

**Rayat Shikshan Sanstha's,
Dahiwadi College, Dahiwadi**



Glocal Perspectives to Research

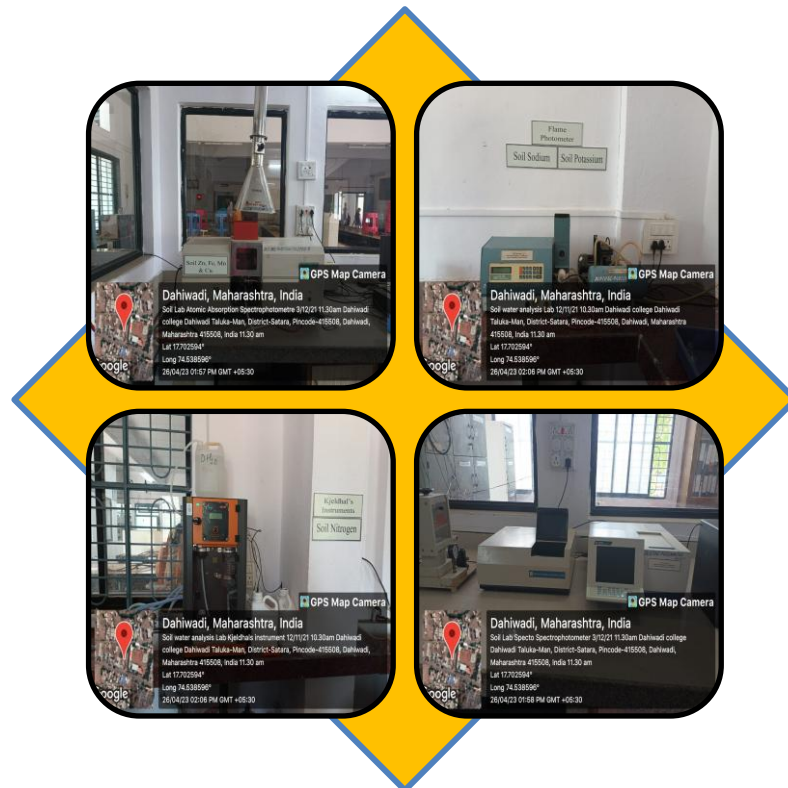


Table of Contents

- 1. Message from the Principal**
- 2. Introduction**
- 3. Objectives**
- 4. Execution**
- 5. Evidence of Success**
- 6. Photo Gallery**

Message from Principal



Under the vision of “Glocal Perspectives to Research,” the Institution’s Innovation Council (IIC) and Research Committee (RC) of Dahiwadi College, Dahiwadi, are actively promoting quality research, innovation, and entrepreneurship to address global challenges with practical solutions. The institute regularly organizes workshops, seminars, and collaborative activities on research methodology, IPR, and entrepreneurship, while the Livelihood Business Incubator (LBI) Centre provides skill-based training and guidance to aspiring entrepreneurs. These initiatives have encouraged faculty and students to publish research papers, books, and book chapters. The college also showcases its achievements through its annual magazine Adwait and DCD Times. “Glocal Perspectives to Research” is one of the best practices of the institute, reflecting its commitment to creating a strong research and innovation ecosystem.

Best Practice: Glocal Perspectives to Research

Introduction

The Research Committee of Dahiwadi College, Dahiwadi is one of the strong pillars of the institution, promoting a vibrant research culture through research projects, seminars, and workshops. The committee provides a valuable platform for faculty and researchers from diverse backgrounds to publish innovative and meaningful research work. The college also has a university-recognized research laboratory for M.Phil. and Ph.D. research, with eleven faculty members serving as research guides. These initiatives strengthen the institution's commitment to quality research, innovation, and knowledge creation.

Objectives of the Practice

- To promote quality research and publication in peer-reviewed and UGC-CARE journals.
- To encourage faculty to seek research funding from government and non-government agencies.
- To encourage faculty to file and publish patents.
- To motivate students to participate in the Avishkar Research Convention.

Execution

Every year, the Research Committee and Institution's Innovation Council (IIC) organize seminars, webinars, workshops, and conferences featuring experts from various fields. Participants from across India gain valuable guidance on research methodology and research paper writing. These activities are supported through the interest generated from a ₹40 lakh corpus fund kept as a fixed deposit.

Evidence of success

During the assessment period the students and faculty achieved great success in various fields:

1. Research Papers and books were published by faculty members and students
2. Awards in Avishkar Competition
3. Patents filed and published
4. MRPs given through corpus

Problems Encountered and Resources Required

The major challenges include **delayed and improperly prepared research proposals, plagiarism, and manuscripts not meeting publication standards**. Some research papers are rejected due to high plagiarism or inadequate quality. Additionally, many students are **first-generation learners** and require greater awareness and guidance regarding research practices.

Basic and Advanced Equipment

UV-Vis Spectrophotometer



PG20-QXS, Dahiwadi, Maharashtra 415506, India

Dahiwadi
Maharashtra
India

Decimal

DMS

Latitude 17.701783 17°42'0" N

Longitude 74.539941 74°32'23" E

Kjeldhal's Instrument



PG20-QXS, Dahiwadi, Maharashtra 415506, India

Dahiwadi
Maharashtra
India

Decimal

DMS

Latitude 17.702 17°42'0" N

Longitude 74.539855 74°32'23" E

Research paper published



Uttar Pradesh Journal of Zoology

Volume 45, Issue 10, Page 16-25, 2024; Article no.UJZOZ-3454
ISSN: 0256-871X (P)

Health Effects of Heavy Metal Contamination in Drinking Water

Maruti J. Lubal *

* Department of Zoology, Dahiwadi College, Dahiwadi, Tal. = Man, Dist. = Satara, Pin = 415508, Maharashtra, India.

Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

Article Information

DOI: 10.5557/UPJZOZ0410-45163454

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.ijournalsonline.org/UPJZOZ0410-45163454>

Systematic Review Article

Received: 16/02/2024
Accepted: 20/04/2024
Published: 23/04/2024

ABSTRACT

Water is essential for life, be it the life of animals, plants or human beings. It is our prime duty to protect, manage and preserve the quality of water. Uncontrolled anthropogenic activities have resulted in contamination of fresh water resources thereby affecting the health of living beings. Rampant industrialization is a major environmental problem on the global scale for the pollution of fresh water with toxic effluents containing heavy metals. Contamination of surface water by heavy metals is the greatest quality issue because of their toxic nature, increased release and negative impact on the health of human beings. Water-borne diseases remain one of the major health concerns in the world. Heavy metals are individual metals and metal compounds that can impact human health. Exposure of humans to metals such as antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, silver, tin, zinc, etc. results in chronic and acute toxicities. The toxicity of heavy metals depends on their concentration, period of exposure and route of exposure. Humans are exposed to heavy metals either by inhalation from the atmosphere, intake through drinking water, or by ingestion through the skin by dermal contact. This present review describes the analysis of heavy metal contamination in drinking water with reference to definition, sources, health effects on humans and preventive measures. This study suggests that the best way to get rid of heavy metal contamination is to stop water from

*Corresponding author: Email: maruti08@gmail.com

Uttar Pradesh J. Zool., vol. 45, no. 10, pp. 16-25, 2024



Uttar Pradesh Journal of Zoology

Volume 45, Issue 11, Page 97-105, 2024; Article no.UJZOZ-3455
ISSN: 0256-871X (P)

Impact of Heavy Metal Pollution on the Environment

Maruti J. Lubal *

* Department of Zoology, Dahiwadi College, Dahiwadi, Tal. = Man, Dist. = Satara, Pin = 415508, Maharashtra, India.

Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

Article Information

DOI: 10.5557/UPJZOZ0411-45163455

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.ijournalsonline.org/UPJZOZ0411-45163455>

Received: 28/02/2024
Accepted: 03/05/2024
Published: 07/05/2024

Systematic Review Article

ABSTRACT

Pollution of the environment by the toxic heavy metals is a global issue of concern and affects the natural quality of the air, water, and soil. Anthropogenic activities are largely responsible for the widespread pollution of heavy metals in the environment, which is having a harmful impact on human health. Rapid urbanization, industrialization, population explosion, and use of advanced technology in developing countries have resulted in huge rise in waste production. Waste generation and disposal along with landfills is a serious global environmental threat resulting in heavy metal contamination of the soils, water, and plants. Heavy metals reaching the atmosphere result in the degradation of air quality, and contamination of the soil and groundwater along with damage to the living organisms. The present review describes the analysis of heavy metal pollution of the environment with respect to air, animals, aquatic ecosystem, plants, and soil. Special emphasis is provided on sources of heavy metals in the environment, harmful impacts of heavy metals on the environment and strategies to control heavy metal pollution of the environment. Present study is based on critical review and analysis of scientific information published by academic and professional researchers who studied the impact of heavy metal pollution on the environment. Research articles on impact of heavy metal pollution on the environment published in high impact factor journals were referred for collection of databases. This study notices that there is an urgent need for continuous monitoring of various environmental

*Corresponding author: Email: maruti08@gmail.com

Uttar Pradesh J. Zool., vol. 45, no. 11, pp. 97-105, 2024

Shubham B. Mane/ Afr. J. Bio. Sc. 6(9) (2024)

ISSN: 2663-2187

<https://doi.org/10.33472/AJBS.6.9.2024.4364-4376>



African Journal of Biological Sciences

Journal homepage: <http://www.afjbs.com>

Research Paper

Open Access

Pingali Lake, District Satara, Maharashtra, A Neglected Potential Habitat for Avifauna

*Shubham B. Mane¹, Vishwas Y. Deshpande², Maruti J. Lubal³

1 KBP University, Yashwantrao Chavan Institute of Science, Satara,

Maharashtra - 415001

2 Hindavi Research Centre & Team VYD, Satara, Maharashtra – 415002

3 Rayat Shikshan Sanstha's Dahiwadi College, Dahiwadi, Maharashtra - 415508

* Corresponding Author: shubham.qhd23@gmail.com

Abstract

Pingali Lake is located in Dahiwadi Tehsil, one of the drought prone Tehsil of Satara District. The water of this Lake is non Perennial and used for Agricultural and Household purpose of Dahiwadi city located near the Lake. Pingali Lake is neighboring to Andhali, Mayani and Yerahwadi water reservoirs. Although Pingali Lake is smaller than the above mentioned water reservoirs, it acts as an excellent neighboring water body for birds. During the visits, a diverse variety of migrating birds were observed in Pingali Lake and surrounding vegetation. For the study of migratory and resident birds the survey was conducted from June 2022 to February 2024. The checklist of birds was prepared found occurrence of total 67 species belonging to 34 families. Out of 67, 10 species of birds were migrant, 26 were resident migrant and 31 species were resident of Pingali lake. According to IUCN Red data list we observed 64 species with least Concerned status, 02 species Near Threatened and 01 Vulnerable species.

Keywords: Avifauna, Pingali lake, Dahiwadi, Anthropogenic Impact.

Article History: Volume 6, Issue 9, 2024

Received: 27 Apr 2024

Accepted: 14 May 2024

doi: 10.33472/AJBS.6.9.2024.4364-4376



Uttar Pradesh Journal of Zoology

Volume 45, Issue 15, Page 18-24, 2024; Article no.UJZOZ-3740
ISSN: 0256-871X (P)

Evaluation of Importance of Birds from Non-Tidal Wetlands: A Review

Maruti J. Lubal *

* Department of Zoology, Dahiwadi College, Dahiwadi, Tal. = Man, District= Satara, Pin = 415508, Maharashtra, India.

Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

Article Information

DOI:

Rayat Shikshan Sanstha's,
Dahiwadi College Dahiwadi



Lab to Land : Soil and Water Analysis Laboratory for Farmers



TABLE OF CONTENTS:

1. Message from the Principal
2. Introduction
3. Objectives
4. Execution
5. Evidence of Success
6. Photo gallery

MESSAGE FROM THE PRINCIPAL :

Rayat Shikshan Sanstha is one of the largest and leading Indian educational organization in Asia founded by Honorable Padmabhushan Dr. Karmveer Bhaurao Patil in 1919. Its aim is to provide education to students from deprived, downtrodden section of society from rural Maharashtra. Our college belongs to Rayat Shikshan Sanstha and is an outcome of visionary educational mission of Karmaveer Anna. It works according to vision of Sanstha.



The Lab to Land team of Chemistry department make a good effort with an aim “Lab to Land: Soil and Water Analysis Laboratory for Farmers.” The main purpose is to analyze the soil samples for their nutritional status and water samples for their potability. Also they provide the Health Cards of soil to Farmers.

This is one of the best practices of our college representative outcome of visionary of Karmaveer Anna. I appreciate the efforts taken by Department of Chemistry and wish them good health and successful life.

Principal

INTRODUCTION:

Most of the people from Maharashtra depend upon farming. But due to scarcity of water and non-productive soil it is a need of the region to test soil and water for improvement of soil fertility and economic returns to farmers. Soil analysis gives valuable information essential for soil quality improvement. By tracking the exact amount of soil nutrients, a farmer can easily adjust fertigation in accordance with soil and crop requirements. Water analysis provides the status of water and creates awareness regarding potability of it.

OBJECTIVES:

- To provide scientific soil testing services to farmers across multiple villages.
- To support the Government Soil Health Card Scheme.
- To estimate the physical properties and available nutrients status (micro, macro & secondary nutrients) of soil.
- To improve soil fertility and agricultural productivity.
- To estimate the physical properties of water and provide its status and recommendations.
- To provide soil and water testing training for students through skill development course and short term course.
- To promote sustainable and eco-friendly farming practices.

THE PRACTICE:

Soil testing lab analyzed soil samples for macro & micro nutrients (N, P, K, S, pH, EC, OC) received from farmers and agriculture department of Satara district, Government of Maharashtra. This data of analysis is uploaded online on Central Government Portal (Soil Health Card Portal) using 3.0 Soil software which generates report automatically. After this soil health card is generated by system for each sample with status and recommendations in it. These soil health cards are submitted to agriculture department of Man Tehsil for distributing to respective farmers.

The soil samples were collected from 84 villages. Total 2175 samples from agriculture department of Satara district, Government of Maharashtra and under National Food Security Mission (A programme of Central Gov. India) were analyzed in the institutional laboratory. Official certification was issued by the Taluka Agricultural Officer confirming: Completion of Testing work, Proper preparation and submission of Soil Health Cards.

Department of Chemistry organizes water testing camps every year in adopted villages Bhandavali, Wavarhire and Waghmodewadi. Samples are analyzed on site and reports are handed over to Sarpanch of the village. As a part of extension work the department of Chemistry organized 8 awareness programmes for farmers extension personnel during the last five years.

EVIDENCE OF SUCCESS:

- Farmers of Man tehsil achieved knowledge about soil condition and how to improve it.
- Getting proper knowledge of soil and water, expenditure on fertilizers is minimized by avoiding unnecessary fertilizers.
- Farmers are able to cultivate appropriate crop as per the soil condition.
- Farmers have got benefits of different government schemes by using soil analysis reports provided by the college lab.
- Water analysis reports created awareness regarding quality of water among the people and as per the recommendations given by the lab people started using water filters.
- The lab generated Rs. 5, 43,750/- revenue analyzing 2175 samples.

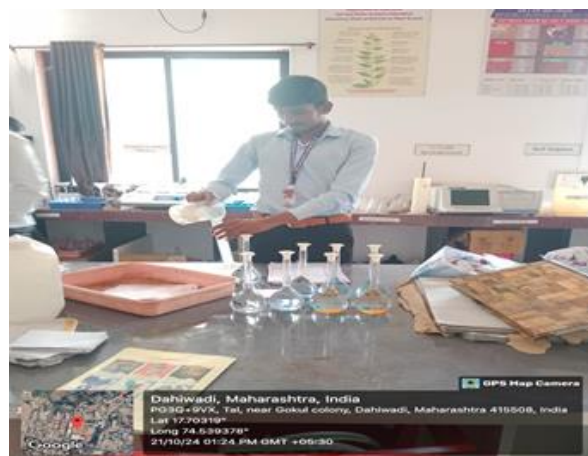
PROBLEMS ENCOUNTERED:

- Lack of immediate availability of acetylene gas.
- Due to less rainfall in the region farmers are not aware of soil and water analysis.

RESOURCE REQUIRED:

- Analytical instruments and human resources.

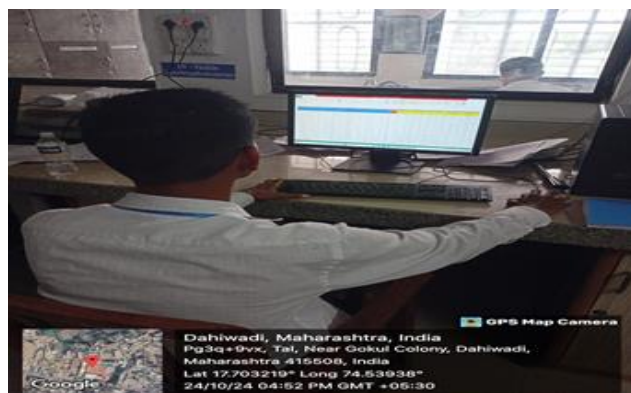
Photogallery



Distribution of soil health cards(2024-25)



Students performing soil testing in the laboratory (2024-25)



Online data entry on soil health card portal(2024-25)




कृषि विभाग, महाराष्ट्र शासन
नोंदणीचे प्रमाणपत्र

विभागीय कृषि सह संचालक,
कोल्हापूर विभाग, कोल्हापूर.
नोंदणी क्रमांक : ८०/२०२२

प्रमाणित करणेत येते की दहिबडी कॉलेज दहिबडी, माती व पाणी प्रयोगशाळा, ता. **भाण, जि. सातारा** या माती व पाणी परिक्षण प्रयोगशाळेची १/१२/२०२२ ते ३१/११/२०२५ या कालावधीसाठी कृषि आयुक्तालयाकडील सूचना क्र. कृ.आ./ मृसमृचा/ खानोप्र/ क्षनि/ मा.सु/ ३०९/ २०१९ पुणे दि. १४ जून २०१९ च्या अधिन राहून महाराष्ट्र शासनाच्या कृषि विभागा कडे मृद व जल नमुने तपासण्यासाठी **विभागस्तर** नोंदणी करणेत येत आहे. सदरची प्रयोगशाळा चालविणे व त्यासाठी नमुने मिळविणे याची जबाबदारी संबंधीत प्रयोगशाळेची राहिल. प्रयोगशाळेची नोंदणी केली म्हणजे प्रयोगशाळा चालविणेची जबाबदारी आसनाची राहणार नाही.

सदर प्रयोगशाळेकडे मृद व जल नमुन्यातील विविध घटक तपासणीच्या उपलब्ध सुविधा व क्षमता पुढीलप्रमाणे आहेत.

अ.क्र.	तपशिल	वार्षिक क्षमता (संख्या)
१	सर्वसाधारण मृद नमुने	५०००
२	विशेष मृद नमुने	-
३	सूक्ष्म मुलद्रव्ये मृद नमुने	२५००
४	जल नमुने	२००

स्थळ : कोल्हापूर
दिनांक : ०४/१२/२०२२


 (बसवराज बिराजदार)
 विभागीय कृषि सह संचालक,
 कोल्हापूर विभाग, कोल्हापूर.

Registration certificate issued by Agricultural Department for Soil Testing Laboratory