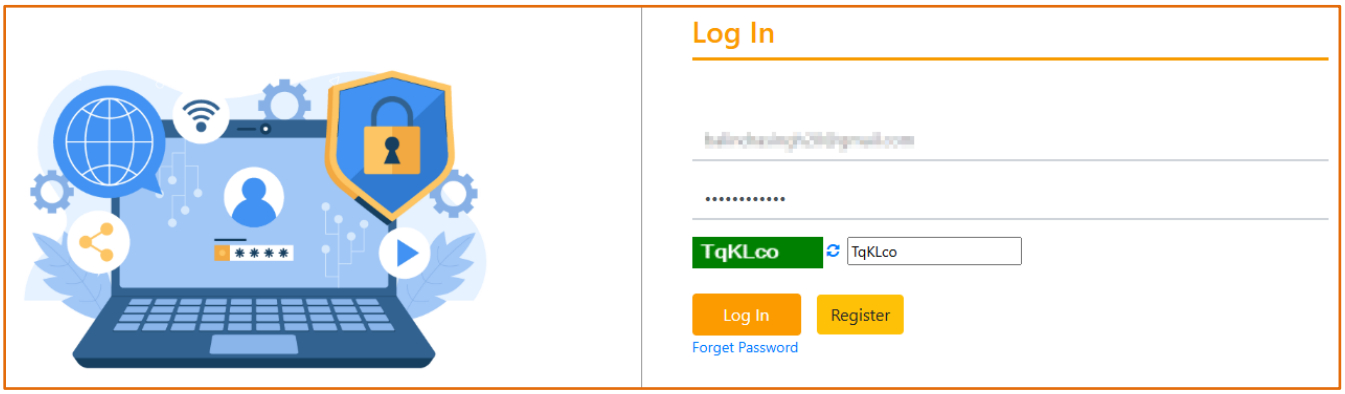
- Input email id,
- Enter registration number of the Agency,
- Name of the Agency,
- Input Address ➔ Select State ➔ District ➔ Input PIN code of the area.
- Contact person name ➔ Mobile No. ➔ Phone No.
- Mobile number of the contact person, etc.
- Select name of work location/ State (more than one if applicable).
- Create Password by entering the same password in provided boxes.



3. Login (By Approved Agency User)

Once an admin has approved agency's registration, they can follow steps given to login into IoT portal.

- Click Login tab available on home screen to login into website.
- Once, Login tab is clicked, login form appears on screen.
- Enter registered Email Id and Password to login.
- Enter Captcha displayed on screen.
- Click on the Login button to proceed.

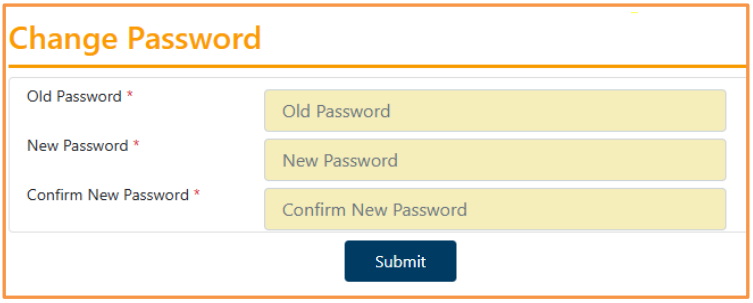


After successful login, user can submit IoT devices details using the following modules:

- Sensor Registration
- Web API Registration

Change Password

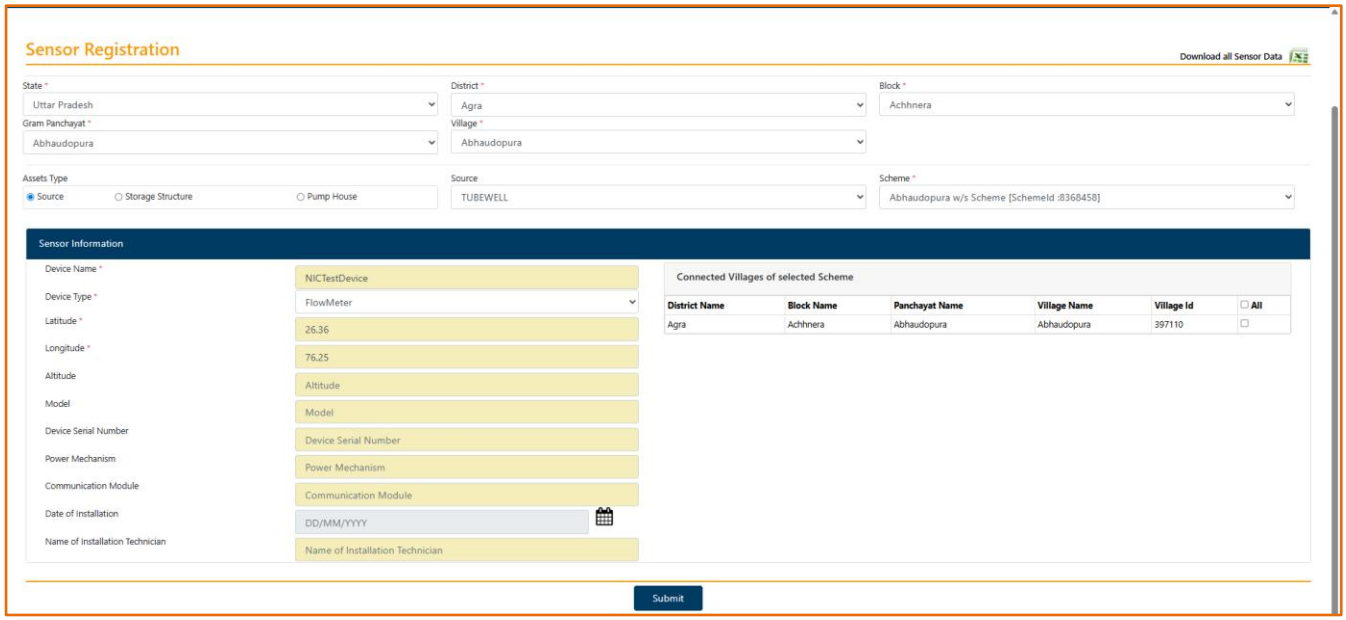
1. Click on the **Change Password** menu
2. On the next form Enter Old Password, New Password.
3. After enter the same password in "Confirm New Password" field
4. Click on the Submit button to save the information on a server for further processing.
5. There after user need to re-login and continue his session.



4. Sensor Registration

Steps to enter details for sensor related information are illustrated as follows:

1. Click Sensor Registration
2. Location of sensor (state to village name),
3. Select “Assets Type, Source, Scheme”
4. Input Sensor Information: After that input the following:
   a. *Device name,*
   b. *Location Lat-long,*
   c. *Altitude,*
   d. *Model,*
   e. *Device serial number,*
   f. *Power Mechanism,*
   g. *Communication module,*
   h. *Date of installation,*
   i. *Name of installation technician, etc.*



Once, sensor information has entered, user can work with the next step initiate Web API Registration into the portal.

Sample registration has been displayed below for reference:

Sensor Registration Information

Sr No.	GatewayId (Sensor deviceCode)	Device Name	Device Type	Latitude	Longitude	Altitude	Model	Device Serial Number	Power Mechanism	Communication Module	Date of Installation	Name of Installation Technician	Location	SchemeId	Edit
1	GWP_101	12344	FlowMeter	421	1243143	2134	12431234	1243134	1234143	1234134	10/12/2025	123412431243	**State:** Uttar Pradesh **District:** Agra **Block:** Achhnera **Panchayat:** Abhaudopura **Village:** Abhaudopura	0007229092	Edit

5. Web API Registration

Steps for Web API registration information are illustrated as follows:

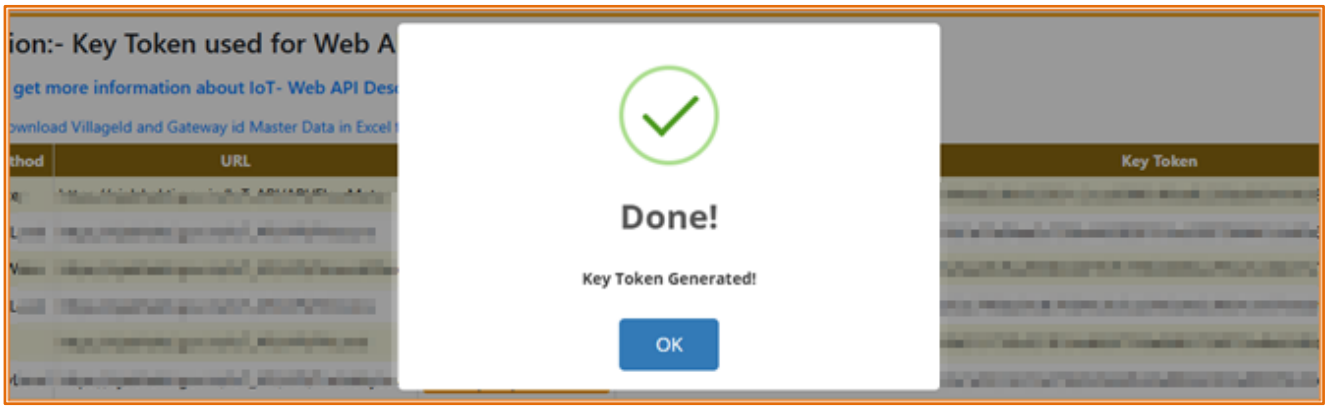
1. Click Web API Registration tab and following screen appears**:**

Sr No.	Api Method	URL	Action	Key Token	Expire Date
1	FlowMeter	https://ejalshakti.gov.in/IoT_API/API/FlowMeter	Already Key Generated	a1e66d6c0c8b932826cd3c39d568df508f1579943de5ee910c122e0a307ba87a1ae92a6372b50dfd522f59ae0a7a40d91af3835d0fb14e6665a1ae2912f71a89	26/12/2026 06:09:55 PM
2	ChlorineLevel	https://ejalshakti.gov.in/IoT_API/API/Chlorine	Already Key Generated	3daf45bed1cf59e67bf05dafe5b80c693025152e0f4cc56a57ed10874e8f60329e1c6bc6ebf627a4fdcbbb8f07e26c57712f9e4c624c3ac63a64f173856932 8f	29/01/2027 05:18:35 PM
3	PHSensor	https://ejalshakti.gov.in/IoT_API/API/LevelSensor	Already Key Generated	895ad8428c07032de1df35e0c1c032e22664d12e1699d05ef3fd6045415761218f74c8372cbe9c59e9032bb7f5437481edc06449405e88f1c80489ff773aa3c4	26/12/2026 06:09:55 PM
4	TurbiditySensor	https://ejalshakti.gov.in/IoT_API/API/LevelSensor	Already Key Generated	895ad8428c07032de1df35e0c1c032e22664d12e1699d05ef3fd6045415761218f74c8372cbe9c59e9032bb7f5437481edc06449405e88f1c80489ff773aa3c4	26/12/2026 06:09:55 PM
5	LevelSensor	https://ejalshakti.gov.in/IoT_API/API/LevelSensor	Already Key Generated	895ad8428c07032de1df35e0c1c032e22664d12e1699d05ef3fd6045415761218f74c8372cbe9c59e9032bb7f5437481edc06449405e88f1c80489ff773aa3c4	26/12/2026 06:09:55 PM

By using **Web API registration**, user can:

- Generate Key for Web API header authorization, by clicking **Generate Key** button.

When **Generate Key** button is clicked, alert message appears as shown below:



Click **OK** to proceed further.

Once a key is generated for a API, the button changes its text "**Already Key Generated**"

Sr No.	Api Method	URL	Action	
1	FlowMeter	https://ejalshakti.gov.in/IoT_API/API/FlowMeter	Already Key Generated	276124f5aa36ea6f385b5ffc1bef86f
2	ChlorineLevel	https://ejalshakti.gov.in/IoT_API/API/Chlorine	Already Key Generated	9406ebd57cb6e5f7438c495cea32f5
3	pHLevel	https://ejalshakti.gov.in/IoT_API/API/PhLevel	Already Key Generated	1aba4346aaba5939411de61f9cb0a

6. IoT Web API Description

Note: You can view web API description from https://ejalshakti.gov.in/IoT_API/Help and check functionality of Web APIs using **Postman** App.

1. FlowMeter API

- URL: https://ejalshakti.gov.in/IoT_API/API/FlowMeter
- Service method: POST
- Input Parameters:

Name	Description	Type	Additional information
VillageId	10-digit Village ID	string	Required
GatewayId	Gateway ID	string	Required
WaterSupply	Water supply	integer	Required
LPCD	Liter per capita per day	Decimal number	Required
Date	Date in format YYYY-MM-DD	Date	Required

- Sample Input Format:

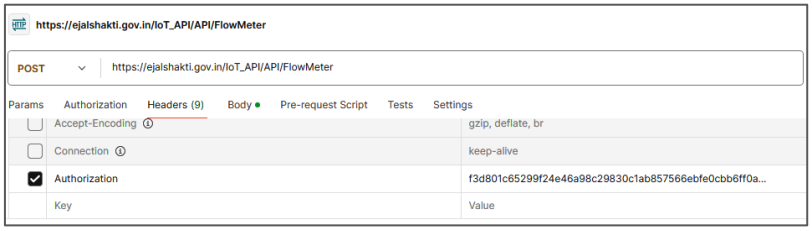
```
{
  "VillageId": "sample string 1",
  "GatewayId": "sample string 2",
  "WaterSupply": 3,
  "LPCD": 4.0,
  "Date": "2021-09-06"
}
```

Note:

- You can copy the Village ID and Gateway ID from Excel downloaded from Web API registration tab.

Steps to check functionality of web APIs using Postman App:

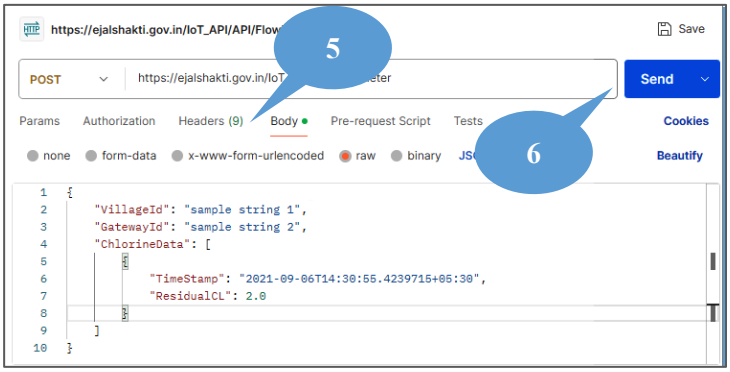
1. Open Postman app on your computer,
2. Select method as POST from drop-down menu.
3. Enter API path (URL) in the URL section.
4. At Header tab of Postman, enter Authorization Key as shown in figure on the right



Note:

- You can copy the Authorization key from Web API Registration tab of https://ejalshakti.gov.in/IoT_Web

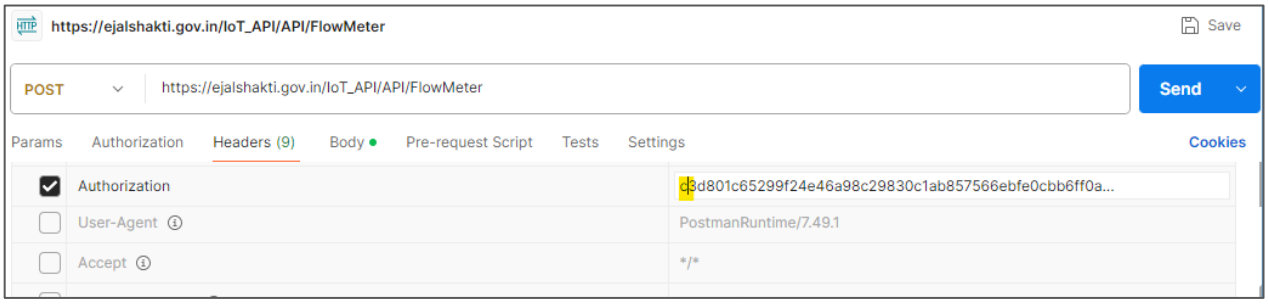
5. Now, click on the Body tab and select radio-button option as raw and JSON from drop down menu placed on the right.
6. Enter input parameters and click on the Send button.



Output:

Once the Send button is clicked, the output appears on screen as shown in figure provided below:

In case, you've **mistyped** Authorization key (for instance replaced first letter 'f' with 'c') and click on the send button – execution of the web API will be failed. *(Refer to figures given below.)*



Similarly, output for other Web APIs can be checked using Postman app.

2. Chlorine API

- URL: https://ejalshakti.gov.in/IoT_API/API/Chlorine
- Service method: POST
- Input Parameters:

Name	Description	Type	Additional information
VillageId	10-digit Village ID	string	Required
GatewayId	Gateway ID	string	Required
ChlorineData	Comprises set of date-time and Residual chlorine level	Collection of chlorine Data	Required

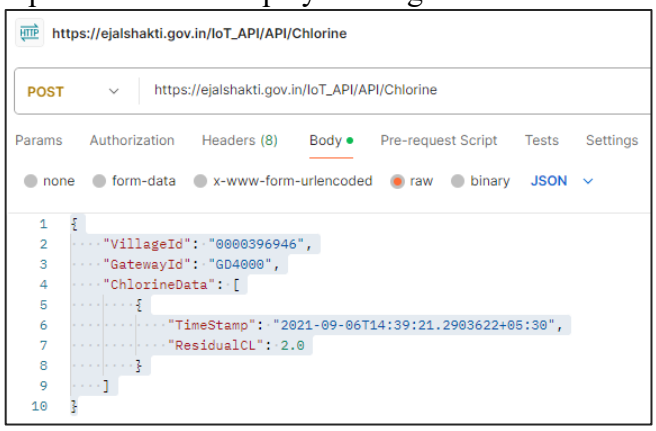
- Sample Input Parameters:

```
{
      "VillageId": "sample string 1",
      "GatewayId": "sample string 2",
      "ChlorineData": [
            {
            "TimeStamp": "2021-09-06T14:30:55.4239715+05:30",
            "ResidualCL": 2.0
            }
         ]
}
```

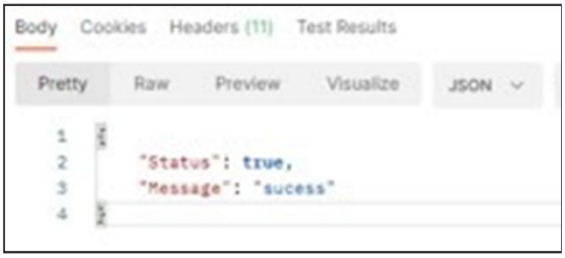
OR

```
{ "VillageId": "sample string 1",
   "GatewayId": "sample string 2",
   "TimeStamp": "2026-01-30T12:43:59.5331536+05:30",
   "ResidualCL": 2.0
}
```

Input entered are displayed in figure:



Output:



3. PHLevel API

- URL: https://ejalshakti.gov.in/IoT_API/API/PHLevel
- Service method: POST
- Input Parameters:

Name	Description	Type	Additional information
VillageId	10-digit Village ID	string	Required
GatewayId	Gateway ID	string	Required
PhLevelData	Comprises set of date-time and PH level	Collection of PH Level Input Data	Required

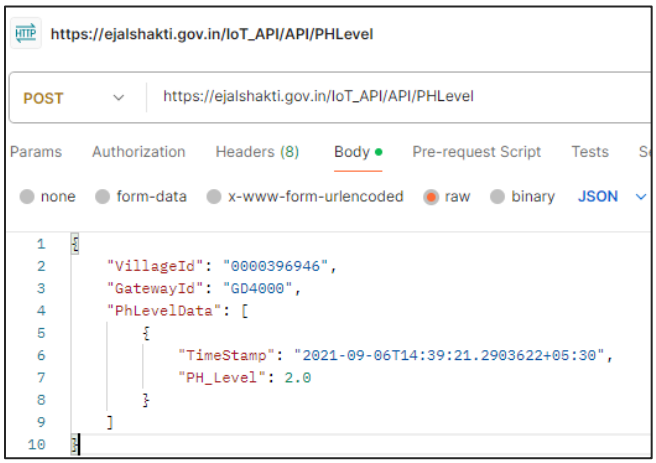
- Sample Input Parameters

```
{
      "VillageId": "sample string 1",
      "GatewayId": "sample string 2",
      "PhLevelData": [
            {
            "TimeStamp": "2021-09-06T14:43:58.8067943+05:30",
            " PH_Level": 2.0
            }
         ]
}
```

OR

```
          {
              "VillageId": "sample string 1",
              "GatewayId": "sample string 2",
              "TimeStamp": "2026-01-30T14:07:07.9690393+05:30",
               "PH_Level": 4.0
          }
```

- Input entered are displayed in figure:



Output:

4. TurbidityLevel API

- URL: https://ejalshakti.gov.in/IoT_API/API/TurbidityLevel
- Service method: POST
- Input Parameters:

Name	Description	Type	Additional information
VillageId	10-digit Village ID	string	Required
GatewayId	Gateway ID	string	Required
TurbidityLevelData	Comprises set of date-time and turbidity level	Collection of Turbidity Level data	Required

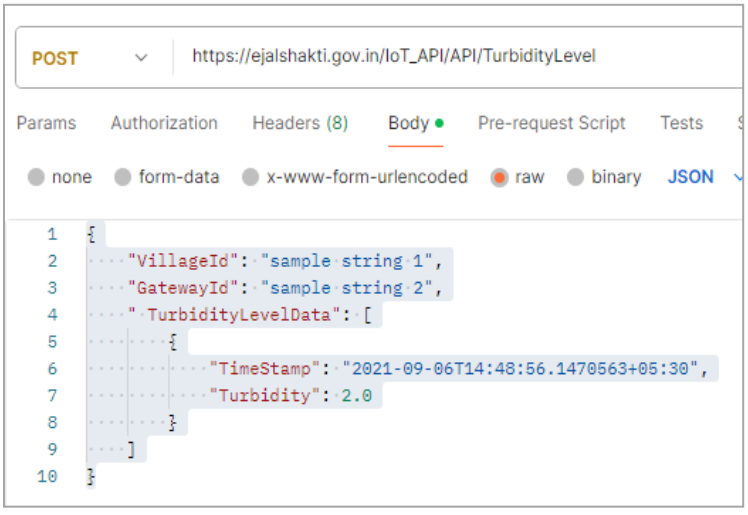
- Sample Input Parameters:

```
{
      "VillageId": "sample string 1",
      "GatewayId": "sample string 2",
      "TurbidityLevelData": [
            {
            "TimeStamp": "2021-09-06T14:48:56.1470563+05:30",
            "Turbidity": 2.0
            }
         ]
}
```

OR

```
{
     "VillageId": "sample string 1",
    "GatewayId": "sample string 2",
    "TimeStamp": "2026-01-30T14:07:09.3766558+05:30",
    "Turbidity": 4.0
}
```

Input entered are displayed in figure:



Output:

5. LevelSensor API

- URL: https://ejalshakti.gov.in/IoT_API/API/LevelSensor
- Service method: POST
- Input Parameters:

Name	Description	Type	Additional information
VillageId	10-digit Village ID	string	Required
GatewayId	Gateway ID	string	Required
LevelSensorData	Comprises set of date-time and levelSensorData	Collection of LevelSensorData	Required
TimeStamp	Date time information	date	Datatype: DateTime

- Sample Input Parameters

```
{
      "VillageId": "sample string 1",
        "GatewayId": "sample string 2",
        "LevelSensorData": [
          {
            "TimeStamp": "2026-02-17T15:26:40.7110048+05:30",
            "LevelSensorValue": 2.0
          }
         …
         ]
}
```

OR

```
{     "VillageId": "sample string 1",
      "GatewayId": "sample string 2",
     "TimeStamp": "2026-01-30T14:07:10.3810282+05:30",
      "LevelSensorValue": 4.0
 }
```

Input entered are displayed in figure:

Output:

7. IoT Data Status

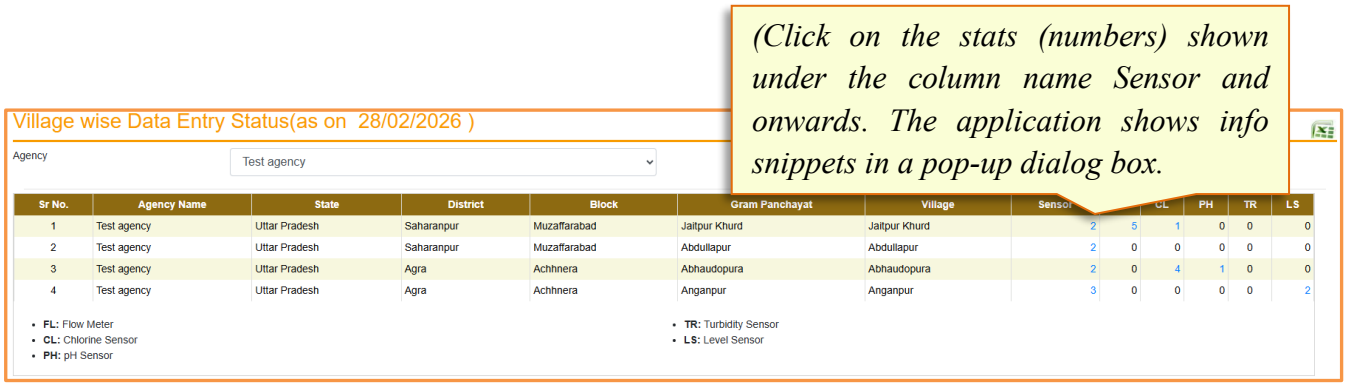
Admin can view the following reports after a successful login:

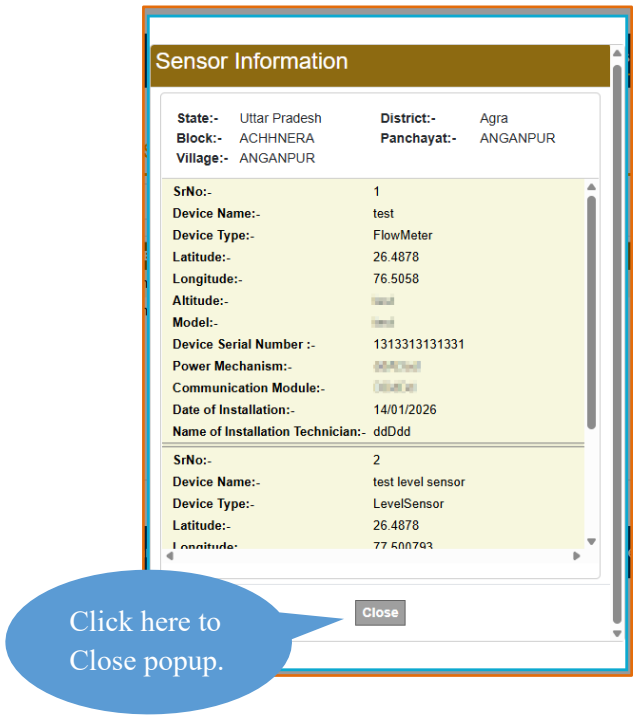
- Registered Agency
- Sensor, Gateway, various parameters information.

Registered Agency:

Steps to view Registered Agency report:

1. Login using credentials.
2. After successful login, select Registered Agency tab available on screen.
3. Click on the numbers button, as shown in figure below:



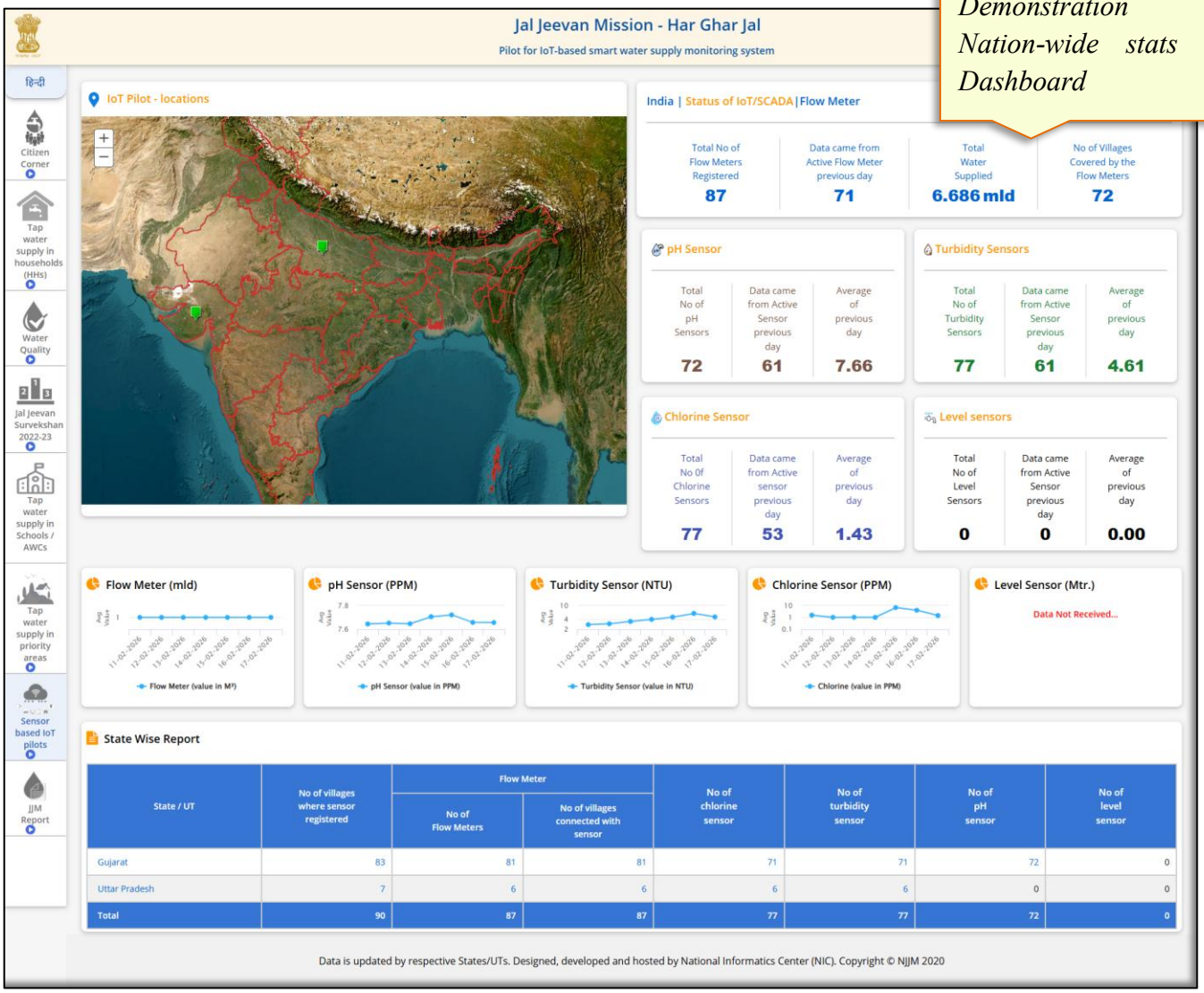


Section II:
IoT Dashboard

https://ejalshakti.gov.in/jjmreport_hi/iot/iotindia.aspx

Section II: IoT Dashboard

The IoT dashboard enables a user to see the data entered on the IoT Web Application. This application is accessible to the public user also, so that they can view progress of IoT systems on their location with the help of map/ data provided. It looks similar to the screenshot provided below:



Demonstration of Nation-wide stats on Dashboard

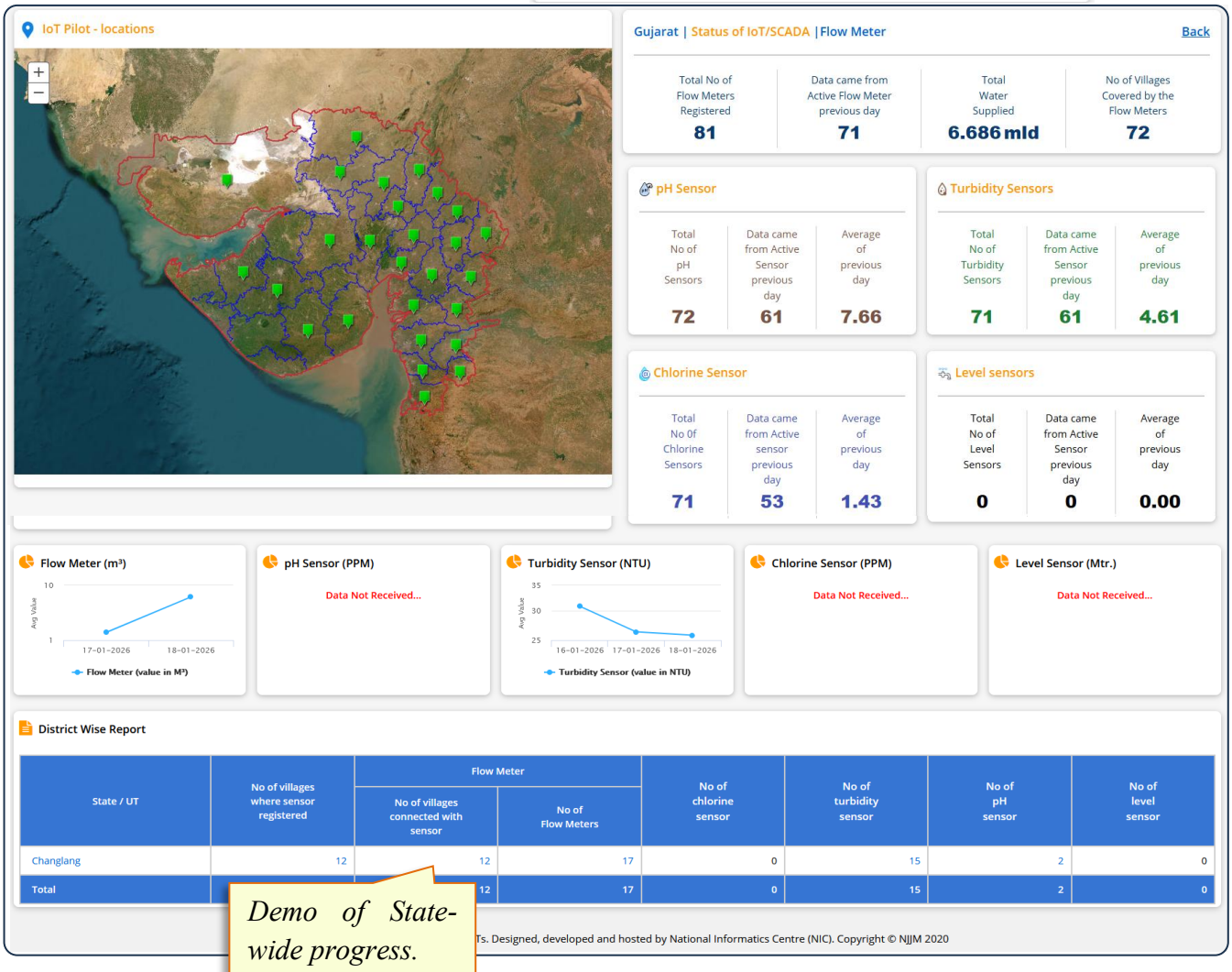
The previous screenshot provides **nation-wide** progress of JJM for IoT implementation.

View State-wide Progress

Further to view **state-wide** progress click on green button/map of a concerned State.

(Once the user mouse hover on the green button, the application displays a snapshot of the IoT devices.)

Hover on the green icon to view progress of a concerned State.



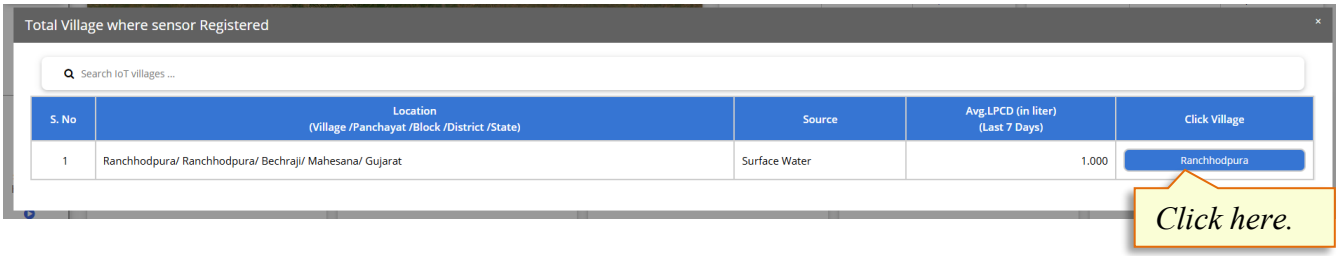
Demo of State-wide progress.

View IoT progress in a District

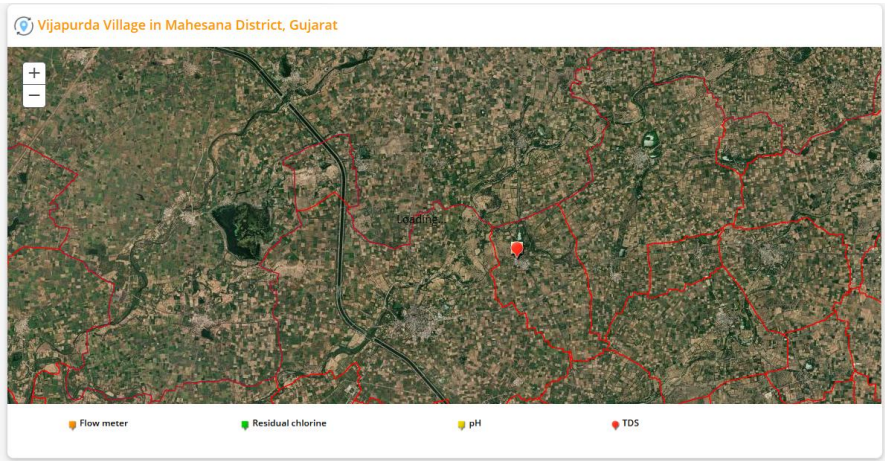
1. Click on the District name displayed under State/ UT column.

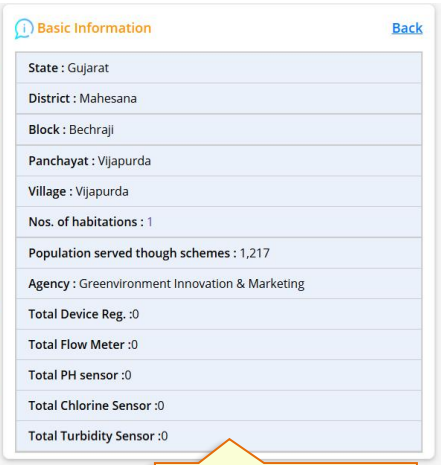
View IoT Progress of Villages

1. Click on the Block name displayed under State/ UT column. *(Refer to the above figure)*
2. Click on the name of village as highlighted in the figure given below.



Once the user clicks on the Village name button. The application displays details IoT progress. *(Refer to the next screenshot.)*





Detailed info of IoT systems in the selected Village.

Assets

S. No.	Assets Id	Assets Type	Assets Location	Latitude/ Longitude
No record Found				

Scheme

S. No.	Scheme Id	Scheme name	Sanction year	Year of commissioning
1	0005096957	WASMO-Vijapurda	undefined	2012-2013