

KAVTHEMAHANKAL A DEVELOPING CITY- A CASE STUDY

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Abstract - Kavthemahankal is a city & tehsil in Miraj subdivision of Sangli district in the state of Maharashtra. Kavthemahankal is having census population in the year 2021 is 20500 & known as K.M City. It is a peaceful town in the Sangli District.

Kavathe Mahankal city is with total 4500 households. Kavthemahankal Nagarpanchayat, kavthemahankal is participated in Swachh Bharat Mission under Ministry of Housing and urban affairs GOI. Also Kavathe Mahankal Nagar panchayat successfully participated and well performed Nagar Panchayat in Mazi Vasundhara Abhiyan scheme launched by Environment Department of Government of Maharashtra. Kavthemahankal Nagar Panchayat practices Solid waste management as per the SWM Rule 2016. For Swachh Survekshan 2021 city has improved Solid Waste management and heading towards garbage free city. Under Mazi Vasundhara Abhiyan Local government successfully implemented various aspects of Mazi Vasundhara Abhiyan. Kavathe Mahankal city mainly focusing on to achieve sustainable Solid waste management goals as well as city beautification. In with focus on sustainability, including repairs and maintenance of public places, tree plantation etc. under ULB jurisdiction to achieve a clean and aesthetically pleasing city with the help of public participation.

Key Words: Air pollution, Solid waste management, Swachh Bharat Mission, Sustainable City, Environment



1. INTRODUCTION

Kavathe Mahankal is heading towards sustainable city goals, clean and green city under urban development in upcoming years

As the global population continues to grow at a steady pace more and more people are moving to cities every day. Cities accommodate nearly 31% of India's current population & contribute 63% of GDP (census 2011).

For the contribution of 75% of India's GDP by 2030 requires development of physical, institutional, social, and economic infrastructure, it is important for the improvement of quality of life & attracting people & investment for the growth and development.

In the current Swachha Survekshan 2021 city is mainly focused on the Solid Waste Management. Mazi Vasundhara Abhiyan mainly focusses on green cover and biodiversity, Green building, solid waste management infrastructure, taking steps for water conservation, improving energy efficiency, implementing awareness programmes and getting citizens to take the Mazi Vasundhara e-pledge to show their commitment towards protecting the environment. These tasks have been spread out over five broad indicators – *vayu* (air), *Bhumi* (earth), *Jal* (water), *Agni* (energy) and *Akash* (education and enhancement)

2. OBJECTIVES:

1. To understand and plan the basic requirements to achieve sustainable city under urban development.
2. The action plan is mainly focused on solid waste management and minimize air pollution and clean air. Also, implementation of best practices and innovative ideas for Clean air and city beautification

3. To study various area development under smart city and designing the points under beautification of city for the sustainable environment.

4. To achieve maximum participation of citizen in Swachh Bharat Mission and Mazi Vasundhara Abhiyan.

3. STATUS OF PROJECTS UNDER CITY

Swachh Bharat Mission is mainly focused on achieving garbage free status, such as: door to door collection, segregation at source, sweeping in residential, commercial and public areas, provision of litter and/or storage bins, processing of wet and dry waste, responsibilities of bulk waste generators towards on-site waste processing, penalties, spot fines & user charges, scientific landfill, cleanliness of drains & water bodies, screening of nallahs, plastic waste management, managing construction & demolition waste, beautification with sustainability, resolution of citizen complaints covering issues related to littering, garbage dumping, overflowing litter bins, etc.

4. INNOVATIVE APPROACH: -

Kavatemahankal Nagarpanchayat is small town with limited resources. To achieve sustainable beautification and air pollution control measure local government adopted some cost-effective innovative approach to achieve goals. The Basic goal of KM Nagarpanchayat was to plant and grow more trees on identified strategic location which are major sources of air pollution.

With the help of awareness campaign for citizen participation many organizations involved in the mission through CSR funding to help KM Nagarpanchayat. Also, Some NGO and SHGs actively participated in all events of KM Nagarpanchayat.

Some of the innovative approach by KM Nagarpanchayat

1. Ayurved Garden
2. Biodiversity Garden
3. Development of Oxidation point o Meghraj Tekdi
4. Transformation of garbage vulnerable point in to beatification Points.

Description of the various projects done by the ULB are given below:

4.1. AYURVED GARDEN

Concept: Plantation of herbal Plants to create awareness about importance of herbal plants in our day-to-day life.

No of Herbal Plants Planted: 150 Plants

No of Herbal Species Planted: 65 Species



Location: Near Water tank kavthemahankal City.

Maintained By: ULB Staff



2. MEGHRAJ TEKADI AREA DEVELOPMENT

Concept: Development of Meghraj Tekdi which is one of the popular place in KavatheMahankal. The main goal was to Transformation of bare land into attractive tourist point for citizens of KavatheMahankal and to make Meghraj Tekdi as a oxidation point by planting more pollution absorbing plants in that area.

No. of Trees Planted: 1000



3. BIODIVERSITY GARDEN

Concept: Development of Biodiversity garden as a environmental park to preserve biodiversity and create awareness about importance of biodiversity preservation amongst the citizen of Kavathe mahankal. Plantation of 100% native plants.

Proposed Biodiversity Garden



BEST FROM WASTE PROJECT:



4. Transformation GVP into Beautification Points: I love Kavthemahankal point at the entrance of the city



5. SOLID WASTE MANAGEMENT PLANT :



6. CREATIVE ARTISTIC PAINTINGS ON WALLS :



7. Other Initiatives:

A) Awareness Through Sort Film

Concept: To Create awareness about segregation of waste and its importance KM Nagar Panchayat made a short film and published on various media platforms

Achievement: Short film has been awarded in State Level Short film festival under Mazi Vasundhara Abhiyan Organized by Environment and Climate Change Department State Government of Maharashtra

Short Film Link :

<https://youtu.be/Lpp-XliIUU8>



B). PINK TOILET CONCEPT FOR THE LADIES

Concept: Introducing the concept of “Pink Toilet” in KavatheMahanakal. The main motto of Pink toilet formation is to create awareness about importance of safe hygiene practice among the women.

Facility: a) Sanitary Vending machine b) Sanitary Disposal Machine c) Toilet Complaint and Feedback System

8. ONGOING PROJECTS:

- Scientific Solid waste Management Processing Plant (Dry Waste , Wet Waste and Hazardous Waste)
- Scientific Faecal Sludge Treatment (FSTP) Plant

9. NEWS AND MEDIA RECONGITION:

9. AIR QUALITY MONITORING IN THE CITY REPORT

'आय लव्ह यू' कवठेमहाकाळ हा पॉइंट ठरतोय लक्षवेधी



Test Report

Report No.:	ME-NG04909-201231-SA-KMNP-SANGLI	Date:	03.04.2021
Name and address of Customer	KAWATHEMAHAKAL NAGAR PARISHAD Kavthemahankal, Dist. Sangli	Order Reference	WO No. 1555/2020 Dtd. 15.12.2020
Sample Description/Type	Ambient Air Quality Monitoring	Sample Collected by	Laboratory
Sampling Location	Kachara Depo	Sample Quantity/Packing	PM ₁₀ : B(s)P, Ni, As, Pb: Filter Paper: 1 X 3 No. PM _{2.5} : Filter Paper 1 X 1 No. SO ₂ : 30 mL X 6 No. PVC Bottle NO _x : 30 mL X 6 No. PVC Bottle NH ₃ : 10 mL X 24 No. PVC Bottle O ₃ : 10 mL X 24 No. PVC Bottle Charcoal Tubes: 2 X 3 No. CO: Bladder: 2L X 3 No.
Date of Sampling	17.03.2021 to 18.03.2021	Date of Receipt of Sample	19.03.2021
Sampling Procedure	As per Method reference		
Date of Start of Analysis	19.03.2021	Date of Completion of Analysis	30.03.2021

Parameter	Unit	Result	#NAQM Standard	Method Reference
Discipline: Chemical Testing; Product Group: Atmospheric Pollution (Ambient Air)				
Location	Kachara Depo		Duration of Survey	24 hours
Sulphur Dioxide (SO ₂)	µg/m ³	7.14	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume 1, 2012-13, Page No.1-6
Nitrogen Dioxide (NO ₂)	µg/m ³	13.1	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume 1, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) of PM ₁₀	µg/m ³	57	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume 1, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) of PM _{2.5}	µg/m ³	18	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume 1, 2012-13, Page No.15-30
Ozone (O ₃)	µg/m ³	<19.6	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume 1, 2012-13, Page No.31-34
Lead (as Pb)	µg/m ³	<0.02	1.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume 1, 2012-13, Page No.48-55

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13. REFERENCES

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14. BIOGRAPHIES

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10. SCOPE OF THE THIS INNOVATIVE PRACTICES IN FUTURE

To achieve sustainable development in the city. Behavioral change in the citizen about the waste management and environment. It has been observed City beautification and garbage free city have positive impact on the socio economic change on the Kavathe Mahanakal city.

11. SUMMARY OF INNOVATIVE APPROACH FOR AIR QUALITY CONTROL AND SUSTAINABLE CITY BEAUTIFICATION

1. Sustainable beautification achieved in various strategic locations.
2. 4000 trees were planted within 6 months.
3. 5000 plus citizens involvement.
4. Public awareness and behavior change achieved towards importance of Environment and Waste Management.
5. CSR and SGH involved to promote the campaign "My Kavthemahankal My Responsibility" and many more.

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