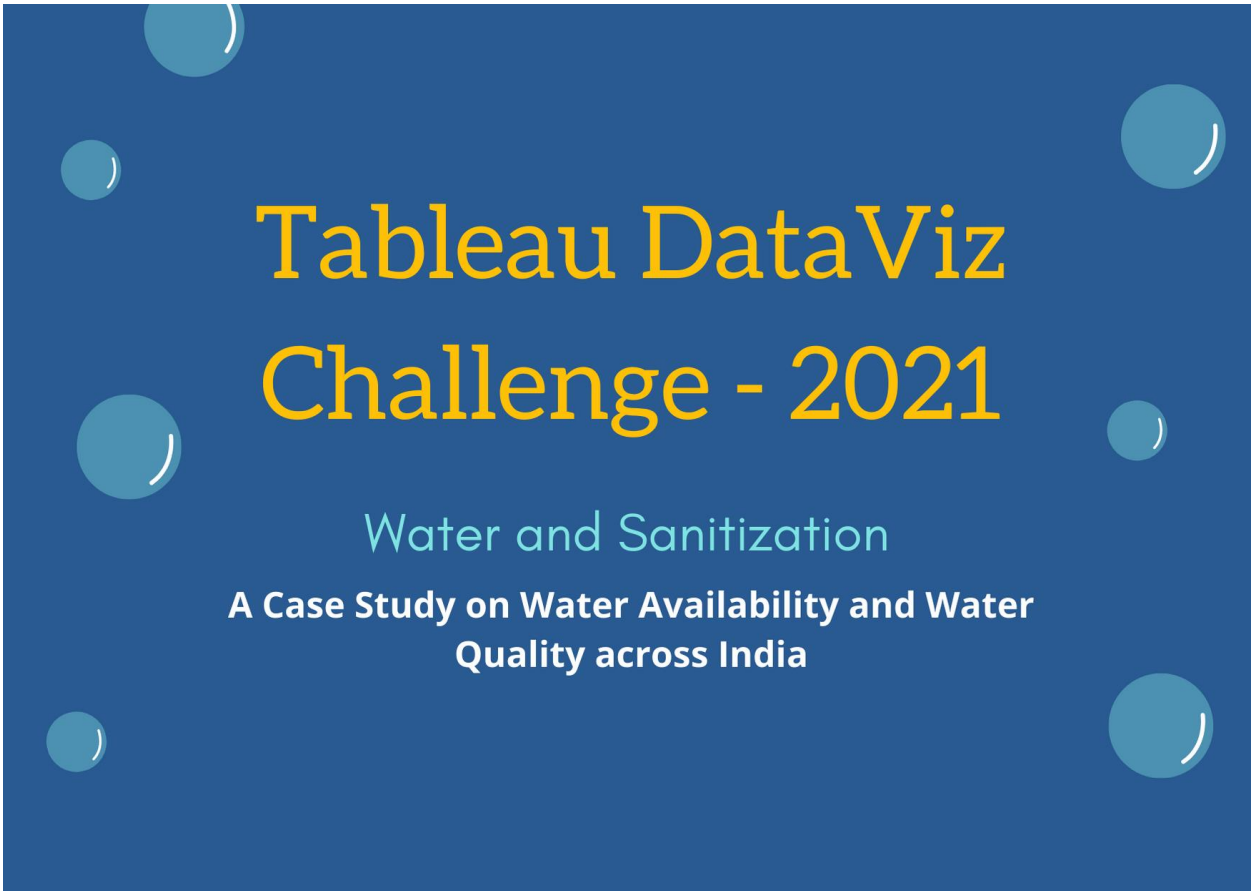


Water is the most important and valuable natural resource on Earth. It sustains all life and life itself originated in water. Before the discovery of traces of water on Mars, Earth was the only planet in the solar system to contain water. About 71% of Earth's surface is covered with water, but only 3% of the available water is freshwater. About two-thirds of the freshwater lies frozen in the form of glaciers and ice caps. The rest of the small portion is available in the form of groundwater and surface water.

Water is used in the agriculture for irrigation of crops. In industries, water is used as a coolant, solvent and in manufacturing processes. Hydroelectricity is electricity generated with the help of water. Water is also used for navigation and transport of goods. India covers 2.45% of the world area and possesses 4% of world's water resources. Precipitation contributes about 4000 cu km of water to the country. India has a large number of surface water resources, in the form of rivers, lakes, ponds, tanks and other small bodies. The three main rivers of North India are Indus, Ganga and Brahmaputra, which carry 60% of the total surface water in India. The flow of India's rivers constitutes 6% of discharge of all the rivers of the world.

Unmindful use of groundwater has led to the lowering of the water table. Excessive quantity of water used in irrigation increases soil salinity, affecting the crops. Disputes also have arisen where water bodies are shared between two states and distribution of water is in question.

The Water Supply in India has increased greatly from 1980 to present. Still the sad reality is that many people lack access to clean water. Water is one of the most basic human requirement and it is very pathetic that some don't have availability to it. If this continues then the consequences will be drastic.

"Water, water, everywhere, not a drop to drink."
The Rime of the Ancient Mariner -By ST Coleridge

So it is high time that we realize how important it is to ensure judicious use of available water. Also we must take necessary actions so that every citizen of the country have access to safe water!

A Case Study on Water Availability and Water Quality across India

This project aims at analysing the quality and quantity of Portable drinking water in all states across India

Now let's have a look at the story the project tells us!

1. We start by categorizing the states into Fully Covered and Partially Covered based on their water availability

2. Next is the all India caste analysis. This gives us the total population of GENERAL , SC and ST caste people overall within India.
The two pie charts each represent the total current and total covered population

3.

State wise analysis gives the ratio of all the categories of people in each state

4.

Caste wise analysis is a deeper look into the picture. This analysis tells us to what extent the current population are covered with respect to water availability in each state

5.

On completing the quantitative analysis next comes the qualitative analysis. The quality parameter graphs tells to what extent the habitations in every state are affected by each of the Quality affecting parameter

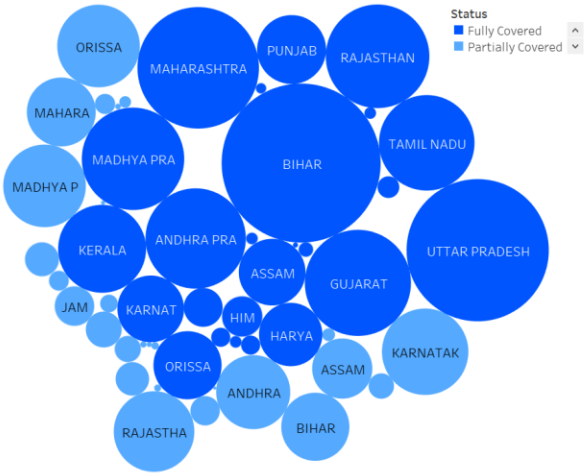
6. Having seen both the Quantitative and Qualitative analysis , we'll move into looking at the Total Budget Allocation state wise

7. The final part of the story reveals the most interesting inference. This part tells us to what extent the allocated budget is spent.

A Case Study on Water Availability and Water Quality across India

States Fully covered or Partially covered | Caste wise Analysis | State wise Analysis | GENERAL Caste Analysis | SC Caste Analysis | ST Caste Analysis | Quality Affected Habitaton | Total Budget Allocation | Tota Tota

States categorised into Fully covered or Partially covered



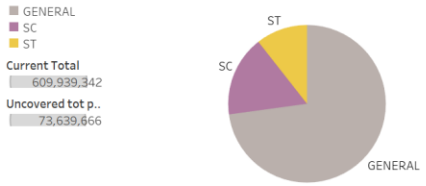
Fully covered indicated that the entire State has the feasibility to portable drinking water.
Partially covered indicated that portable drinking water is not yet available to everyone in the State

GENERAL Caste Analysis | SC Caste Analysis | ST Caste Analysis | Quality Affected Habitations. | Total Budget Allocation | Total Allocaton vs Total Expen... | A Case Study on Water Avail...

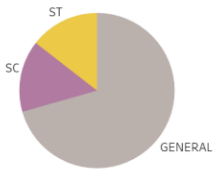
A Case Study on Water Availability and Water Quality across India

States Fully covered or Partially covered | Caste wise Analysis | State wise Analysis | GENERAL Caste Analysis | SC Caste Analysis | ST Caste Analysis | Quality Affected Habitaton | Total Budget Allocation | Tota Tota

Current Population:Caste wise Categorisation in India



Uncovered Population:Caste wise Categorisation in India



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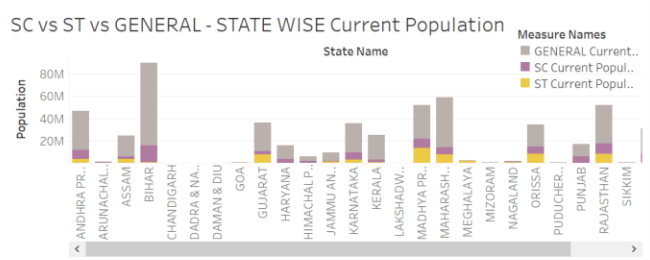

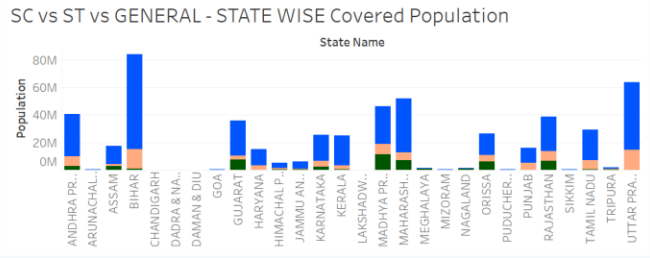

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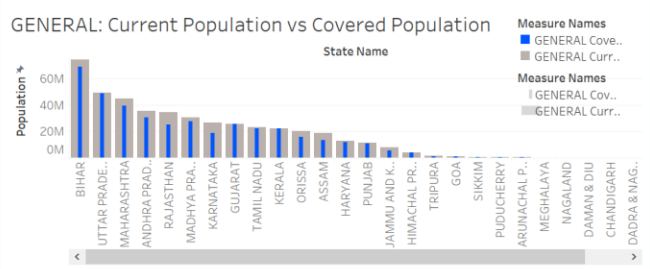

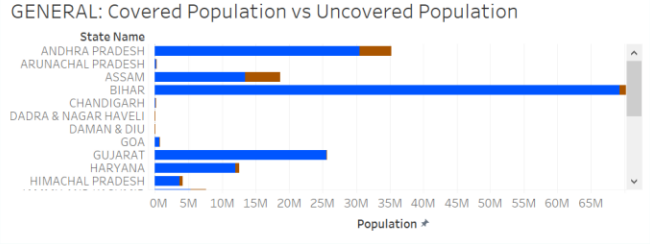

GENERAL Caste Analysis | SC Caste Analysis | ST Caste Analysis | Quality Affected Habitations. | Total Budget Allocation | Total Allocaton vs Total Expen... | A Case Study on Water Avail...

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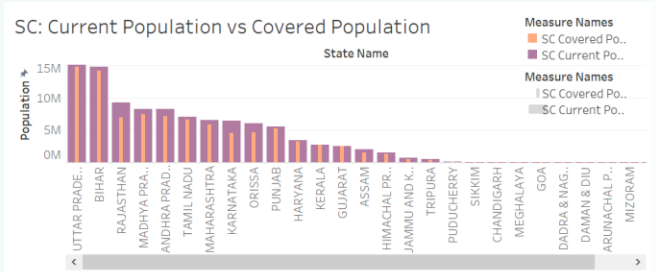

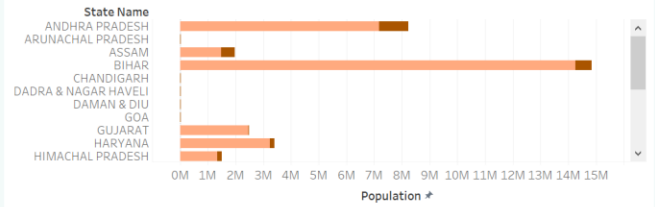

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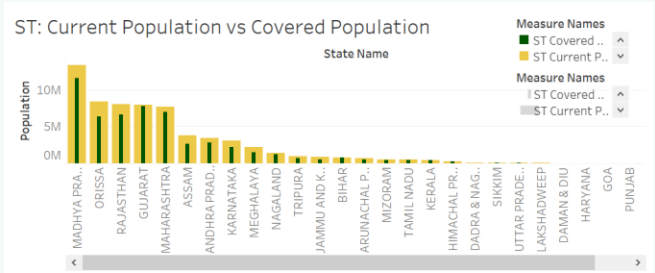
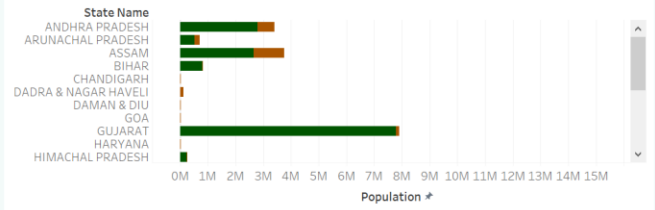


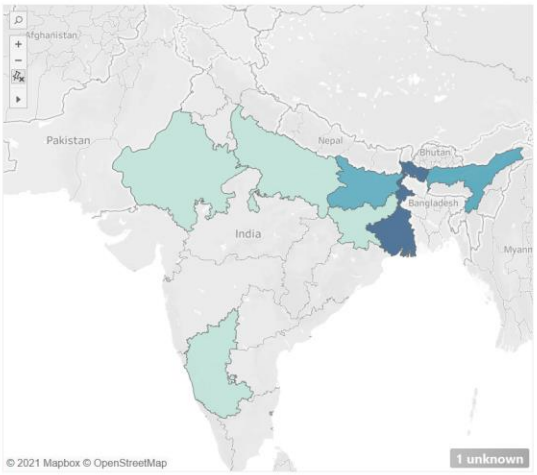


GENERAL Caste Analysis | SC Caste Analysis | ST Caste Analysis | Quality Affected Habitations. | Total Budget Allocation | Total Allocaton vs Total Expen... | **A Case Study on Water Avail...**

A Case Study on Water Availability and Water Quality across India

red ed | Caste wise Analysis | State wise Analysis | GENERAL Caste Analysis | SC Caste Analysis | ST Caste Analysis | Quality Affected Habitaton | Total Budget Allocation | Total Allocation VS Total Expenditure

Quality Affected Habitations



Quality Paramet..
(All)
Arsenic
Fluoride
Iron
Nitrate
Salinity
No of Affected H..
1 2,119

GENERAL Caste Analysis | SC Caste Analysis | ST Caste Analysis | Quality Affected Habitations. | Total Budget Allocation | Total Allocaton vs Total Expen... | A Case Study on Water Avail...

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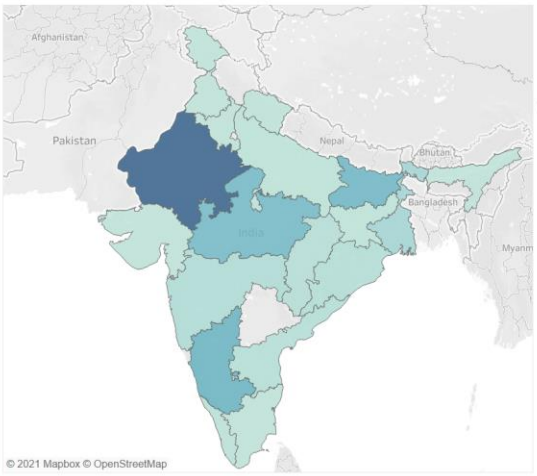
Quality Affected Habitations



Quality Paramet..
(All)
Arsenic
Fluoride
Iron
Nitrate
Salinity
No of Affected H..
2 7,130

GENERAL Caste Analysis | SC Caste Analysis | ST Caste Analysis | Quality Affected Habitations. | Total Budget Allocation | Total Allocaton vs Total Expen... | A Case Study on Water Avail...

A Case Study on Water Availability and Water Quality across India

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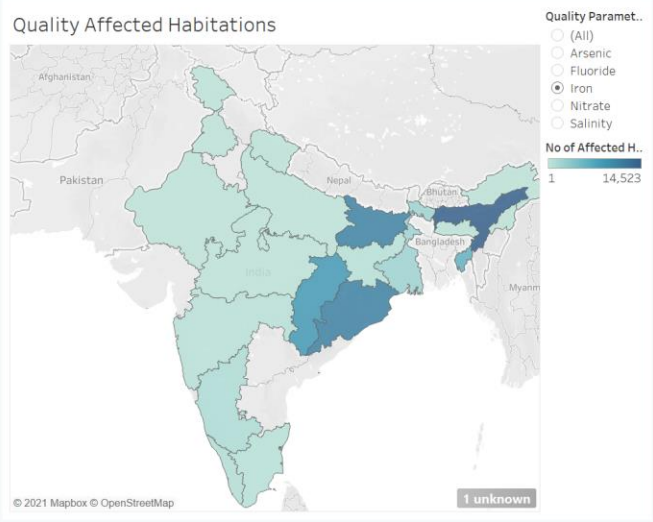

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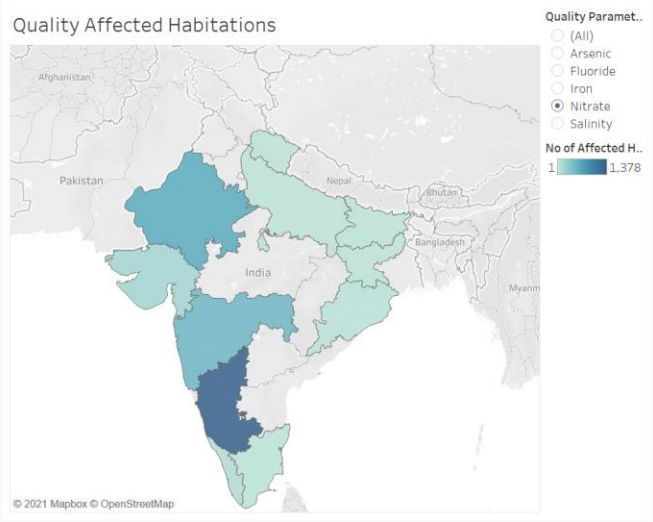

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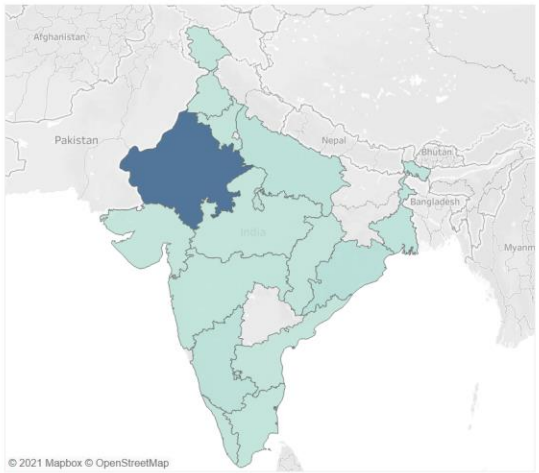

Quality Paramet..
(All)
Arsenic
Fluoride
Iron
Nitrate
Salinity
No of Affected H..
1 18,924

GENERAL Caste Analysis | SC Caste Analysis | ST Caste Analysis | Quality Affected Habitations. | Total Budget Allocation | Total Allocaton vs Total Expen... | A Case Study on Water Avail...

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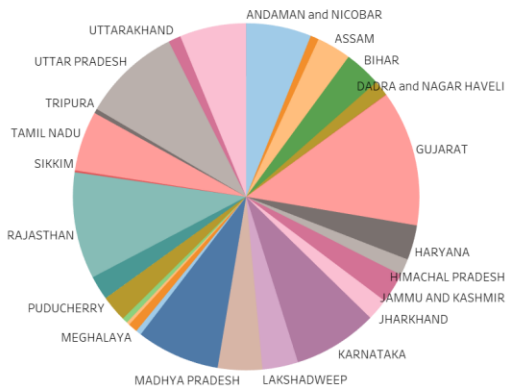
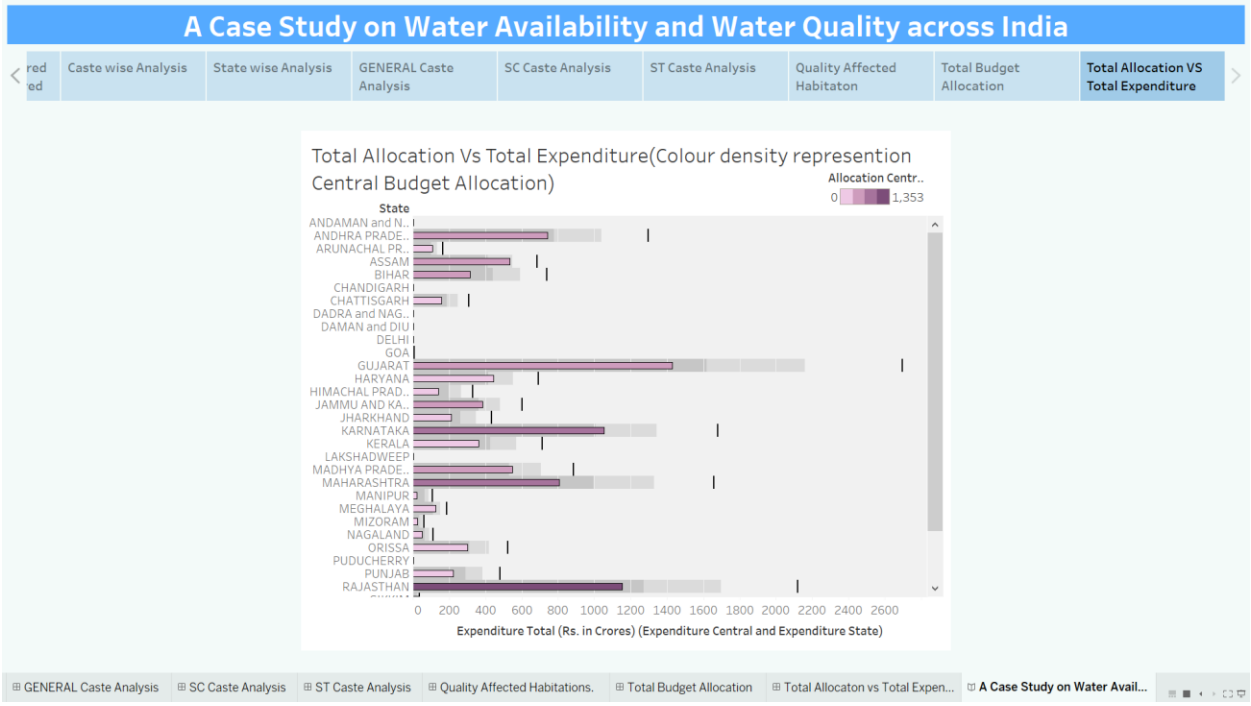
State wise Total Budget Allocation



State
ANDAMAN ..
ANDHRA PR..
ARUNACHA..
ASSAM
BIHAR
CHANDIGA..
CHATTISGA..
DADRA and ..
DAMAN and..
DELHI
GOA
GUJARAT
HARYANA
HIMACHAL ..
JAMMU AN..
JHARKHAND
KARNATAKA
KERALA
LAKSHADW..
MADHYA P..
MAHARASH..
MANIPUR
MEGHALAYA
MIZORAM
NAGALAND
ORISSA
PUDUCHER..
PUNJAB
Allocation Total (R..
21,334

GENERAL Caste Analysis | SC Caste Analysis | ST Caste Analysis | Quality Affected Habitations. | Total Budget Allocation | Total Allocaton vs Total Expen... | A Case Study on Water Avail...



INFERENCE:

The most Shocking inference is that almost all the states have not spent a significant portion of the allocated budget. Which means that a proper and a structured plan to utilize the entire allocated budget in a potential manner will help in improving both the Quality and the Availability of portable drinking water in India. Let's hope the change happens soon!