

Kannada Sangha Pune's
Kaveri College of Arts, Science and Commerce, Pune
Class:BBA

A.Y-2020-2021,

Basic course in Environmental Awareness

LIST OF ENVIRONMENTAL AWARENESS PROJECT

S.R.NO	Roll no	Name of the student	Project Title	
01	77	Akassha Nitin Jadhav	Environmental Study of Ujani Dam	
02	56	Akash Jogawade	Environmental Study of Mula Mutha Dam	
03	13	Abhishek Waghmare	Environmental Study of Pawana Lake	
04	60	Aditi Rajesh Pate	Environmental Study of Mula Mutha River	
05	31	Adwait Mahajan	Environmental Study of Mula Mutha River	
06	74	Aiyshawarya Shah	Environmental Study of Bhima River	
7	08	Akshat Chubey	Environmental Study of Mithi River	
8	29	Akshata Shakhalkar	Environmental Study of Mula Mutha River	
9	23	Aniket Athawale	Environmental Study of Yamuna River	
10	6	Anup Fate	Pawna Lake	
11	26	Anup Saptarshi	Environmental Study of Mula River	
12	14	Arjun Boarkar	Environmental Study of Mula River	
13	76	Arjun Karanjkar	Environmental Study of Mula - Mutha River	
14	63	Ashwini Birajdar	Environmental Study of Japi River	
15	55	Atharwa Deshpande	Environmental Study of Mula Mutha River	
16	97	Deval Tavargerri	Environmental Study of Mulshi Dam	
17	57	Disha Dhene	Environmental Study of Godavari River	
18	97	Dnyaneshwari Lole	Environmental Study of Yamuna River	
19	25	Gargi Shahane	Environmental Study of Pravara River	

20	95	Gaurav Choudhary	Environmental Study of Ganga River	
21		Gaurav Gaikar	Environmental Study of Mula Mutha River	
22	73	Gaurav Shirvalkar	Environmental Study Pawana River	
23	03	Harshada Amrale	Environmental Study of Mula Mutha River	
24	41	Heramb Mane	Environmental Study of Mula Mutha River Mutha River	
25	52	Hitesh Girase	Environmental Study of Mula River	
26	80	Ketaki Thakur	Environmental Study of Mula Mutha River	
27	26	Ketaki Sonawane	Environmental Study of Koyana River	
28	37	Komal Gavade	Environmental Study of Lawsa Dam	
29	22	koumudi bhave	Environmental Study of Mula Mutha River	
	67	Kshrij Kulkarni	Environmental Study of Mula Mutha River	
30		Kumar Talawar	Environmental Study of Khadakwasla Dam	
31	46	Mandar Kanade	Environmental Study of Mula mutha Dam	
32		Mayur Parmar	Environmental Study of Ganges	
33	57	Meher Shaikh	Envirmental study and Awareness of Murtha River	
34	30	Nandini Kothari	Environmental Study of Ambazari Lake	
35	18	Nikhil Bashetti	Environmental Study of Ujani Dam	
36		Nikhil Waghmare	Envirmental Study of Pawna Lake	
37		Om Gabdule	Not opening	
38	17	Omkar Gatkal	Environmental Study of Mutha River	
39	10	Omkar Minde	Environmental Study of Mula Mutha River	
40	64	Omkar Paygude	Environmental Study of Mula Mutha River	
41	54	Omkar Thombare	Environmental Study of Mula Mutha River	
42		Parikshit Peshave	Environmental Study of Mula Mutha River	
43		Pavan Handibag	-----	
44	48	Peyusha Dhande	Environmental Study of Model Colany Lake	

45	47	Piyush Deshmukh	Environmental Study of Mula – Mutha River	
46	59	Pooja Chauhan	Environmental Study of Mula – Mutha River	
47	36	Pradnya Bhandare	Environmental Study of Mula – Mutha River	
48	05	Prathamesh abhangrao	Environmental Study of Bhima River	
49		Prathmesh Nandre	Environmental Study of Umgot River	
50	32	Pratiksha Ghumbre	Environmental Study Mutha River	
51	01	priti balkawade	Enviromental Study Mutha River	
52	44	raku Choudhary	Enviromental Study of Umongot River	
53	49	Sahil Malusare	Enviromental Study of Pashan Lake	
54	27	sakshi dalvi	Enviromental Study of P Mula River	
55	34	Sakshi Rasal	Enviromental Study of Yamuna River	
56	12	sameer ali	Enviromental Study of Khadakwasla Dam	
57	21	Sameer Bagwan	Enviromental Study of Mutha River	
58	85	sankaipa bhalerao	Enviromental Study of Bhima River	
59	16	Sarthak Salunke	Enviromental Study of Mula River	
60	20	Satyajit Ingle	Enviromental Study of Nag River	
61	50	Sayali Dhapse	Enviromental Study of Mula – Mutha River	
62	58	Sejal Thapar	Enviromental Study of Mula – Mutha River	
63	40	Shantanu Dunakhe	Enviromental Study of Mula – Mutha River	
64	84	Shivmala Khatri	Enviromental Study of Bhima River	
65	91	Shreyash Khule	Enviromental Study of Mula – Mutha River	
66	35	Shruti Sagar	Enviromental Study of Ganga River	
67	51	Siddhi Sable	Enviromental Study of Khadakwasla Dam	
68	61	Siddhi Shinde	Enviromental Study of Khadakwasla Dam	
69	94	Somesh Kudale	Enviromental Study of Mula – Mutha River	

70	92	Sushant Rasal	Enviromental Study of Khadakwasla Dam	
71	28	Swarali Datar	Enviromental Study of Bhima River	
72	87	Swarda Gaikwad	Enviromental Study of Bhima River	
73	69	Sweta Kumar	Enviromental Study of Mutha River	
74	04	Vaibhavi Suryawanshi	Enviromental Study of Mula – Mutha River	
75	62	Vinay Jagdale	Enviromental Study of Mula – Mutha River	
76	39	Yash Jadhav	Enviromental Study of Mula – Mutha River	



Dr. Shweta Bapat

BBA Co-Ordinator

Kaveri college of Arts ,Science & Commerce.



Kannada Sangh Pune's
Kaveri College of Arts, Science and Commerce
Class - SYBBAIB
A.Y. - 2020-2021
Basic Course in Environmental Awareness

Sr.NO.	Name of the Student	Name of the project Report
1	Abhishek Nagare	Environmental Study of Mutha River
2	Aishwarya Prabhu	Environmental Study of Mutha River
3	Ajinkya Sukale	Environmental Study of Khadkwasala Dam
4	Akash Chadde	Environmental Study of Pavana Lake
5	Albin Thykkoottathil	Environmental Study of Tapti River
6	Apurva Bhujbal	Environmental Study of Khadkwasala Dam
7	Arundhati Nene	Environmental Study of Jambhulwadi Lake
8	Aryan Godse	Environmental Study of Mula Mutha River
9	Atharva Bandiwadekar	Environmental Study of Mula Mutha River
10	Atharva Bokil	Environmental Study of Mula Mutha River
11	Atharva Jogdeo	Environmental Study of Pashan Lake
12	Atharva Mokate	Environmental Study of Mula Mutha River
13	Atharva Kutte	Environmental Study of Pavana Lake
14	Ayan Shaikh	Environmental Study of Mutha River
15	Ganesh Kamble	Environmental Study of Mutha River
16	Hariprasad Bhandari	Environmental Study of Mula Mutha River
17	Harlin Rathod	Environmental Study of Mula Mutha River
18	Harsh Gupta	Environmental Study of Mula Mutha River
19	Harshada Deshpande	Environmental Study of Pashan Lake
20	Himanshu Rajput	Environmental Study of Woghur Dam
21	Kaushiki Sawant	Environmental Study of Bhima Basin
22	Krishna Varma	Environmental Study of Mula Mutha River
23	Manas Ghorpade	Environmental Study of Mutha River
24	Manish Shirke	Environmental Study of Mutha River
25	Mansi Bhagwat	Environmental Study of Mula Mutha River
26	Mayur Panchal	Environmental Study of Pavana Lake
27	Nishant Chawda	Environmental Study of Mutha River
28	Om Ganjkar	Environmental Study of Panshet Dam
29	Omkar Raskar	Environmental Study of Khadkwasala Dam
30	Omkar Thorat	Environmental Study of Mutha River
31	Omkar Tonde	Environmental Study of Mula Mutha River
32	Piyush Bhilare	Environmental Study of Pashan Lake
33	Pooja Harbare	Environmental Study of Mutha River
34	Pranjali Mohite	Environmental Study of Mula Mutha River
35	Prathmesh Patil	Environmental Study of Bhima River
36	Pratik Ogale	Environmental Study of Bhima River
37	Pushkaraj Thakurdas	Environmental Study of Mula Mutha River
38	Rajeshwari Chakankar	Environmental Study of Panshet Dam

39	Rohit Mudliyar	Environmental Study of Mula Mutha River
40	Rutvik More	Environmental Study of Khadkwasala Dam
41	Saba Shaikh	Environmental Study of Mutha River
42	Sanket Pasalkar	Environmental Study of Jambhulwadi Lake
43	Sakshi More	Environmental Study of Pavana Lake
44	Samir Kanak	Environmental Study of Pavana Lake
45	Samruddhi Gandhi	Environmental Study of Kundalika River
46	Samruddhi Tonde	Environmental Study of Mula Mutha River
47	Shambhavi Oza	Environmental Study of Khadkwasala Dam
48	Shruti Sonar	Environmental Study of Mula Mutha River
49	Shubham Dhangar	Environmental Study of Ekburjee Dam
50	Shubhankar Soman	Environmental Study of Khadkwasala Dam
51	Shweta Tripathi	Environmental Study of Khadkwasala Dam
52	Siddhant Musale	Environmental Study of Mula Mutha River
53	Siddharth Udameeshi	Environmental Study of Pavana Lake
54	Soham Athavle	Environmental Study of Jambhulwadi Lake
55	Soham Mane	Environmental Study of Pavana Lake
56	Sohel Kanegiri	Environmental Study of Mutha River
57	Shrushti Sonkar	Environmental Study of Amba River
58	Sumedh Kakatkar	Environmental Study of Mula Mutha River
59	Tamanna Gupta	Environmental Study of Mula Mutha River
60	Tanvi Achyut	Environmental Study of Khadkwasala Dam
61	Vanshita Jadhav	Environmental Study of Mutha River
62	Vedangi Walanj	Environmental Study of Mutha River
63	Vratesh Pardeshi	Environmental Study of Pavana Lake
64	Vrushabh Mahajan	Environmental Study of Pashan Lake
65	Vrushabh Pawar	Environmental Study of Mula Mutha River
66	Yograj Rajbhoj	Environmental Study of Jambhulwadi Lake
67	Yukta Panchal	Environmental Study of Panshet Dam

Shweta

Dr. Shweta Bapat

BBA and BBA(IB) Coordinator

Kaveri college of Arts,commerce&Science.



Kannada Sangha Pune's
Kaveri College of Arts, Science and Commerce, Pune
SYBSc(CS) 2020-21

Environment Studies Field Projects


Sr No.	Student's Name.	Title of the Field Project .
1	Ayush Kishor Raut	Agriculture
2	Ranjit ravindra shinde	Study of commene birds and basic principles of identification
3	Vaishnavi Padharinath Chorghe	Plants study
4	Tanvi Arun Ghodke	Study of common plants, insects,birds and basic principles of identification
5	Tanmay Dharmaraj Angre	Study Of Simple Ecosystems Pond, River, Delhi Ridge
6	Sonali Datta Gore	Climate changing
7	Atharva Damodar Kulkarni	Fresh water Ecosystem
8	Vedant Mangesh Chandratre	Visit to local polluted site- Urban
9	Atharva Rajaram Bharakar	Visit to an area to document enviroment assets : river/forest/flora,etc
10	Maitreyee Joshi	Study of a simple ecosystem-Pond
11	Shubham Tilekar	Study of Simple Ecosystem- River,Pond,Delhi Ridge
12	Abhishek Rajendra Bhosale	Study of simple ecosystem
13	Manali Atul Ambavale	Visit to Krishna River
14	Prajakta Vitthal Amrale	Study of common plants ani basic principles identification
15	Shilimkar Atharva Hanumant	Study of simple ecosystem- Aquatic ecosystem - pond, river etc.
16	Atharva Rajesh Jadhav	Sudy of simple ecosystems
17	Abhishek sanjay Awate	Environmental Assets : Godavari River.
18	Sandhya Laxman Balkawade	Study of common plants, insects, birds and basic principles of identification
19	Bhushan bane	Environment assets:- Bhima river
20	ROHAN NAVANATH BODAKE	Study of common plants,insects and birds and basic principles of identification
21	Ashish Vijay Borate	A Visit to a local polluted site
22	Savnee Laxman Botre	Study of common plants, insects, birds and basic principles of identification
23	Vrushali vijay chandalekar	Visit to a local polluted site
24	Akanksha pradeep chavan	Field visit to local polluted area-industrial
25	Ganesh Datal	Study ecosystem river and ponds
26	Gayatri Vaibhav Dhamale	Study of simple ecosystem - River
27	SonaliRamchandra Dixit	Marine pollution
28	Rutika Vinod Gole	Study of common plants
29	Samruddhi gore	Visit to tadoba national park



30	Diksha Milind Gujarathi	Agriculture pollution
31	Isha Praveen Hosur	Study of common birds and basic identification principles.
32	Pranjal Appasaheb Jagtap	Visit to a local polluted site
33	Shivtej	Study of common plant ,birds,insects and basic principles of identi
34	Pranil Pravin Kadam	Ecosystem
35	Shubhankar Kale	Industrial Pollution
36	Pranita Dashrath Kashilkar	Study of common plants and basic principle of identification
37	Aditi Chetan Kathalay	Flora and Fauna of Warje Hills
38	Atharva Shriniwas Khaladkar	Study of simple ecosystems
39	Rutuja subhash kothule	Study of simple Ecosystem - Pond
40	Venu vivek kulkarni	Forest
41	Arya Purushottam Lele	Flora And Fauna Of ARAI Tekdi
42	Prapti.M.Limaye	Study of simple ecosystems-pond,river,Delhi Ridge,etc.
43	Aniruddha	Forest
44	Rushikesh Nanaware	Study of common birds and basic principle of identification
45	Rushikesh Nanaware	Study of common birds and basic principle of identification
46	om jayesh kamble	study of simple ecosystem pond
47	Sharwari Rajendra Paigude	Study of common insects and basic principles of identification
48	Rohit Pasalkar	Visit to local polluted site
49	Prajwal Ashok Ghag	Deforestation
50	Pranit hande	Study of common insects,birds,plants and basics principles of identification
51	shreya puranik	study of simple ecosystems- pond
52	SHUBHAM RAUT	Visit To River Bhima To Document Environmental Asset.
53	Riva Khandge	Visit to a local polluted site- rural/urban/agriculture/industrial
54	Pranjal Dhanraj Rodge	Visit to local polluted site-MUMBAI CITY
55	Kshitija Sanjiv Savairam	Study of common plant - Aloe vera
56	Aditya Shedge	Environmental Assets : Dal Lake
57	Nishant Shelke	Field work
58	Nidhi Shenoy	Study of common plants,insects,birds and basic principles of identification.
59	Shruti Keskar	Study of common plants, insects, birds and basic principles of identification
60	Shubham Misal	Study of simple ecosystem- pond,river,& delhi, ridge



61	Soham vitthal sonawane	
62	Paurnima baban tupe	Study of ecosystem pond,river,delhi ridge
63	Mihir Chandrasekhar Vaidya	Visit local polluted site
		A visit to local water polluted site
64	Renuka Yuvraj Veer	Visit to river krishna to document environmental
65	Kajal Yenpure	asset.
		Visit to a local polluted site


Course Coordinator





**Kannada Sangha Pune's
Kaveri College of Arts Science and Commerce,
Pune**

**Bachelor of Business Administration –
2020-21**

Project on Add-on 'Basic Course in Environmental Awareness'

Name: Satyajit Sudhakar Ingle

Class: SY BBA

Roll No: 20

Sign of Student: 

Sign of Teacher: _____

Date of Submission: 24 Feb 2021

INDEX

St. No.	Name of the Topic	Page no.
1.	Introduction	01
2.	Dependence	03
3.	Cleanliness Status	05
4.	Source of Pollution	07
5.	Prevention measures	09
6.	Suggestions.	10

NAG RIVER

(The River That Lends Life and A Name To Nagpur)

Introduction

The Nag river flows through Orange city 'Nagpur', Maharashtra. Nagpur city derives its name because of this river. It originates from the western weir of Ambarzasi lake in West. The river's origin was intact till 1999, but then the NMC-formed committee traced the real origin up north of the lake at a village called Lava, 25kms away from western weir.



Sangam

Nag river merges with pili river in the heart of the city. People call this point as Sangam and have also built a temple called Sangameshwar Mahadev.

Salient feature

- Origin - Lava Village
- Major Tributaries - Bos Nallah, Pili River, Futala, Posa river
- Minor Tributaries - 24 Natural drains within the city
- Width - 12 to 40 (metres)
- Length - 68 kms (17 kms within city)
- End Point - Confluence with Kanhan River
- Total Area in Nag river catchment - 5620 hectare.

The Nag river was once a lifeline of the city. But today, the river's rich history has got buried in deep silt beneath the millions of litres of sewage flowing in it. Improper development coupled with callous tendency of the citizens to throw garbage and other waste into the river has turned it into a 'Nallah'.

Dependence



Koradi-Khaparkheda

Power plant

- Municipally treated wastewater from Nag river is used for cooling purposes in the power plants at Koradi-Khaparkheda and Mauda.
- Daily household water supply for drinking and various purposes is used to be supplied from the Nag river. But in recent years, supply of water was cut down and was only being supplied at every alternate day due to lack of monsoon. But, now Nag river is a dead river and the drinking water is supplied from 'Pench reservoir and tetladah dam'.
- Now, Nag river use is only reduced to dump city's waste and carry sewage of 'n' number of houses situated along its bank and serves no real use other than dumping city's waste.
- It is said the only reason Nagpur city doesn't get flooded in monsoon is because of Nag river as the river stretches through the city and can easily hold all the monsoon water.

Ambazasi lake, origin point of Nag river is famous as a tourist place to visit in Nagpur. There is a 25 acres garden adjacent to it for which NMC (Nagpur Municipal Corporation) charges Rs 10 from the visitors.

Other than this, people aren't dependent on Nag river for anything except for release of sewage and dumping waste or carrying industrial effluents.



Ambazasi Lake

Cleanliness Status

River water quality according to MPCB suggests that some parts of river is not highly polluted and sustain fishes and other aquatic life.

The River stretches through the city for 17kms. Almost half of the stretch has open green cover on southern side. While the remaining stretch passes through mixed and residential land use.

River channel in Shankar Nagar: This area is more lush compared to others. Also the groundwater quality is good.

River channel at Central Mall: Most of the stretch is surrounded by residential and mixed land use. Waste from Central mall is dumped directly into it.

River channel behind dharampath: Here Natural vegetation is found. Therefore groundwater and wastewater quality in this stretch is good.

Volume of Sewage that is discharged into the Nag river each day is about 430 million litres (MLD).

To treat this sewage, there are only 3 small Sewage treatment plants (STPs). Combined treatment capacity of 3 STPs is about 43 MLD.

- 5MLD at Shankar Nagar
- 40 MLD near Sangam at Yashwantrao Chavan Stadium
- 3 MLD at St. Xavier's School.

So, only 10% sewage is treated and rest 90% is directly being released into the river. This explain low cleanliness status of the river.

If we go through various channel through which river passes, high cleanliness status is nowhere to be found. But NMC is taking serious course of action for cleanliness drive and plans to achieve this status by 2023 with 'Nagar river rejuvenation project' which was approved by Central Cabinet in second quarter of 2020 because of the constant effort of Shri Nitin Gadkari (Minister of Micro, small and Medium Enterprises).

Source of Pollution

The five stretch of 17kms within the city limits has a number of dumping of solid waste, industrial waste water. Nag river reeks of stench for the first time when it crosses Buldi (a commercial hub and the veritable city centre with dense population)

When the river crosses buldi, it is dumped with

- 1 sewage
- 2 Municipal solid waste,
- 3 debris and
- 4 Every kind of material such as plastic that can be dumped into it



Slums dumping waste into Nag River

As many as 31 slums along the banks of Nag river are the major contributors to solid waste dumping in the water body. People's perception on how the river water quality got reduced is due to increase in urbanization and dumping of waste mainly plastic, untreated or semi-treated water of residences and industrial effluents of factories.

Prevention measures

The Times of India with NMC had carried out a 'save Nag river' campaign during May 1 to 15 in 2013.

Initiatives taken and awareness raised during the campaign are as follows

1. Shramdan - to ensure involvement of all. Daily cleaning was done by the volunteers between 7-9am.
2. Notices served - Hundreds of household along the bank of the river were served notices by the NMC. Apart from households, many commercial establishments were also been served notices.

By the end of day 15th, a whopping 5500 tones of garbage was excavated from the river. Following which, there was no flooding of the river in the following monsoon. But everything got back to the same as it was before the drive.

Then for next 2-3 years, NMC spent a lot of money on two things.

1. De-silting machines ahead of monsoon.
2. Beautification of the river front at origin.

Now, in 2020 with Shri Nitin Gadkari's effort, 'Nag river rejuvenation' project worth Rs. 1700 cr has been approved from the centre.

Key takeaway from the project

1. Entire sewerage from central and North Nagpur areas will be recycled through treatment plants and pumping stations will be erected for the same before releasing it in river.
2. Tunneling a Canal from Ambazari and Futala lake fill pardi for Boat rides.

Suggestions

People connect with the River is missing. If it were to be regenerated i.e. if people are more cautious, generous and take basic preventive measures upon themselves by avoiding throwing of garbage or any sort of waste into the River body. Source of pollution into the river will be greatly reduced right from the source itself.

However much government spend the funds on cleaning drive of the river. It will eventually get polluted if there is no source reduction of the pollution.

Constructing state of the art sewer line to avoid using Nag river as the only outlet for sewage. Building state of the art modern STPs as it will help treating the sewage water before directly releasing into the Nag river.

Ensuring implementation of laws which are for the good of the river and using legal, technological, all the means to clean up the river.

NGOs should be involved and the gap between them and the administration should be bridged to get the best results.

The pace of Nag river's destruction foretells its total demise in the coming days. Concerted efforts for a long time may conserve the river to some extent. Else, the next generation of the city would have to find the Nag river in only history books.





**Kannada Sangha Pune's
Kaveri College of Arts Science and Commerce,
Pune**


**Bachelor of Business Administration –
2020-21**

Project on Add-on 'Basic Course in Environmental Awareness'

Name: Swarnali Ravindra Datar

Class: SYBBA

Roll No: 28

Sign of Student: 

Sign of Teacher: _____

Date of Submission: _____

Q 1] Collect information about any water resource in your city.

Ans: Name of the River: MUTHA River

- i) The Mutha River is a river in the Western Maharashtra, India.
- ii) It arises in the Western Ghats in the village called Vegase & flows on to join the Bhima River.
- iii) This river has been dammed twice; first at the Panshet Dam & then again dammed at Khadakwasla.
- iv) Mutha river is an important source of drinking water for Pune; the water is also used for agriculture purposes.
- v) Before reaching Khadakwasla tributaries like Ambi & Moshi join the river.
- vi) Further it converges with the Mula river at Sangam Ghat near COEP college in Pune & it is then known as Mula-Mutha.
- vii) Between Vegase & Sangam bridge, the Mutha river flows a distance of 50 kms with about 15kms flowing through Pune City.



- Q2] Analyse the data collected in terms of its
- 1) Who are dependent on this water resource
 - 1.2) Cleanliness Status
 - 2) Sources of Pollution
 - 3) Steps taken by local government to preserve the water resource.
 - 4) Your suggestions to general public to preserve the water resource.

Ans - a) The Mutha river is dammed twice and it is the main source for irrigation, industries and drinking water.

b) Untreated Sewage is the biggest cause of pollution in this river. Sewage treatment plants do not entirely treat the sewage and then estimated 30% of sewage enters the river untreated.

c) This causes reduction of oxygen level in the water.

d) Other causes include industrial pollution, owing to the cotton industry, solid waste dumped by residents or religious waste and waste water from residential society.

e) According to the data released by PMC

environmental dept. constantly rising pollution level since 2012 have now transformed Mutha river into a dead river



* Steps taken by government to reduce pollution:

1. Preparation of action plan for sewage management and restoration of water quality in aquatic resources
2. Setting up of monitoring system to check the discharge of effluent directly into rivers and water bodies.
3. Set action to comply with effluent standards is taken by SPcBs to improve the water quality.
4. Issuance of directions for implementation of zero liquid discharge.
5. Financial assistance for installation of Common Effluent treatment plants for cluster of small scale industrial units
6. Issuance of directions under Section 5 of Environment Act, 1986 to industries and under Section 18(i) (b) of Water Act, 1974.

- 7) The National Tribunal of India has the power to hear all cases relating to issues of the river under the ~~water~~ water (Prevention & Control of Pollution) Act 1974 & the Water (Prevention & Control of Pollution) Cess Act 1977.
- 8) Considering the serious nature of encroachment encroachments of the Mutha river, the NGT in its latest order on 23 July 2019 ordered a committee to be formed to look ~~into~~ into these issues
- 9) The committee will comprise:-
- i) The Chief Engineer, Water Resources Department (Government of Maharashtra)
 - ii) The District Collector, Pune.
 - iii) The Member Secretary, Maharashtra Pollution Control Board.
 - iv) SEIAA, Maharashtra.
 - v) A Senior Scientist for the CPCB, Regional office at Pune.
- 10) The committee will decide the appropriate measures.
- 11) In 2014, the Government of Maharashtra announced that that the Pune Municipal Corporation would build new Sewage treatment plants to ensure that no

sewage would be dumped into the rivers.



These are several suggestions that can help in reducing water pollution.

They are:-

- # Dispose of your medication properly
- # Avoid water polluting recreational activities
- # Reduce the use of chemicals while cleaning.
- # Avoid use of pesticides & Herbicides.
- # Avoid throwing metal waste in water bodies.
- # Do not flush pills, liquids or powdered medication or drugs in the water bodies.
- # Do not litter the banks of water bodies
- # Avoid throwing untreated industrial waste in water bodies.
- # Reduce the usage of hydroelectric plants.



- Our nature has always given us everything we need in abundance.
- But it is our responsibility to preserve it & use it wisely.
- Water is one such resource, it covers 70% of the earth's surface but only 3% of it is fresh water, of which 2.5% is unavailable as it is locked up in glaciers, polar ice caps, atmosphere soil, or is highly polluted.
- Only 0.5% of the total earth's water is available for drinking & other purposes.
- We should always keep these facts in mind while using any natural resources.





**Kannada Sangha Pune's
Kaveri College of Arts Science and Commerce,
Pune**


**Bachelor of Business Administration –
2020-21**

Project on Add-on 'Basic Course in Environmental Awareness'

Name: Vinay S. Jagdale

Class: 5Y. BBA

Roll No: 62

Sign of Student: 

Sign of Teacher: _____

Date of Submission: _____



Mula - Mutha River, Pune,
Maharashtra.

Introduction

Pune, located in the state of Maharashtra lies on the western margin of the Deccan plateau, on the leeward side of the Sahyadri mountain range. It lies at the convergence of two rivers Mula and Mutha. The Mula and Mutha Rivers originate in the Sahyadri ranges and travel across Pune city, and form Mula-Mutha river which eventually joins the Bhima river.

The total length of the three rivers Mula, Mutha and Mula-Mutha traversing through Pune Municipal Corporation area is approximately 44 km. The river length covered in this project along the land is as follows:

- Mula River :-

Mumbai - Pune Bypass to Sangam
[22.2 km]

- Mutha River :-

Mumbai - Pune Bypass to Mula-Mutha Sangam
[10.4 km]

- Mula-Mutha River :-

Mula-Mutha Sangam to Kharadi
[11.8 km]

Status Of River



The growing urban activities have left these water bodies in ~~an~~ vulnerable state. Due to lack of planning, the rivers presently face growing levels of ~~pollu~~ pollutants and rapid degradation, creating unhygienic conditions.

Due to high levels of pollution, including ~~125~~ 125 MLD of untreated sewerage water being discharged into the river by the Pune Municipal Corporation, the Maharashtra Pollution Control Board has classified the water quality to be of Class - IV.

The study found levels of faecal coliform [indication of human and animal excreta], biochemical oxygen demand [oxygen levels for aquatic life to survive] and dissolved oxygen in the Mula-Mutha river, all not meeting safety levels.

According to report, Mula-Mutha contain 332.08 mg/l faecal coliform. As per the pollution watchdogs 100 mg/l is the safe limit.

Bio-chemical oxygen demand in the Mula-Mutha river is at 12.08 mg/l which is almost four times above prescribed level. Prescribed level of BOD is 3 mg/l.

Mula-Mutha river records 42 mg/l chemical oxygen demand [COD]. At the same time, the nitrate level in the Mula-Mutha river is recorded at 2.41 mg/l, almost double the safety limit.

Cause of Pollution



The major reasons of pollution of Mula-Mutha are discharge of untreated domestic waste into the river due to inadequate sewerage system (including pumping stations) and sewage treatment capacity in the town, as well as open defecation on the river banks.

Pune Municipal Corporation releases 744 MLD of water into the river per day, of which 332.08 mgd MLD is released without any treatment.

Steps taken by the local Government to prevent the Water Resource



In order to cope up with these current issues and create a meaningful public realm along the river, the Pune Municipal Corporation has taken up the River Rejuvenation Plan for all three rivers in entire Pune Municipal Corporation area along with Pimpri-Chinchwad Municipal Corporation, Kharkee Cantonment Board and defense authorities. This will revitalize the rivers, after clean environment, enhance the surrounding areas and create a city level assets.

The Mula, Mutha and Mula-Mutha River Rejuvenation project aims at transforming these rivers into a valuable assets for the city, creating memorable identity for Pune. The Mula, Mutha and Mula-Mutha River Rejuvenation Project incorporates a comprehensive proposal which is unique and context specific, providing large public realm.

The Pune Municipal Corporation have sanctioned funds of Rs 990.26 Cr, out of which Central Government has components of 841.72 Cr and Pune Municipal Corporation has components of 148.54 Cr for management of sewerage system and STPs: which will be completed by 2022.

For solid waste management Maharashtra government has approved DPR of all 338 Urban Local Bodies. The funds for the same amounting to Rs 2560.0 Cr has already been sanction by Government.

According to Pune Municipal Corporation have passed a resolution in their General Body meeting and reserved the funds. The utilisation of the funds is reviewed from time to time.



Over the past three years, volunteers led by the NGO Jeevitnadi, have been cleaning small stretches of the Mula-Mutha river in Pune.



My Suggestion



Drainage Net System



Drainage Net System was adopted by a Australian city of Kwinana in 2018. Within just two months 370 kilograms of rubbish was collected.

I would like to suggest Pune municipal corporation to adopt these techniques to prevent water bodies pollution from waste like plastic materials, metal scrap, furniture, toys, garbage, etc.

This method will keep the solid waste material away from water bodies. Many countries have started using this method and have achieved success.