

**Assessment of ambient air quality during lockdown imposed
by outbreak of COVID-19 in the city of Agra**

By:

Megha Bisht

Roll No: 1945972

Enrollment No: 2016/1972

A PROJECT DISSERTATION

Submitted to the Faculty of Earth Sciences

In partial fulfilment of the requirements for the degree of
Master of Science in Environmental Sciences.

UNDER THE SUPERVISION OF:

Dr. Ashutosh Kumar Pandey

Assistant Professor,

School of Earth Sciences,

Banasthali Vidyapith, Rajasthan.



SUBMITTED TO:

SCHOOL OF EARTH SCIENCES

Banasthali Vidyapith

Rajasthan – 304022 (INDIA).

JUNE 2021

DECLARATION

The project/dissertation for the fulfillment of M.Sc. Degree in Environmental Science is my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. To the best of my knowledge, no part of this project/dissertation has been submitted to any other University or institute for the award of any Degree or Diploma.

The work was done under the guidance of Dr. Ashutosh Kumar Pandey, at Banasthali Vidyapith.



Signature:

Candidate's full name: Megha Bisht

Date: 19 June 2021

Place: Rudrapur

वनस्थली विद्यापीठ
पो. वनस्थली विद्यापीठ ३०४०२२
(राजस्थान)



BANASTHALI VIDYAPITH
P.O. BANASTHALI VIDYAPITH 304022
(RAJASTHAN)

CERTIFICATE

This is to certify that the project entitled '**Assessment of ambient air quality during lockdown imposed by outbreak of COVID-19 in the city of Agra**' is a bonafide record of independent research work done by Ms. Megha Bisht (roll no. 1945972) under my supervision and submitted to School of Earth Sciences, Banasthali Vidyapith, Rajasthan, India in partial fulfillment for the award of the degree of MASTER OF SCIENCE IN ENVIRONMENTAL SCIENCE.

Ashutosh Kumar Pandey
20/06/21

(Dr. Ashutosh Kumar Pandey)
School of Earth Sciences
Banasthali Vidyapith, Rajasthan

“Spatio-seasonal variations of trace gas pollutants over the urban atmosphere of Delhi, India”

A PROJECT DISSERTATION

Submitted to the Faculty of Earth Sciences
In partial fulfilment of the requirements for the degree of
Master of Science in Environmental Science



Under the supervision of:

Dr. Ashima Sharma
Assistant Professor
(Environmental Science)
School of Earth Sciences
Banasthali Vidyapith, Rajasthan

Submitted by:

Neha Sharma
Roll No.: 1945973
Enrolment No.: 2016/3565
School of Earth Sciences
Banasthali Vidyapith, Rajasthan

SCHOOL OF EARTH SCIENCES

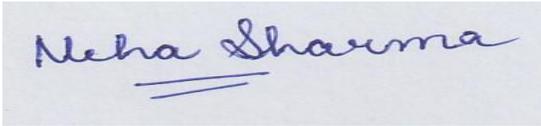
BANASTHALI VIDYAPITH

RAJASTHAN – 304022 (INDIA)

JUNE 2021

DECLARATION

The project/dissertation for the fulfilment of M.Sc. Degree in Environmental Science is my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. According to best of my knowledge no part of this project/dissertation has been submitted to any other University or institute for the award of any Degree or Diploma. The work was done under the guidance of Dr. Ashima Sharma, at School of Earth Sciences, Banasthali Vidyapith.

A rectangular box containing a handwritten signature in blue ink that reads "Neha Sharma". The signature is written in a cursive style with a double underline beneath the name.

Signature:

Candidate's full name: Neha Sharma

Date: 25/06/2021

Place: Sikandrabad, U.P

वनस्थली विद्यापीठ
पो. वनस्थली विद्यापीठ ३०४०२२
(राजस्थान)



BANASTHALI VIDYAPITH
P.O. BANASTHALI VIDYAPITH 304022
(RAJASTHAN)

CERTIFICATE

This is to certify that the Project/Dissertation entitled "Spatio-seasonal variations of trace gas pollutants over the urban atmosphere of Delhi, India" is a bonafide record of independent research work done by Neha Sharma (Roll no.: 1945973) under my supervision and carried out in Banasthali Vidyapith submitted to School of Earth Sciences, Banasthali Vidyapith in partial fulfillment for the award of the Degree of MASTER OF SCIENCE IN ENVIRONMENTAL SCIENCE.

Signature of the supervisor

**“RELATIONSHIPS BETWEEN CRITERIA AIR
POLLUTANTS AND METEOROLOGICAL
PARAMETERS OVER HARYANA, INDIA”**

A PROJECT DISSERTATION

Submitted to the Faculty of Earth Sciences
In partial fulfilment of the requirements for the degree of
Master of Science in Environmental Science



Under the supervision of:

Dr. Ashima Sharma
Assistant Professor
(Environmental Science)
School of Earth Sciences
Banasthali Vidyapith, Rajasthan

Submitted by:

Neha Vijay
Roll No.: 1945974
Enrolment No.: 2016/1800
School of Earth Sciences
Banasthali Vidyapith, Rajasthan

SCHOOL OF EARTH SCIENCES

BANASTHALI VIDYAPITH

RAJASTHAN – 304022 (INDIA)

JUNE 2021

DECLARATION

The dissertation for the fulfillment of M.Sc. Degree in Environmental Science is my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. According to best of my knowledge no part of this dissertation has been submitted to any other University or institute for the award of any Degree or Diploma.

The work was done under the guidance of Dr. Ashima Sharma, Assistant Professor at the School of Earth Sciences, Banasthali Vidyapith.

A handwritten signature in black ink, appearing to read 'Neha', is written over a horizontal line. Below the line, there are several horizontal strokes and a series of dots, suggesting a stylized or scribbled signature.

Signature:

Candidate's full name: Neha Vijay

Date: 25-6-2021

Place: Newai, Rajasthan

वनस्थली विद्यापीठ
पो. वनस्थली विद्यापीठ ३०४०२२
(राजस्थान)



BANASTHALI VIDYAPITH
P.O. BANASTHALI VIDYAPITH 304022
(RAJASTHAN)

CERTIFICATE

This is to certify that the Project/ Dissertation entitled 'Relationships between criteria air pollutants and meteorological parameters' is a bonafide record of independent research work done by Neha Vijay (Roll No.: 1945974) under my supervision and carried out in School of Earth Sciences, Banasthali Vidyapith, submitted to School of Earth Sciences, Banasthali Vidyapith in partial fulfillment for the award of the Degree of MASTER OF SCIENCE IN ENVIRONMENTAL SCIENCE.

Signature of the supervisor

“The cross-sectional study- Cardiovascular health effects and Noise sensitivity in Air Force personnel exposed to Aircraft noise”

By

Shruti Kumari

Roll no.: 1945975

Enrollment number: 2016/1834

A PROJECT DISSERTATION

Submitted to the faculty of Earth Sciences

In partial fulfillment of the requirements for the degree of

Master of Science in Environmental Science

UNDER THE SUPERVISION OF

Dr. Sarika Singh

Assistant Professor

School of Earth Sciences,

Banasthali Vidyapith, Rajasthan



SUBMITTED TO

SCHOOL OF EARTH SCIENCES

BANASTHALI VIDYAPITH

RAJASTHAN-304022 (INDIA)

June 2021

DECLARATION

The dissertation for the fulfilment of M.Sc. Degree in Environmental Science is my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgment of collaborative research and discussions. According to best of my knowledge no part of this dissertation has been submitted to any other university or institute for the award of any degree or diploma.

The work was done under the guidance of Assistant Professor Dr. Sarika Singh, at the School of Earth Sciences, Banasthali Vidyapith.

A handwritten signature in black ink, reading "Shrutika", written in a cursive style and underlined with a single horizontal stroke.

NAME: Shrutika Kumari

वनस्थली विद्यापीठ
पो. वनस्थली विद्यापीठ ३०४०२२
(राजस्थान)



BANASTHALI VIDYAPITH
P.O. BANASTHALI VIDYAPITH 304022
(RAJASTHAN)

CERTIFICATE

This is to certify that the Dissertation entitled “**The cross-sectional study- Cardiovascular health effects and Noise sensitivity in Air Force personnel exposed to Aircraft noise**”, is a bonafide record of independent research work done by Ms. Shruti Kumari (1945975) under my supervision and submitted to the School of Earth sciences, Banasthali Vidyapith, Rajasthan, India for the award of the degree of MASTER OF SCIENCE IN ENVIRONMENTAL SCIENCE.

Sarika Singh

Dr. Sarika Singh
School of Earth Sciences
Banasthali Vidyapith,
Rajasthan

**A Study on Feasibility, Influencing Factors, Efficiency Improvement, and Kinetics
of Bio-Hythane Production: A Review**

By

Sushma Kumari

Roll no: 1945976

Enrollment number: 2019/3566

A PROJECT DISSERTATION

Submitted to the Faculty of Earth Sciences

**In partial fulfilment of the requirements for the degree of
Master of Science in Environmental Science.**

UNDER THE SUPERVISION OF

Dr. Sunil Kumar

Principal Scientist & Head

Technology Development Centre

CSIR-NEERI, Nagpur, Maharashtra.



SUBMITTED TO:

SCHOOL OF EARTH SCIENCES

Banasthali Vidyapith

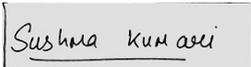
Rajasthan – 304022 (INDIA).

“JUNE 2021”

DECLARATION

The project/dissertation for the fulfilment of M.Sc. Degree in Environmental Science is my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. According to best of my knowledge no part of this project/dissertation has been submitted to any other University or institute for the award of any Degree or Diploma.

The work was done under the guidance of Dr. Sunil Kumar, Principal Scientist & Head, Technology Development Centre, CSIR-NEERI, Nagpur, Maharashtra

Signature: 

Candidate's full name: Sushma Kumari

Date: 21/06/2021

Place: Nagpur, Maharashtra



सी.एस.आई.आर. - राष्ट्रीय पर्यावरण अभियांत्रिकी अनुसंधान संस्थान
CSIR - National Environmental Engineering Research Institute

नीरी
NEERI

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद, / Council of Scientific & Industrial Research)
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद, विज्ञान एवं प्रौद्योगिकी मंत्रालय, भारत सरकार के अंतर्गत स्वायत्त संघटन)
(Autonomous Organisation under the Dept. of Scientific and Industrial Research, Ministry of Science & Technology, Govt. of India)

डॉ. सुनील कुमार

प्रधान वैज्ञानिक एवं प्रमुख
प्रौद्योगिकी विकास केंद्र

Dr. Sunil Kumar

Principal Scientist & Head
Waste Reprocessing Division

CERTIFICATE

This is to certify that the thesis entitled '**A Study on Feasibility, Influencing Factors, Efficiency Improvement, and Kinetics of Bio-Hythane Production: A Review**' is a bonafide record of independent review work done by Ms. Sushma Kumari under my supervision and submitted to School of Earth Sciences, Banasthali Vidyapith, Rajasthan, India in partial fulfilment for the award of the degree of Master of Science in Environmental Science. The matter embodied in this report has not been submitted for award of any other degree.

Sunil K.

(Dr. Sunil Kumar)

Principal Scientist & Head
Waste Reprocessing Division
CSIR-NEERI, Nagpur, Maharashtra

नेहरु मार्ग, नागपुर - 440 020 (भारत) - Nehru Marg, Nagpur - 440 020 (INDIA)

Ph (O) : 91-712-2249885-89 (Ext.696) Fax : 2249900 Email : s_kumar@neeri.res.in

URL : www.neeri.res.in

सतत विकास की ओर / Towards Sustainable Development

Estimation of Seasonal Ambient Air Quality of Varanasi

SUBMITTED BY:

Sushmita Singh

Roll Number: 1945977

Enrollment number: 2019/3567

A PROJECT DISSERTATION

Submitted to the Faculty of Earth Sciences

In partial fulfilment of the requirements for the degree of

Master of Science in Environmental Science

UNDER THE SUPERVISION OF

Dr. Dharampal Singh

Assistant Professor

School of Earth Sciences

Banasthali Vidyapith, Rajasthan



SUBMITTED TO:

School of Earth Sciences

Banasthali Vidyapith, Rajasthan

JUNE, 2021

DECLARATION

The dissertation for the fulfilment of M.Sc. Degree in Environmental Science is my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. According to best of my knowledge no part of this dissertation has been submitted to any other University or institute for the award of any Degree or Diploma.

The work was done under the guidance of Dr. Dharampal Singh, at the Banasthali Vidyapith, Rajasthan.

Signature:

Candidate's full name: **Sushmita Singh**

वनस्थली विद्यापीठ
पो. वनस्थली विद्यापीठ ३०४०२२
(राजस्थान)



BANASTHALI VIDYAPITH
P.O. BANASTHALI VIDYAPITH 304022
(RAJASTHAN)

CERTIFICATE

This is to certify that the thesis entitled '**Estimation of seasonal ambient air quality of Varanasi**' is a bonafide record of independent research work done by Ms. Sushmita Singh (1945977) under my supervision and submitted to School of Earth Sciences, Banasthali Vidyapith, Rajasthan, India in partial fulfillment for the award of the degree of MASTER OF SCIENCE IN ENVIRONMENTAL SCIENCE.

(Dr Dharampal Singh)

School of Earth Sciences
Banasthali Vidyapith, Rajasthan

RESPIRATORY HEALTH PROBLEMS IN BAGASSE EXPOSED
SUGARCANE WORKERS – A PRELIMINARY STUDY

By

Sushmita Singh

Roll no.: 1945978

Enrollment number:2019/3568

A PROJECT DISSERTATION

Submitted to the Faculty of Earth Sciences

In partial fulfilment of the requirements for the degree of

Master of Science in Environmental Science

UNDER THE SUPERVISION OF

Dr. Sarika Singh

Assistant Professor

School of Earth Sciences,

Banasthali Vidyapith, Rajasthan



SUBMITTED TO

SCHOOL OF EARTH SCIENCES

Banasthali Vidyapith

Rajasthan – 304022 (INDIA).

JUNE 2021

DECLARATION

The project/dissertation for the fulfillment of M.Sc. Degree in Environmental Science is my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. According to best of my knowledge no part of this project/dissertation has been submitted to any other University or institute for the award of any Degree or Diploma.

The work was done under the guidance of Dr. Sarika Singh, Assistant Professor at the School of Earth Science, Banasthali Vidyapith, Rajasthan.

A handwritten signature in black ink, reading "Sushmita Singh". The signature is written in a cursive style with a large initial 'S'.

Name: Sushmita Singh

Date: 25/June/2021

Place: Moradabad, Uttar Pradesh

वनस्थली विद्यापीठ
पो. वनस्थली विद्यापीठ ३०४०२२
(राजस्थान)



BANASTHALI VIDYAPITH
P.O. BANASTHALI VIDYAPITH 304022
(RAJASTHAN)

CERTIFICATE

This is to certify that the Project/Dissertation entitled 'RESPIRATORY HEALTH PROBLEMS IN BAGASSE EXPOSED SUGARCANE WORKERS – A PRELIMINARY STUDY' is a bonafide record of independent research work done by Ms. Sushmita Singh (1945978) under my supervision and submitted to the School of Earth Sciences, Banasthali Vidyapith, Rajasthan, India in partial fulfilment for the award of the degree of MASTER OF SCIENCE IN ENVIRONMENTAL SCIENCE.

(Dr. Sarika Singh)

School of Earth Sciences
Banasthali Vidyapith, Rajasthan

**“Study of Environmental Impact Assessment (EIA) for Propylene Derivative
Petrochemical Project- BPCL-KR by using Remote Sensing and GIS”**

By

Tanu Gangwar

Roll no: 1945979

Enrollment number:2016/1842.

A PROJECT DISSERTATION

Submitted to the Faculty of Earth Sciences

In partial fulfilment of the requirements for the degree of

Master of Science in Environmental Science.

UNDER THE SUPERVISION OF

Dr. Dharampal Singh

Assistant Professor

“School of Earth Science,

Banasthali Vidyapith, Rajasthan”.



SUBMITTED TO:

SCHOOL OF EARTH SCIENCES

Banasthali Vidyapith

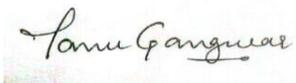
Rajasthan – 304022 (INDIA).

“JUNE 2021”

DECLARATION

The dissertation for the fulfillment of M.Sc. Degree in Environmental Science is my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. According to best of my knowledge no part of this dissertation has been submitted to any other University or institute for the award of any Degree or Diploma.

The work was done under the guidance of Dr. Dharampal Singh, Assistant Professor at the Banasthali Vidyapith, Rajasthan.

Signature: 

Candidate's full name: Tanu Gangwar.

वनस्थली विद्यापीठ
पो. वनस्थली विद्यापीठ ३०४०२२
(राजस्थान)



BANASTHALI VIDYAPITH
P.O. BANASTHALI VIDYAPITH 304022
(RAJASTHAN)

CERTIFICATE

This is to certify that the thesis entitled '**Study of Environmental Impact Assessment (EIA) for Propylene Derivative Petrochemical Project-BPCL-KR by using Remote Sensing and GIS**' is a bonafide record of independent research work done by Ms. Tanu Gangwar (1945979) under my supervision and submitted to School of Earth Sciences, Banasthali Vidyapith, Rajasthan, India in partial fulfillment for the award of the degree of MASTER OF SCIENCE IN ENVIRONMENTAL SCIENCE.

(Dr Dharampal Singh)
School of Earth Sciences
Banasthali Vidyapith, Rajasthan