



PADMABHUSHANVASANTRAODADA PATIL MAHAMDYALAYA, KAVATHE MAHANKAL,
DIST. SANGLI

DEPARTMENT OF STATISTICS

FIELD WORK

(Academic Year – 2023-24)

Shikshan Prasarak Sanstha's,

Padmabhushan Vasantodada Patil Mahavidyalaya, Kavathe Mahankal.

DEPARTMENT OF STATISTICS

Report of Field- Work

Title	Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil
Place	Kavathe Mahankal Tehsil
Duration	25 th January to 28 th January, 2024
Organized by	Department of Statistics
Participants	Teachers: 05, Students: 28, Total: 33
Coordinator	Miss. Snehal Mahadev Zarekar
Background	This field work aims to assess the availability, consumption patterns, and quality of domestic water sources in Kavathe Mahankal Tehsil. By investigating these factors, we aim to understand the challenges and opportunities for sustainable water management and improve access to safe drinking water for local communities. Through comprehensive data collection and analysis, we seek to inform evidence-based policies and interventions to address water-related issues effectively.
Objectives	<ol style="list-style-type: none">1. To determine the water source distribution in Kavathe Mahankal Tehsil.2. To determine consumption patterns in domestic water usage and influencing factors.3. To determine the per capita consumption rate4. To determine the quality of domestic water based on TDS in the water and impact on health.5. To test awareness and activism about consumption and quality of water.6. To check whether the TDS level in the water is good or not.7. To check whether the use of RO water and the health conditions are independent or not.8. To check the trend of water level in Kavathe-Mahankal Tehsil
Conclusions	<ol style="list-style-type: none">1. Water tanks, wells and bore wells are the main resources of the domestic water.

	<ol style="list-style-type: none">2. Most of the people still prefer taste of the water instead of quality. But the trend is changing now.3. 53% of the families have some health problems related with the water. Many of them are suffering from kidney stones and frequent fever and cold.4. The consumption rate of drinking water per capita is about 4 litres.5. The consumption rate of non-drinking water per capita is about 80 litres.6. People have awareness about the quality of the water and they are using water treatment devices.7. The health conditions are highly dependent upon use of RO water. That is health conditions are highly dependent upon quality of the water.8. The water quality in Kavathe Mahankal is not good.
--	---

Murad

PRINCIPAL,
Padmabhushan Vasantrodada Patil
Mahavidyalaya, K.Mahankal, Dist-Sangli



ग्रामपंचायत कार्यालय, नरसिंहगाव

स्थापना:-२४/११/१९६६ ता.कवठे महाकाळ.जि.सांगली फोन:-०२३४१-२४६०४२

दिनांक :- २४/०१/२०२४



To,
The Principal,
Padmabhushan Vasantrodada Patil Mahavidyalaya,
Kavathe Mahankal, Dist. Sangli 416 405

Subject: Permission letter regarding field work

Respected Sir / Madam,

With reference to your letter regarding organizing a field work by Department of Statistics, Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal in our village.

I agree and grant permission for field work as on 25th January to 28th January, 2024.

Regards.

Ugale
सरपंच

ग्रामपंचायत नरसिंहगाव
ता. कवठेमहाकाळ जि सांगली

Padmabhushan Vasantrodada Patil Mahavidyalaya

Kavathe Mahankal, Dist. Sangli (Maharashtra) Pin- 416 405

Principal: Prof. Dr. M. K. Patil
Website: www.pvpcollegekm.com

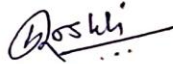
Phone No. 0.2341 222014
Email: kmpvp@rediffmail.com

PVPMKM/

Date: 06/01/2024

Notice

All the students of Statistics are informed that we are going to visit all the villages in Kavathe Mahankal Tehsil on 25/01/2024 to 28/01/2024 to do a one-day field-work through the Department of Statistics. However, the students should report their names Snehal Zarekar on and before 23/01/2024.


Head
Department of Statistics
P.V.P. Mahavidyalaya,
Kavathe Mahankal, Dist.-Sangli.

Shikshan Prasarak Sanstha's,
Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal.

DEPARTMENT OF STATISTICS

FIELD- WORK

Sr. No.	Name	Class	Signature
1.	Bandagar Vishal Annaso	B. Sc. III	<i>Bandagar.</i>
2.	Bhosale Sushmita Abaso	B. Sc. III	<i>Bhosale</i>
3.	Chavan Swati Deepak	B. Sc. III	<i>Chavan</i>
4.	Choudhary Geeta Dayaram	B. Sc. III	<i>Geeta</i>
5.	Chougule Yashoda Nathaji	B. Sc. III	<i>Chougule.</i>
6.	Devarshi Rahul Pargonda	B. Sc. III	<i>Devarshi</i>
7.	Ghejji Bhagyashri Ramanna	B. Sc. III	<i>Ghejji</i>
8.	Jadhav Aarti Tanaji	B. Sc. III	<i>Jadhav.</i>
9.	Kadam Aniket Mahadev	B. Sc. III	<i>A.M. Kadam.</i>
10.	Kodag Dhanashri Dattatray	B. Sc. III	<i>Kodag</i>
11.	Kore Pratik Jayant	B. Sc. III	<i>Kore</i>
12.	Kute Pranav Kundlik	B. Sc. III	<i>Kute</i>

13.	Latthe Rohini Mukesh	B. Sc. III	<u>Rmlatthe</u>
14.	Mahajan Ashwini Annaso	B. Sc. III	<u>Amahajan</u>
15.	Mali Priyanka Balu	B. Sc. III	<u>Bmali</u>
16.	Mane Laxmi Sahadev	B. Sc. III	<u>Mane</u>
17.	Nagane Akshay Pandurang	B. Sc. III	<u>Akshay</u>
18.	Olekar Pratik Bandu	B. Sc. III	<u>Pratik</u>
19.	Patil Akshata Balaso	B. Sc. III	<u>Patil</u>
20.	Patil Pratiksha Anandrav	B. Sc. III	<u>P.A. Patil</u>
21.	Patil Shweta Basagonda	B. Sc. III	<u>Shweta</u>
22.	Pawar Yogita Anil	B. Sc. III	<u>Yogita</u>
23.	Sawant Swapnali Suryakant	B. Sc. III	<u>Swapant</u>
24.	Shinde Ashwini Pandurang	B. Sc. III	<u>APS</u>
25.	Shinde Shailaja Dilip	B. Sc. III	<u>SSJ</u>
26.	Suryawanshi Digvijay Sanjay	B. Sc. III	<u>DSJ</u>
27.	Nikam Snehal Suresh	B. Sc. III	<u>Snehal</u>
28.	Shinde Madhuri Nitish	B. Sc. III	<u>mmj</u>

Mundani
PRINCIPAL,
 Padmabhushan Vasantrodada Patil
 Mahavidyalaya, K.Mahankal, Dist-Sangli



INTRODUCTION

Humans have the right to sufficient, safe, acceptable, physically accessible, and good-quality water for domestic use. According to the World Health Organization (WHO), a minimum quantity of water should be available for drinking, food preparation, basic hygiene, bathing, and sanitation to ensure sustainable healthy living. Water is linked to health and hygiene (according to a study by the WHO in 2019), and insufficient, low-quality of water leads to diseases.

“Water” is a key challenge in our area. The of adequate water is essential to ensure a healthy life but the quality of water plays an important role and also quantifies water consumption based on water-use activities and across all daily water uses. The escalating demand for water has strained the water supply system. In this study, we are trying to investigate domestic water consumption patterns and management strategies (quality of demanded water).

Due to the increasing population, the water demand has pressure on water resources, which is causing a problem because there is not enough water to meet everyone’s needs thus it indirectly affects the quality of water and it is critical to develop realistic estimates of water consumption based on water-use activities. By analyzing trends in domestic water use and evaluating the impact of various management approaches. This study aims to examine awareness and activism about the quality and consumption of supplied water with a focus on personal water use activities.

This study mainly focuses on the domestic use of water in all possible areas in Kavathe-Mahankal Tehsil with various sources of water supply that contain a lake, water tank, well, groundwater, river, RO, etc.



OBJECTIVES

9. To determine the water source distribution in Kavathe Mahankal Tehsil.
10. To determine consumption patterns in domestic water usage and influencing factors.
11. To determine the per capita consumption rate
12. To determine the quality of domestic water based on
 - 1) TDS in the water.
 - 2) Impact on health.
13. To test awareness and activism about consumption and quality of water.
14. To check whether the TDS level in the water is good or not.
15. To check whether the use of RO water and the health conditions are independent or not.
16. To check the trend of water level in Kavathe-Mahankal Tehsil



SAMPLE SIZE DETERMINATION:

The population size of Kavathe-Mahankal Tehsil is 152327 according to census of 2011. We used Yamane's formula to determine the sample size at approximately 5% margin of error and we got the sample size approximately 399. The Yamane's formula for the sample size determination is given by,

$$n = \frac{N}{1 + Ne^2}$$

- Where, n is sample size
- N is the population size
- E is the margin of error.

DATA COLLECTION:

The main objective of the project is to analyze the Availability, consumption and quality of the domestic water. We sampled the 370 families from the 60 villages of the Kavathe-Mahankal Tehsil to collect the information about the consumption and availability of the domestic water. We designed the questionnaire to collect the respective data. For this data, we have collected samples by convenient method from different villages, as it was impossible to collected simple random sample.

For the information about the quality of the water; we used the secondary data of the water contents from the different water resources in Kavathe-Mahankal tehsil. The data is taken from the hydro-geological data of Kavathe Mahankal.



STATISTICAL TOOLS:

1) Graphical representation:

Pie chart

A pie chart is a type of graph that represents the data in the circular graph. The slices of pie show the relative size the data, and it is type of pictorial representation of data .A pie chart requires list of categorical variables and numerical variables. Here the term pie represents the whole. All the slices of the pie chart add up to make whole equaling 100% and 360 degrees.

Bar chart

A bar chart is a graphical representation used to display and compare discrete categories of data through rectangular bars, where the length or height of each bar is proportional to the frequency or value of the corresponding category or strips. It can be either horizontal or vertical.

Line Chart

Line chart is the graphical tool that is used to represent the trend in the data over the time. Line chart consists of the series of the data points connected by the line segments.

2) Hypothesis testing:

Chi-square test for independence of attributes:

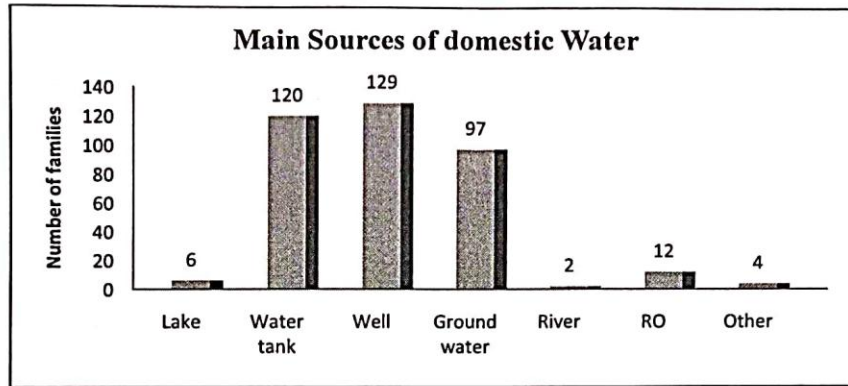
The null hypothesis of this test is that the attributes are independent on each other. The test is used to check the independency of the attributes. Observed frequencies are tabulated in the contingency table and the expected frequencies are calculated. The test checks whether the observed frequencies and expected frequencies are significantly different or not.

One sample t test for testing one population mean:



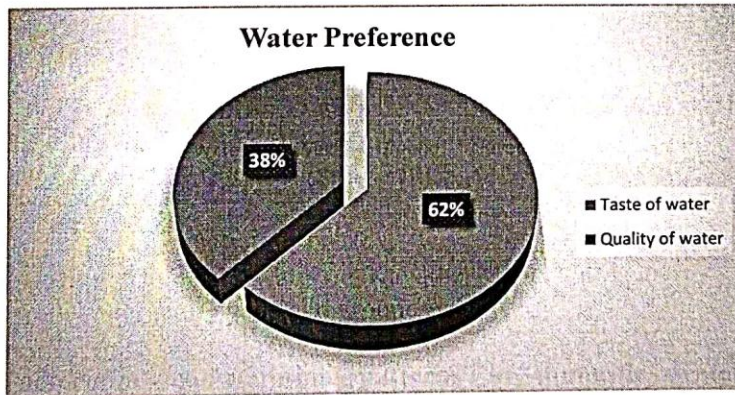
STATISTICAL ANALYSIS:

1) To determine the water source distribution in Kavathe Mahankal Tehsil.



Interpretation: Domestic water in Kavathe Mahankal Tehsil is obtained mostly from water tank, wells and ground water.

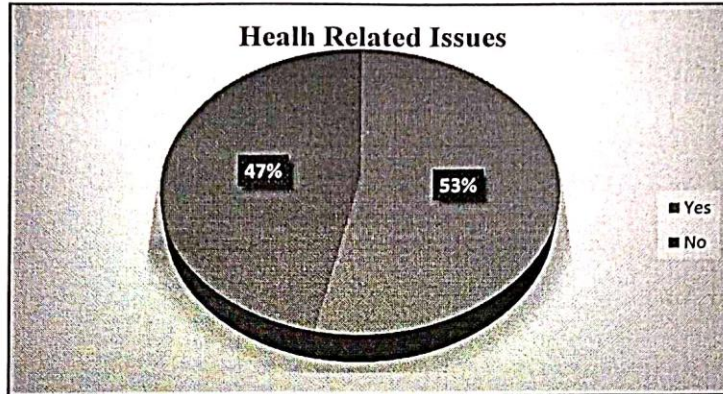
2) To determine consumption patterns in domestic water usage and influencing factors.



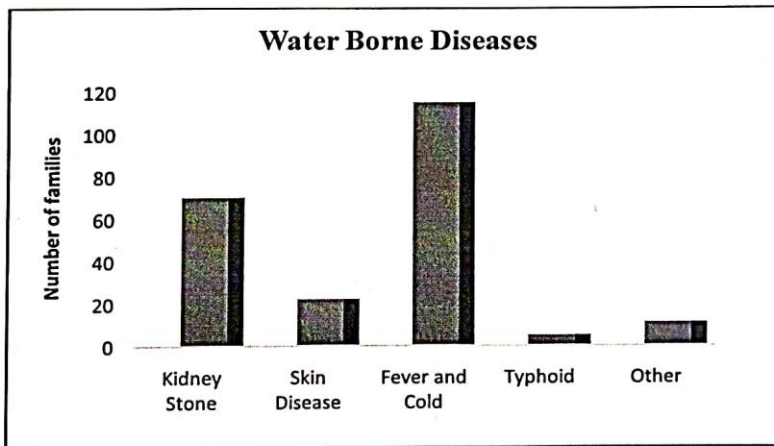
Interpretation: People in our locality prefer taste of the water.



3) To analyze of the health problems:



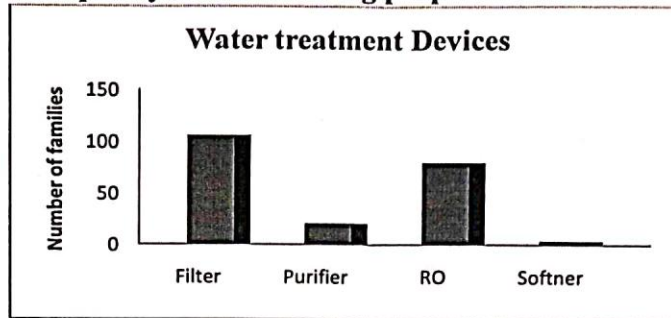
Interpretation: Out of 370 families, 53% families face some health related issues due to consumption of water.



Interpretation: Most of the families are facing the problems of kidney stone and fever and cold.



4) Awareness of quality of water among people and activism towards it:



Interpretation: Out of 370 families, 212 families have awareness about quality of water and filters and RO water are preferable among them.

5) To check whether the use of RO water and the health conditions are independent or not.

Many families were using RO water and many families were facing health problems. Therefore we can be interested in testing the independence in both the variables. We want to test the null and the alternative hypotheses as,

H_0 : The use of RO water and the health conditions are independent.

H_A : The use of RO water and the health conditions are dependent.

The contingency table is,

	Uses RO water	Doesn't use RO Water	Total
Having health problem	63	134	197
Not having health problem	49	123	172
Total	112	257	369



The test statistic is, $\chi^2 = 58.696$

Here P-value is almost zero.

Therefore we reject the null hypothesis at 5% level of significance.

We conclude that, the data provides enough evidence to claim that health conditions are highly dependent upon the use of RO water.

6) To check whether the TDS level in the water is good or not.

The TDS level is known for the water from different water resources from different villages in Kavathe Mahankal. The water quality levels from TDS are given in the Table 1 in appendix.

The water is said to be of good quality if TDS level is below 900. We want to check whether the quality is good or not.

We want to test the null and the alternative hypotheses are,

$$H_0: \mu \leq 900 \quad \text{Against} \quad H_0: \mu > 900$$

The test statistic is,

$$t = \frac{(\bar{X} - \mu)}{s/\sqrt{n}} = 2.007$$

$$P\text{-value} = 0.02532$$

Here P-value is less than 0.05.

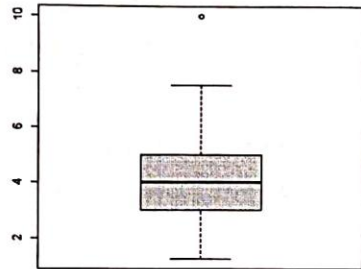
Therefore we reject the null hypothesis at 5% level of significance.

Data provides that the mean TDS level in Kavathe Mahankal is significantly greater than 900. Therefore the quality of water is too poor.



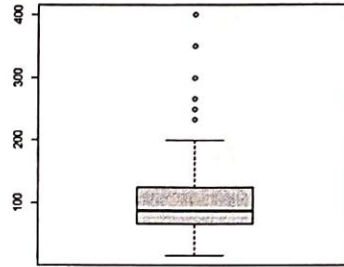
7) The consumption of domestic water per capita

Drinking water



On an average, 4 litres of drinking water is consumed by per person.

Non-drinking water



On an average, 80 litres of non-drinking water is consumed by per person



CONCLUSIONS

9. Water tanks, wells and bore wells are the main resources of the domestic water.
10. Most of the people still prefer taste of the water instead of quality. But the trend is changing now.
11. 53% of the families have some health problems related with the water. Many of them are suffering from kidney stones and frequent fever and cold.
12. The consumption rate of drinking water per capita is about 4 litres.
13. The consumption rate of non-drinking water per capita is about 80 litres.
14. People have awareness about the quality of the water and they are using water treatment devices.
15. The health conditions are highly dependent upon use of RO water. That is health conditions are highly dependent upon quality of the water.
16. The water quality in Kavathe Mahankal is not good.



LIMITATIONS

- 1) As the data of TDS is available for the year 2019-20, the TDS value may be decreased as many villages has been using RO plants.
- 2) We considered here the domestic water as drinking and non-drinking water, but it may contain usage of water for domestic animals.
- 3) As many villages have adopted the concept of ATAL BHUJAL YOJANA, the use of other water resources may be decreased.
- 4) We are unable to get the actual data of supply and demand of the water, so as to plan the careful usage.

SCOPE

- 1) The study can be used for the further activisms for improving the quality in the water.
- 2) The study can lead the awareness in the people about the water treatment devices.



ग्रामपंचायत कार्यालय, नरसिंहगाव

स्थापना:-२४/११/१९६६ ता.कवठे महाकाळ.जि.सांगली फोन:-०२३४१-२४६०४२



क्र-

दिनांक :- २६/०२/२०२४

To,
The Principal,
Padmabhushan Vasantrodada Patil Mahavidyalaya,
Kavathe Mahankal, Dist. Sangli 416 405

Field-work Completion Certificate

This is certified that, a field-work organized by Department of Statistics, Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal in our village is successfully completed in the academic year 2023-24. In this field-work, 05 teachers and 28 students were participated.

सरपंच

ग्रामपंचायत नरसिंहगाव
ता. कवठे महाकाळ जि सांगली

Padmabhushan Vasantrodada Patil Mahavidyalaya

Kavathe Mahankal, Dist. Sangli (Maharashtra) Pin- 416 405

Principal: Prof. Dr. M. K. Patil
Website: www.pvpcollegekm.com

Phone No. 0.2341 222014
Email: kmpvp@rediffmail.com

PVPMKM/

Date: 24/02/2024

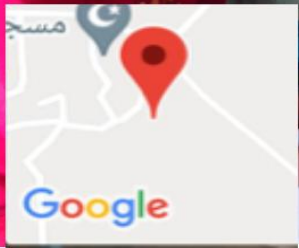
Field-work Completion Certificate

This is certified that, a field work organized by Department of Statistics, Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal in Kavathe Mahankal Tehsil on dated 24th February, 2024 has been completed successfully. In this field-work, 05 teachers and 28 students were participated.

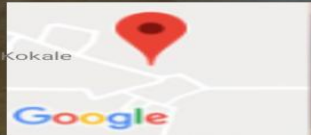


PRINCIPAL,
Padmabhushan Vasantrodada Patil
Mahavidyalaya, K.Mahankal, Dist-Sangli

PHOTOS



Pune Division, Maharashtra, India
Kuchi, Maharashtra 416405, India
Long 74.854425°
Lat 17.015362°
24/1/2024 03:25 PM



Pune Division, Maharashtra, India
Kokale, Maharashtra, India
Long 75.002697°
Lat 16.999185°
25/1/2024 12:34 PM



CERTIFICATES



Shikshan Prasarak Sanstha's
Padmabhushan Vasanttraodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS

C E R T I F I C A T E

This is to certify that **Bhosale Sushmita Abaso** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasanttraodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS

C E R T I F I C A T E

This is to certify that **Bandagar Vishal Annaso** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantaoada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS
C E R T I F I C A T E

This is to certify that **Chavan Swati Deepak** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantaoada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS
C E R T I F I C A T E

This is to certify that **Choudhary Geeta Dayaram** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantoraodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS

C E R T I F I C A T E

This is to certify that **Chougule Yashoda Nathaji** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantoraodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS

C E R T I F I C A T E

This is to certify that **Devarshi Rahul Pargonda** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantaoada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS
C E R T I F I C A T E

This is to certify that **Ghejji Bhagyashri Ramanna** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantaoada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS
C E R T I F I C A T E

This is to certify that **Jadhav Aarti Tanaji** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantroadada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS

C E R T I F I C A T E

This is to certify that **Kadam Aniket Mahadev** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantroadada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS

C E R T I F I C A T E

This is to certify that **Kodag Dhanashri Dattatray** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantaoada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS C E R T I F I C A T E

This is to certify that **Kore Pratik Jayant** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantaoada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS C E R T I F I C A T E

This is to certify that **Kute Pranav Kundlik** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantaoadada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS
C E R T I F I C A T E

This is to certify that **Latthe Rohini Mukesh** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantaoadada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS
C E R T I F I C A T E

This is to certify that **Mahajan Ashwini Annaso** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasanttraodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS C E R T I F I C A T E

This is to certify that **Mali Priyanka Balu** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasanttraodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS C E R T I F I C A T E

This is to certify that **Mane Laxmi Sahadev** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS
C E R T I F I C A T E

This is to certify that **Nagane Akshay Pandurang** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS
C E R T I F I C A T E

This is to certify that **Olekar Pratik Bandu** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS C E R T I F I C A T E

This is to certify that **Patil Akshata Balaso** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS C E R T I F I C A T E

This is to certify that **Patil Pratiksha Anandrav** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS C E R T I F I C A T E

This is to certify that **Patil Shweta Basagonda** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS C E R T I F I C A T E

This is to certify that **Pawar Yogita Anil** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantaoada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS
C E R T I F I C A T E

This is to certify that **Sawant Swapnali Suryakant** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantaoada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS
C E R T I F I C A T E

This is to certify that **Shinde Ashwini Pandurang** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasanttraodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS
C E R T I F I C A T E

This is to certify that **Shinde Shailaja Dilip** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasanttraodada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS
C E R T I F I C A T E

This is to certify that **Suryawanshi Digvijay Sanjay** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantaoadada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS

C E R T I F I C A T E

This is to certify that **Nikam Snehal Suresh** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal



Shikshan Prasarak Sanstha's
Padmabhushan Vasantaoadada Patil Mahavidyalaya, Kavathe Mahankal
Affiliated to Shivaji University, Kolhapur

DEPARTMENT OF STATISTICS

C E R T I F I C A T E

This is to certify that **Shinde Madhuri Nitish** of Class B. Sc. III has successfully completed the field work on "Availability, consumption and quality of domestic water in Kavathe Mahankal Tehsil" during the academic year 2023-24.

Miss. S. M. Zarekar

Mr. G. D. Satpute

Mrs. S. S. Patil

Asso. Prof. V. V. Koshti
Head

Prof. (Dr.) M. K. Patil
Principal