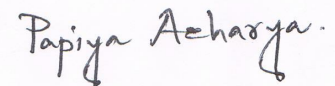


FIELD WORK REPORT AT JAISALMER IN RAJASTHAN

Department of Geography had organized an educational tour cum field survey with 5th semester (CBCS system) 47 students including 4 teachers from 21st November to 29th November 2024. According to the syllabus of University of Kalyani it is a mandatory field work for 5th semester students. We had started our journey from Jaipur –via-Jaisalmer and ended in Bikaner. We were also covered “ The Great Indian Desert” is called “ Thar Maruvumi”. The scenic beauty is just marvelous. We had done our field work on Desert region. The name of the village is Sam village is situated on Sam desert. We were specially visited Meghwar ki Basti in Sam village. We had completed our field survey in urban area also. We had chosen the Jaisalmer town for our field work also. The one and only living fort in the world “ The Golden Fort”. The city is mainly situated inside the fort. We had collected our data from village and urban area. The main topic was Water scarcity. The name of the topic of the field work is “ ***Analysis The Comparison Study on Water Scarcity in Village and Urban Area of Sam Desert at Jaisalmer in Rajasthan , India***”.



Signature of the HOD

Signature of the Faculty

REPORT ON FIELD WORK

2024-25

- 1. Topic Name:** *“Analysis the comparison study on water scarcity in village and urban area of Sam Desert in Jaisalmer in Rajasthan , India.”*
- 2. Semester name of participation:** 5th semester 2024
- 3. Place:** Sam Desert, Jaisalmer , Rajasthan
- 4. Duration:** 21/11/2024 to 29/11/2024
- 5. Student list of participation :** 46
- 6. Course code:** GEO/H/CC/P/11

DEPARTMENT OF GEOGRAPHY
SRIKRISHNA COLLEGE, BAGULA, NADIA, WEST BENGAL
JAIPUR, JAISALMER, BIKANER IN RAJASTHAN
21/11/2024 TO 29/11/2024)

NAME OF THE STUDENTS	REGISTRATION NO.	GENDER	AGE
ANKITA DEWAN	32386	F	20
ANKITA KUJUR	32387	F	19
ANKITA SARKAR	32388	F	19
ARPITA HALDER	32389	F	20
BARSHA BISWAS	32390	F	19
BRISHTI MONDAL	77075	F	20
BRISTI BISWAS	32391	F	19
DEBLENA SARKAR	32392	F	20
DEBLINA ROY	32393	F	20
DIPANWITA BISWAS	32394	F	20
DISHA ROY	32395	F	20
LIZA GAZI	32396	F	21
MADHURIMA SAHA	32397	F	20
MANJIMA GHOSH	32399	F	20
MOUMITA BISWAS	32401	F	20
MOUMITA BISWAS	32402	F	19
MOUSUMI BISWAS	32403	F	20
PRITI JOADDER	32404	F	20
PRIYANKA PRAMANIK	32405	F	20
SAKSHI BISWAS	32408	F	20
SIMA SAHA	32409	F	20
SUILY BHADRA	32410	F	20
SNEHA BISWAS	32411	F	21
SNEHA DAS	32412	F	20
SNEHA GANGULY	32413	F	19
SUSOMA PAUL	32417	F	19
SUCHANDRA CHAKROBARTY	42042	F	19
SUSHMITA BISWAS	32418	F	20
SWAGATA BISWAS	32419	F	21
TIYASA SARKAR	32421	F	20
AKASH MONDAL	32422	M	21
AMIT RAJBANSHI	32423	M	21
ARIT DAS	32426	M	20
AVIJIT SANNYASHE	32427	M	20
DIBYAJYOTI BHATTACHARYA	32429	M	19
DIPTAM MONDAL	32430	M	19

NAME OF THE STUDENTS	REGISTRATION NO.	GENDER	AGE
MUSTAFIJUR MALITA	32431	M	20
PRITAM BISWAS	32432	M	20
SAMIRAN GHOSH	32433	M	21
SANTANU BISWAS	32434	M	19
SAYANDIP MANDAL	32435	M	21
SAYANTAN DEBNATH	32436	M	21
SOUMYAJIT SARKAR	32437	M	20
SUJOY KARMAKAR	32439	M	19
TONMOY SADHUKHAN	32440	M	20
BIBEK TAPPA		M	20
NAME OF THE STAFFS			
DR. NIRMAL KR. BISWAS	(TEACHING FACULTY)	M	39
SMT. ASIMA SING	(TEACHING FACULTY)	F	33
MR. DIPANKAR GHORUI	(TEACHING FACULTY)	M	46
SMT. PAPIYA ACHARYA	(TEACHING FACULTY)	F	38



SRIKRISHNA COLLEGE



Bagula ◯ Nadia ◯ W. B. ◯ India

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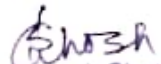
Ref. No.:

Date : 19.11.2024

TO WHOM IT MAY CONCERN

It is for information that a group of 46(Forty six) students and 4 (Four) teachers of the Department of Geography of Srikrishna college, Bagula is going to organize a Fieldwork cum Excursion at Jaisalmer in Rajasthan on 21st November to 29th November 2024.

All concerned are requested to offer their help and co-operation for success of the same.

 19.11.2024
Dr. Sukdeb Ghosh
Principal
Srikrishna College
Bagula Nadia,
W.B. PIN-741502



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DEPARTMENT OF GEOGRAPHY

TO WHOM IT MAY CONCERN

This is to certify that Shri/smt.Bansha Biswas.....
Roll no.3113137 - 2234947..... and Registration no.032390.....
has completed the field report entitled " COMPARISION STUDY ON
WATER SCARCITY IN RURAL AND URBAN AREA AT SAM DESERT IN
JAISALMER, RAJASTHAN, INDIA" as part fulfillment of geography 5th
semester CBCS Honours syllabus of University of Kalyani under our
supervision.

.....Papaya Acharya.....
06.02.2025
Department of Geography
Srikrishna College
Field guide, Bagula, Nadia.

OBJECTIVES

- To find out the Problem of daily water useage in Rural and Urban Area.
- To get data on the bassis of availability of water in our study region.
- To find out the rate of reduction on water scarcity and conservation.
- To Evaluate the Porocess of Management and Conservation on water scarcity.
- To find the position on level of water scarcity next decade of our study region.

STUDY AREA

Rajasthan is in landlocked State in northern India. The Thar Desert which strain across India and Pakistan cover most of the state. The Jaisalmer district its located in western part of India. It is the longest in Rajasthan.

Jaisalmer district is located about 557 kilometers west of Jaipur the capital of Rajasthan. This district borders Pakistan. This district has a 447 kilometers long internal border with North-West India and Pakistan. Pakistan to the North West Barmer to South Jodhpur to east and Bikaner to North East. The district covers an area 38,401 km² and its 270 East west and 186 km North South.

The latitude and longitude of extension respectively to 24°6'72" to 26.92° North, 70.9° East. Its average height above sea level is 229 meter (751 Feet).

Rajasthan is a semi desert state. The rainfall in this state is very low. The annual rainfall here is 209 millimeters which makes water, precious commodity. The highest recorded temperature in this place is 48°C. There is a drinking water problem in this region due to the low ground water level. The quality of drinking water here very poor.

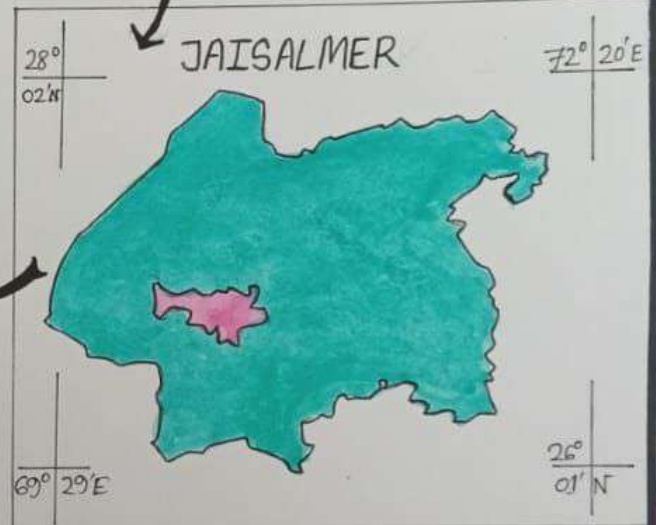
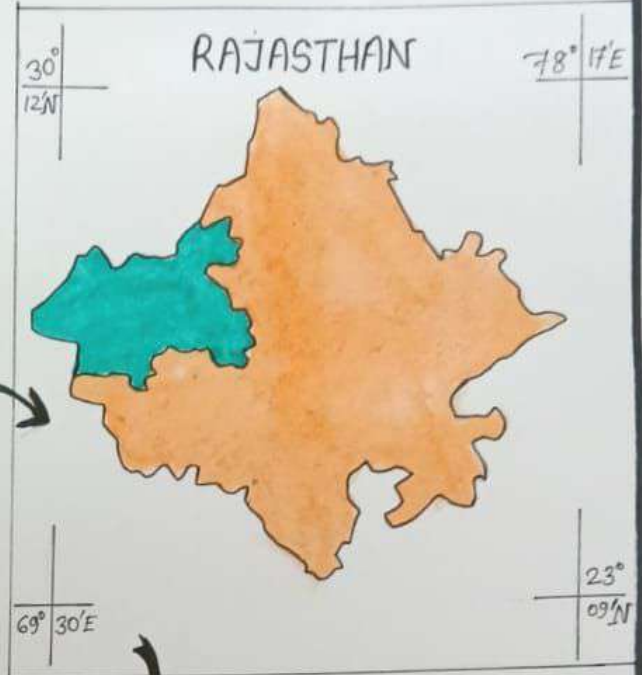
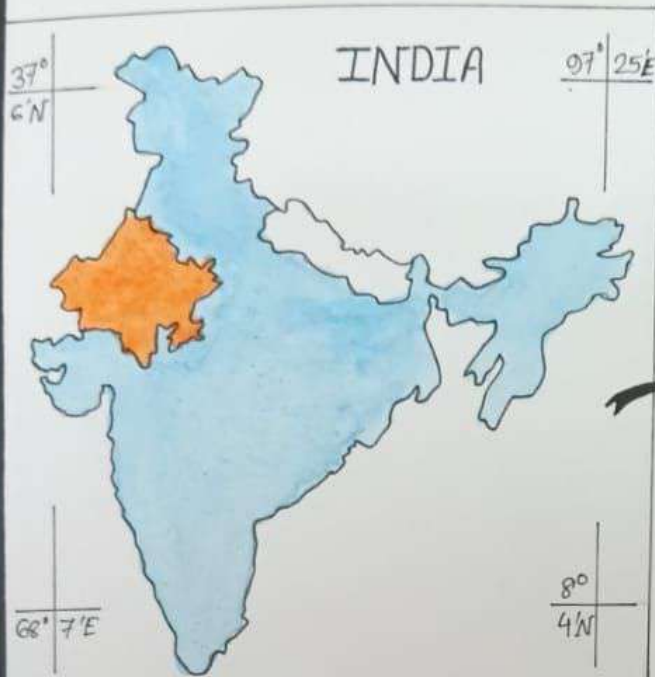
We are the students of Geography Department chose this place because of this water problem.

The main sources of the water in Jaisalmer are under ground aquifers but these resource depleting rapidly due to over extraction for agriculture, domestic use and industrial purposes.

Historically the region has relied a traditional methods such as step wells and johads (water storage ponds) to collected and store rainwater. However these sources are increasingly unable to meet the demand. The impact of water scarcity in Jaisalmer is visible in different ways —

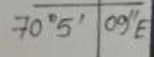
- Agriculture
- Drinking water
- Rural-urban Divide
- Tourism

LOCATION MAP



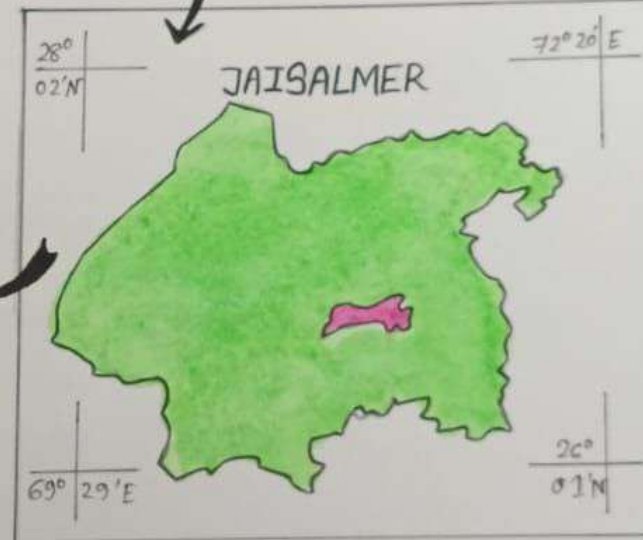
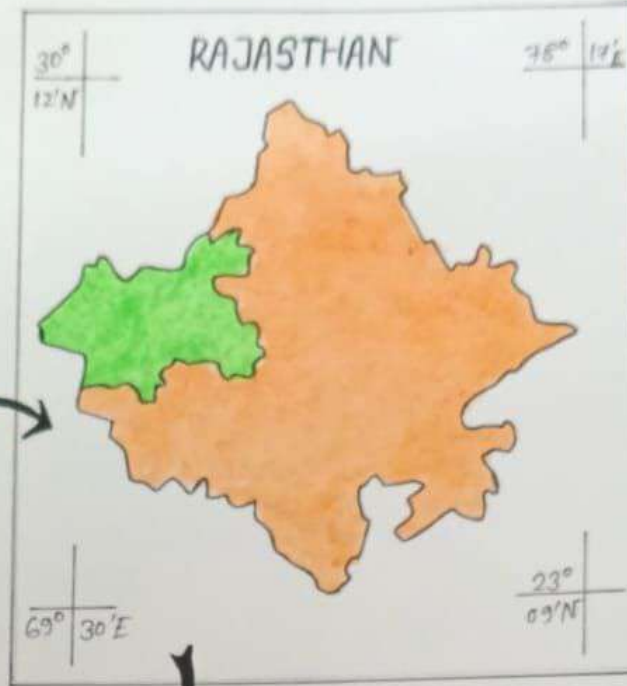
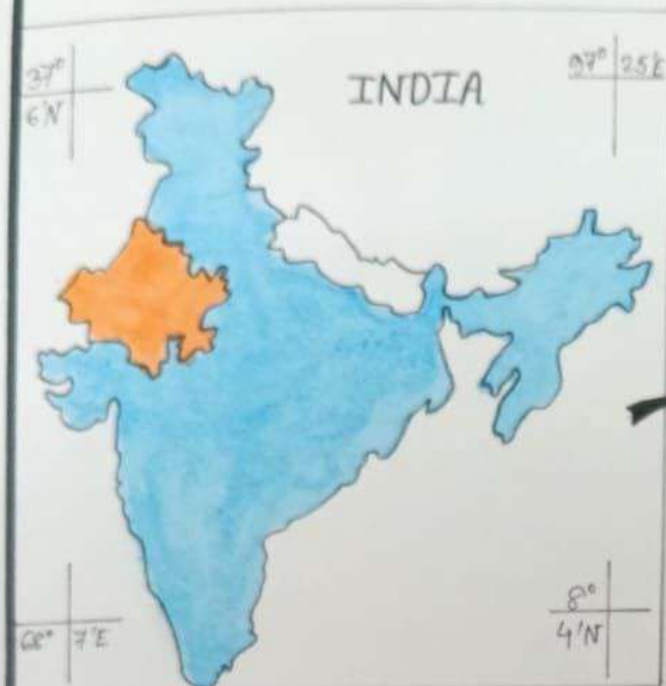
1. MENUON KI BASTI
2. MEGHWAR KI BASTI

9/12/24



NOT TO SCALE

LOCATION MAP



NOT TO SCALE

LITERATURE REVIEW

Rajesh Kumar Abhay - Water Scarcity Management in Rajasthan - II :

A Case of Sikar District by Rajesh Kumar Abhay. This work focuses on water management about scarcity in the Sikar District of Rajasthan, providing insights into strategies that may be relevant to other arid regions like Jaisalmer.

Dr. Brajendra Han Joshi : Jal Aur Samaj

This book explores the pond culture of Bikaner, traditional water conservation practices that could offer lessons for addressing water scarcity in Jaisalmer.

Anupam Mishra : Rajasthan ki Rajat Bوندهin,

This focuses on traditional water harvesting and storage structures in Rajasthan's desert areas, highlights ingenuity of local communities in conserving water.

Jibralil : Water Management System in Desert Region of Rajasthan, Thirteenth - Eighteenth Centuries,

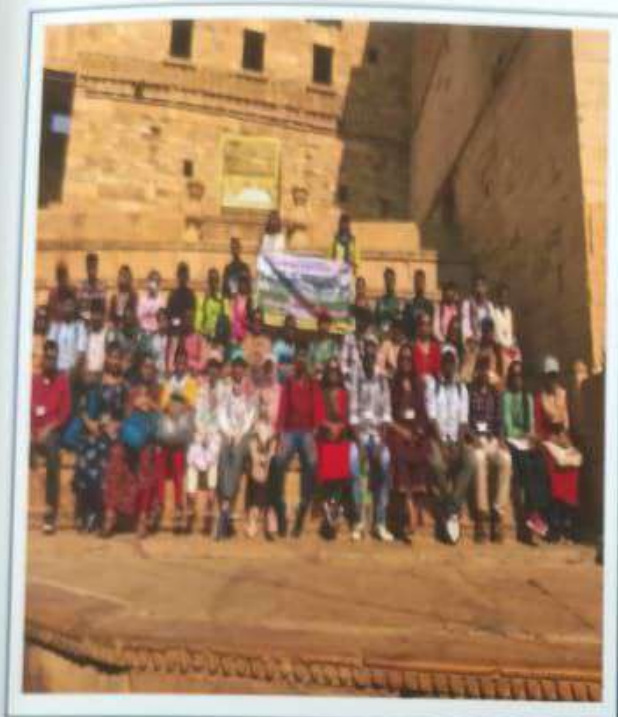
This scholarly work examines historical water management system in Rajasthan's desert region, shedding light on traditional practices that addressed water scarcity.

Raj Kishor Mahapatra : PIPASA

A documentary on India's water crisis in Barmar, Rajasthan this book provides an in-depth look into the water scarcity challenges in Barmar Rajasthan, offering insights that may be relevant to understanding similar issue in Jaisalmer.

METHODOLOGY

The entire study is based upon the data derived from both Primary and Secondary Sources. Due importance has been given upon field survey primary data has been collected using pre-prepared questionnaire from visitors. In addition selective personal interview has also taken during field survey. Secondary data has been produced from gram panchayat, different tourist office, Govt. website, journals and reports. The statistical analysis has been performed as descriptive.



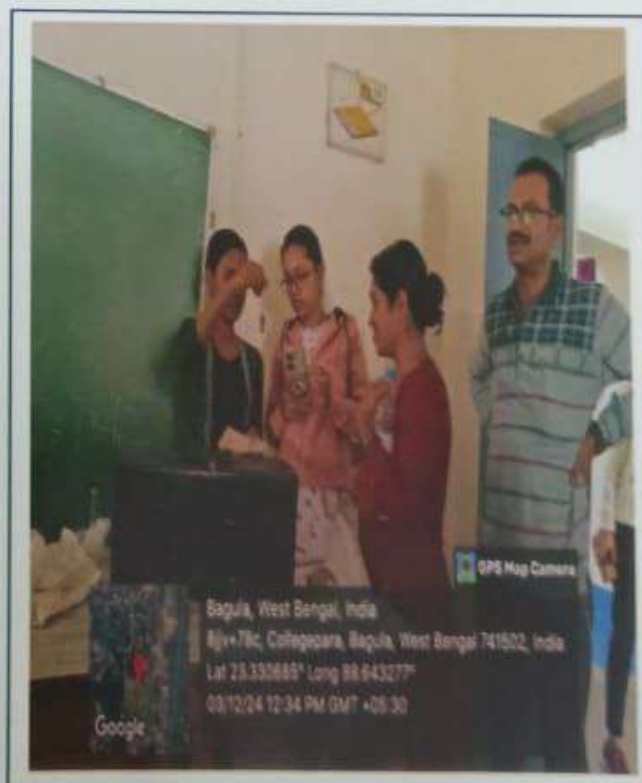
Our Surveyed Group



Prismatic Compass Survey at Kanoi, Sam Desert, Rajasthan



Dumpy Level SURVEY At Kanoi, Sam Desert, Rajasthan, India



Soil Test Sample From Sam Desert doing testing at department

WATER AVAILABILITY

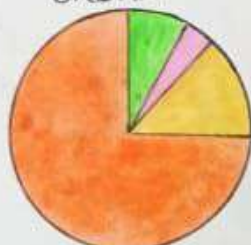
PIE - DIAGRAM

Showing
THE TIME OF STAYING IN
JAISALMER, RAJASTHAN

RURAL



URBAN



INDEX

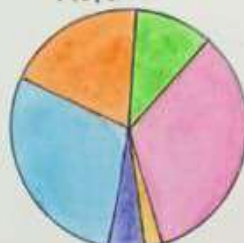


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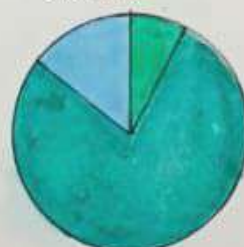
PIE - DIAGRAM

Showing
PRIMARILY OBTAINING OF
WATER

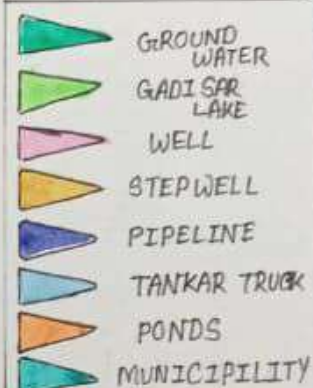
RURAL



URBAN



INDEX



SCALE: 1 CM TO 1.5 UNIT

PIE - DIAGRAM

Showing
THE DAILY WATER USES

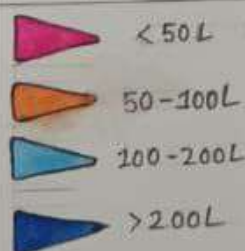
RURAL



URBAN



INDEX



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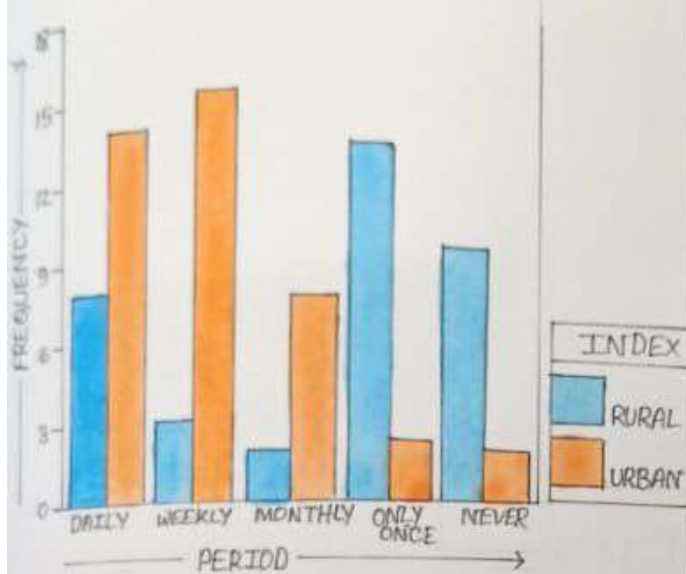
BAR GRAPH

Showing
THE COMPARISON OF WATER
AVAILABILITY IN OUR PER
DAY



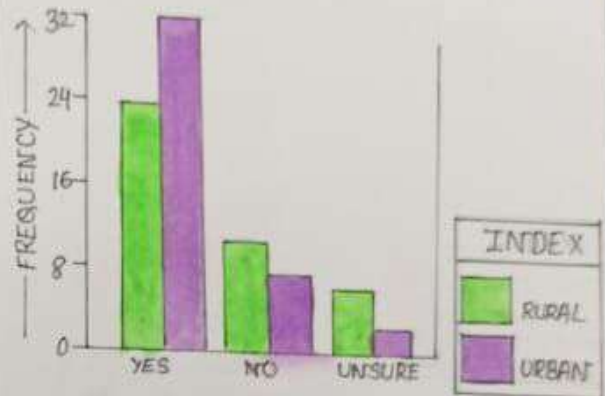
SCALE: 1 CM TO 10 UNIT

COMPARATIVE BAR GRAPH
showing
THE FREQUENCY OF WATER
SCARCITY



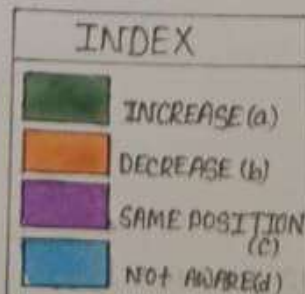
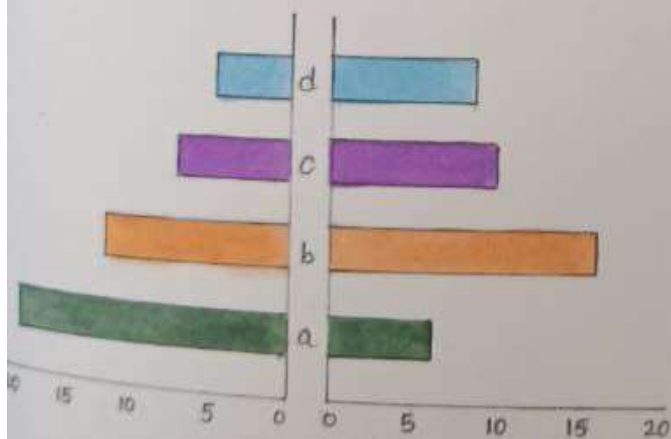
SCALE : 1 CM TO 3 UNIT

COMPARATIVE BAR GRAPH
showing
ON GROWING WATER PROBLEM
OF WATER SCARCITY



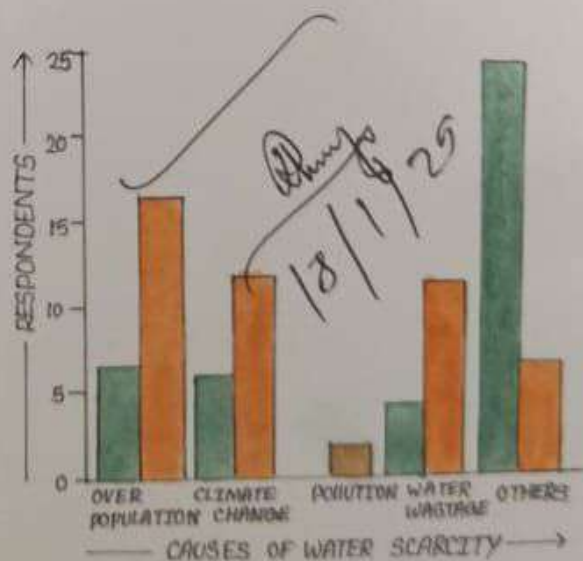
SCALE : 1 CM TO 8 UNIT

HORIZONTAL BAR
showing
THE GROUND LEVEL LAST 10 YEARS



SCALE : 1 CM TO 5 UNIT

COMPARATIVE BAR GRAPH
showing
THE MAIN CAUSE OF WATER
SCARCITY



SCALE : 1 CM TO 5 UNIT



WATER SCARCITY

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Rural and urban both region of Jaisalmer face severe water scarcity, the nature and severity of the issue differ significantly. Rural areas with their dependence on traditional water sources, face chronic shortages that directly impact agriculture and public health. Poor water quality and limited access to clean drinking water in rural areas lead health issues to vulnerable populations. In addition poor hygiene are exacerbated by limited water availability, further compounding health issues.

Urban areas although benefiting from better infrastructure, according to our data increasingly pressured by population growth and tourism, creating unsustainable demands on limited water resources. The concentration of people in urban centers increases the risk of water related health issues.

Climate conditions play a crucial role in intensifying water scarcity across both regions. Rising temperatures and erratic rainfall, driven by climate change, are making water management even more challenging.

Jaisalmer strain already limited resources, affecting both rural and urban populations. This makes it imperative to consider climate-resilient strategies, such as enhancing rain water harvesting in rural areas and promoting water efficient and recycling in urban centers to ensure long-term water scarcity and improve public health outcomes.

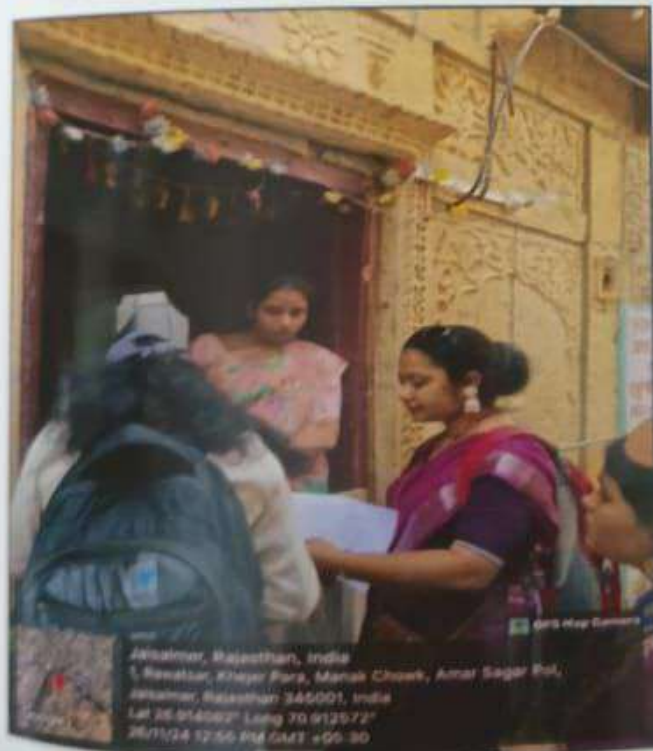
In our studying area from last two decade the availability of water is increased in a rapid growth. But when we compare availability of rural and urban area facing different type of problem mainly frequency of water. Frequency of is too much low still now they faced so much problem mainly in summer season. Daily availability of water is too much low in rural area but urban region are not facing like them. From the comparison study people are agreed on same cause like over population, climate change, water wastage etc. From the respond view we concluded its problem of water scarcity should be decreased by the help of Govt. planning and people conscious. Though respondents feel the ground water level is decreased in future time. Finally we can said that facilities are more available in urban areas. But the management, conscious future planning is more high in rural areas.



Household Survey on Water Scarcity at Meghwar ki Basti in Kanoi, Sam Village, Rajasthan



Survey on Water Scarcity at Golden Fort, Rajasthan



Doing Field Work at Golden Fort with Our Field Guide



Source of Water from Bajada Maximum Time of the Year at Sam Desert in Rajasthan

SOLUTION

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The measurement of solution is different way —
Rainwater Harvesting :

- > collect and store rainwater for domestic, agricultural and industrial use.
- > Implement roof top harvesting system and community based storage tanks.

Improve water storage and Management :

- > Treat water to make it suitable for reuse in agriculture, industry and non potable urban uses.
- > Developed Decentralised waste water treatment plants urban & rural area.

Desalination :

- > use desalination Plants to convert sea water into fresh water, Particularly in coastal and arid regions. However ensure energy efficient and eco-friendly method.

Ground Water Recharge :

- > Built check dams, recharge wells and Percolation Stands to replenish ground water level.
- > prevent over extraction of ground water by enforcing strict regulation.

Policy and Governance :

- > Implement Integrated water resources management (IWR) strategies.
- > Developed policies that promote equi-table water distribution and penalized over extraction or pollution.
- > Improved IGMP throughout the Jaisalmer.

Awareness & Education Campaigns :

- > Raise awareness about the importance of water conservation.

Water scarcity in Jaisalmer is a pressing issue, rooted in its arid climate, limited rainfall and growing demands due to population and tourism. The region relies heavily on ground water and external water sources like Indira Gandhi Canal, which face challenges of overuse and sustainability.

From our data analysis we find the different opinion, facilities, availabilities and management between rural and urban areas. The rural people faced more problem than urban people. But interesting things are both people of this region are conscious about waste and management of water even the rural people faced in regulating of water not only for their luxury in their basic needs also. In summer season both people are facing their problem they bought water from tanker. The price of water is too high in urban region on the other hand side the village also getting water from tanker, thus is a monopoly who having the power on the basis of economy political power. The villagers facing problem from the tourism sector in the interior region of same village the tent is developed very fast and they waited more more water for the tourist therefore the water shortage arise in daily life.

The water management system is much better than the other water scarcity region. They use different type of water recycling method. The rain water harvesting method is very famous in this region.

Finally we concluded at the level of water scarcity is reduced from last 5 or 10 years. Government is also take an important role for this matter. But people are not so happy by the activity because the frequency is poor. They want more initiatives on the basis of this matter.