## Registered



कुमाऊँ विश्वविद्यालय, नैनीताल—263001(उत्तराखण्ड) KUMAUN UNIVERSITY, NAINITAL-263001(UTTARAKHAND) Sponsored Research and Industrial Consultancy Cell(SRICC) ☎Office: 05942-235213, Fax: 05942 -235213, E-mail: sriccku@gmail.com

No. SRICC/MOU/2019/5350

Dated: >> February, 2018

To,

Director

G.B. Pant Institute of Himalayan, Environment and Development Kosi-Katarmal, Almora - 263643.

Subject: Regarding MOU between Kumaun University and G.B. Pant Institute of Himalayan, Environment and Development, Kosi-Katarmal, Almora

Sir,

Please enclosed find herewith the original MOU between the Kumaun University and G.B. Pant Institute of Himalayan, Environment and Development, Kosi-Katarmal, Almora for researchers of both institutions.

Thanking you.

Enclosure - Original MOU/Photostat.

Yours faithfully

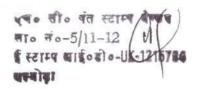
Olc

Prof. (Rajeev Upadhyay Director

SRICC

Copy to - PS to Vice Chancellor for kind information to Hon'ble Vice Chancellor.

Director SRICC





# INDIA NON JUDICIAL Government of Uttarakhand

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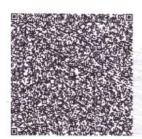
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# MEMORANDUM OF UNDERSTANDING BETWEEN KUMAUN UNIVERSITY, NAINITAL AND

G.B. PANT NATIONAL INSTITUTE OF HIMALAYAN ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

CL.1 THE MoU

12 July 2018 Rajeur

Cl. 1.1 THIS MoU made and entered into on 2 July day of 2018 between G.B. Pant National Institute of Himalayan Environment and Sustainable Development, a Society registered

under the Societies Registration Act (1860), having its registered office at Kosi-Katarmal, Almora having its Office Kosi-Katarmal, Almora 263643 (hereinafter called GBPNIHESD which expression shall where the context so admits include its successors and permitted assigns) of the one part,

### And

CL.1.2 KUMAUN UNIVERSITY, NAINITAL, was established in 1973 under the UP State Act, having it's office at Kumaun University, Nainital Uttarakhand – 263001 (hereinafter called the KUMAUN UNIVERSITY (KUN) which expression shall where the context so admits include its successors and permitted assigns ) of the other part.

### PREAMBLE:

The Department of Science and Technology Govt. of India and the University Grants Commission have realized the need for a close linkage between the National Laboratories and the Universities in terms of research and academic activities. In compliance to this idea, Kumaun University, Nainital (KUN) and **GBPNIHESD** have decided to sign a Memorandum of Understanding (MoU) as per the following terms and conditions:

#### 1. GENERAL

- 1.1 The scientist of GBPNIHESD may participate in the teaching programme in the different departments such as Department of Biotechnology, Botany, Chemistry, Economics, Forestry, Geology, Geography, Mathematics, Pharmacy, Physics, RS&GIS, Sociology, and Zoology (SSJ, Almora and DSB, Nainital Campuses), of the Kumaun University on request and subject to mutual convenience.
  - 1.2 The scientist of GBPNIHESD and the faculty members of KUN will work towards joint research projects thereby mutually using research facilities developed/to be developed at GBPNIHESD and KUN.
  - **1.3** KUN will recognize and accept the students of **GBPNIHESD** for supervising research leading to Ph.D. degree of KUN.
  - 1.4 The Faculty and students of the above mentioned Department of KUN shall be allowed the use of library of GBPNIHESD subject to prior permission of the Director/Head, GBPNIHESD. Scientists and Ph.D. students of GBPNIHESD shall likewise be given the above mentioned facilities at KUN.
  - 1.5 The Scientists/Faculty members and students of above mentioned department of GBPNIHESD/KUN shall be issued necessary permission, on request, to access to laboratories and other facilities of KUN/GBPNIHESD as per their respective rules.

- 2.8. GBPNIHESD and KUN will work closely to generate appropriately trained manpower in the related areas through organization of formal academic curricula, symposia, short term training courses, etc.
- 2.9. GBPNIHESD will provide training facilities (minimum for 3 months) for selected number of students of KUN as per availability of space. The scientists of **GBPNIHESD** will help in preparation of project dissertations wherever needed. The students will mention these scientists as senior guide in the Pre-PhD Dissertation reports. Data generated during project work can be published only after technical clearance from GBPNIHESD with equal/amicable sharing amongst GBPNIHESD and KUN.
- 3.0. Honorarium, TA/DA (if applicable) will be provided to the faculty members/Scientists/technical staff of KUN and GBPNIHESD as per rule by requesting organizations.
- 3.1. The MoU related to PhD degree will be done under the JOINT SUPERVISION of the faculty of the respective department of Kumaun University, Nainital and the scientists of GBPNIHESD.
- 3.2. It is further agreed that the Vice-Chancellor, KUN and Director/Head, GBPNIHESD through periodic meetings will monitor the progress of this MoU. Any change/modification/termination as introduced/suggested by the Review Committee (comprising of Vice-Chancellor, KUN and Director GBPNIHESD and other members as may be mutually decided by them) shall be acceptable to both the institutions. In case of difference of opinions and dispute, if any, the verdict of the Hon'ble Vice-Chancellor, Kumaun University, Nainital shall be final.

12 July 2018 Rajuer

Signed this day of July 9, 2018 at Kumaun University, Nainital.

Director/Head

निवेशक Director

भी. स. भन्त हिमालय पर्यावरण एवं विकास संस्थान G. B. Pant Institute of Himalayan

Environment and Development,

कोसी-कटावमल, अस्मोड़ा-263643

Kesi-Katarmal, ADMORA.-26304.

Registrar

Kumaun University, Nainita egistrar

Kumaon University

NAINITAL.

Kumaun University

Nainital

DIRECTOR

Sponsored Research And Industrial Consultancy Cell Kumaun University, NAINITAL

Signature of the Convenor of different departments

1. Biotechnology 3. Chemistry 4. Economia 6. Geology

Achama 5. Forestry Professor & Head DEPARTMENT OF FORESTRY A **ENVIRONMENTAL SCIENCE** KUMAUN UNIVERSITY NAINITAL 7. Geography 8. Mathematics Department of Geography Department of Mathematics Kumaun University, Lanual University J. Compus Ima: 10. Pharmacyban Singh Jeena Campu ALMORA - 251601 9. Physics Illiarukhand. INDIA 11.RS&GIS 12. Sociology Department of Generalia Kumaun Whitersitheod S. S. J. Cambus. Campus. 13. Zoology

The MoU will come into force from the date of approval of the draft both by the Executive Council of Kumaun University, Nainital and Chairman Governing Body of the GBPNIHESD.

# Microbiological Status of Soil, Plant Growth Promotion And Biocontrol Activity Of Microbes Isolated From Of Pithoragarh District Of Uttarakhand

# DISSERTATION

Submitted in partial fulfillment of the Requirement for the Award of the degree of

MASTER OF SCIENCE

in

MICROBIOLOGY

Submitted by

**BHARTI TEWARI** 

DEPARTMENT OF BIOTECHNOLOGY, SIR J.C.BOSE TECHNICAL CAMPUS, BHIMTAL KUMAUN UNIVERSITY, NAINITAL, UTTARAKHAND, INDIA (JULY 2023)

Work carried out at

G.B. PANT NATIONAL INSTITUTE OF HIMALAYAN ENVIRONMENT (AN AUTONOMOUS INSTITUTE OF MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE, GOVERNMENT OF INDIA) KOSI-KATARMAL, ALMORA, 263643

Under the joint supervision of

Dr. Rishendra Kumar Assistant Professor, Department Of Biotechnology, Sir J.C.Bose Technical Campus, Bhimtal-263136 Kumaun University, Nainital Dr. Sumit Rai
Scientist 'C'
Centre for Environmental Assessment And
Climate Change
G.B. Pant National Institute of Himalayan
Environment
Kosi-Katarmal, Almora

# IMPACT OF ALTITUDE ON PHYTOCHEMICAL CONSTITUENTS AND BIOLOGICAL ACTIVITIES OF JUNIPERUS COMMUNIS L.

# DISSERTATION THESIS

Submitted in partial fulfillment of the requirement for the award of the degree of

MASTER OF SCIENCE (BIOTECHNOLOGY)

by
GARVIT SINGH

DEPARTMENT OF BIOTECHNOLOGY
SIR J.C. BOSE TECHNICAL CAMPUS, BHIMTAL
KUMAUN UNIVERSITY, NAINITAL, UTTARAKHAND, INDIA

# Work carried out at

# G.B. PANT NATIONAL INSTITUTE OF HIMALAYAN ENVIRONMENT

(AN AUTONOMOUS INSTITUTE OF MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE, GOVERNMENT OF INDIA)

KOSI-KATARMAL, ALMORA, 263643

Under the joint supervision of

Dr. Santosh Kumar Upadhyay Assistant Professor, Department of Biotechnology, Sir J.C. Bose Technical Campus, Bhimtal- 263136 Kumaun University, Nainital

Dr. Mithilesh Singh
Scientist 'D'
Centre for Environmental Assessment
and Climate Change,
G.B. Pant National Institute of Himalayan
Environment, Kosi-Katarmal, Almora, 263643

# TLC-Bioautography Directed Isolation Of Antimicrobial And Antioxidant Active Fractions From *Primula sikkimensis* Hook.

### DISSERTATION

Submitted in partial fulfilment of the requirement for the award of the degree of

MASTER OF SCIENCE

in

BIOTECHNOLOGY

Submitted by

PRERNA RANA

DEPARTMENT OF BIOTECHNOLOGY, SIR J.C. BOSE TECHNICAL CAMPUS, BHIMTAL, KUMAUN UNIVERSITY, NAINITAL, UTTARAKHAND, INDIA (JULY 2023)

Work carried out at

G.B. PANT NATIONAL INSTITUTE OF HIMALAYAN ENVIRONMENT (AN AUTONOMOUS INSTITUTE OF MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE, GOVERNMENT OF INDIA) KOSI-KATARMAL, ALMORA, 263643

Under the joint supervision of

Dr. Santosh Kumar Upadhyay Assistant Professor, Department of Biotechnology, Sir J.C. Bose Technical Campus, Bhimtal- 263136 Kumaun University, Nainital

Dr. Mithilesh Singh
Scientist 'D'
Centre for Environmental Assessment
And Climate Change,
G.B. Pant National Institute of Himalayan
Environment, Kosi-Katarmal, Almora

# VULNERABILITY ASSESSMENT OF FLORISTIC DIVERSITY OF SHIVALIK HILLS IN HIMACHAL PRADESH, INDIA

# THESIS

Submitted for the award of the degree of

DOCTOR OF PHILOSOPHY

in

BOTANY

by

JYOTI

(Enrollment No. KU11105033)

G.B. PANT NATIONAL INSTITUTE OF HIMALAYAN ENVIRONMENT, MOHAL-KULLU-175126 HIMACHAL PRADESH, INDIA

and

DEPARTMENT OF BOTANY, D.S.B. CAMPUS KUMAUN UNIVERSITY, NAINITAL-263002, UTTARAKHAND INDIA

2023

## DEPARTMENT OF BOTANY

### D.S.B. CAMPUS, KUMAUN UNIVERSITY

### NAINITAL – 263002, UTTARAKHAND, INDIA

### CERTIFICATE

I hereby certify that the work which is being presented in thesis entitled "VULNERABILITY ASSESSMENT OF FLORISTIC DIVERSITY OF SHIVALIK HILLS IN HIMACHAL PRADESH, INDIA" in fulfilment of the requirements for the award of Doctor of Philosophy in Botany and submitted in the Department of Botany, Kumaun University, Nainital, is an authentic record of my own work carried out during a period from October, 2014 to September, 2023 under the supervision of Dr. Lalit Mohan Tewari, Professor, Department of Botany, D.S.B. Campus, Kumaun University, Nainital and Dr. Sher Singh Samant, Former Scientist-G and Head Himachal Regional Centre, G.B. Pant National Institute of Himalayan Environment, Mohal-Kullu, Himachal Pradesh and Former Director, ICFRE-Himalayan Forest Research Institute, Conifer Campus, Panthaghati, Shimla. The matter presented in this thesis has not been submitted by me for the award of any other degree of this or any other University/Institution.

Candidate

This is to certify that the candidate has put more than 200 days attendance during the course of her Ph. D. thesis and the above statement made by her is correct to the best of our knowledge. Boward

Dr. Sher Singh Samant

Co-Supervisor

Prof. Lalit Mohan Tewari

SupervisoPR. LALIT M. TEWARI Professor

Department of Botany D.S.B. Campus, Kumaun Universi Nainital (U.K.)

It is pleasure for me to forward the Ph. D. thesis of Ms. Jyoti.

Head of the

Kumaun University, Nainita! - 263001

Uttarakhand (India)

Date: 65/19/23

# STUDY ON POPULATION ASSESSMENT AND ECOLOGICAL NICHE MODELLING OF QUERCUS OBLONGATA D. DON IN HIMACHAL PRADESH, NORTH WESTERN HIMALAYA FOR CONSERVATION

# A THESIS

Submitted in partial fulfilment of the Requirements for the award of the degree

of

DOCTOR OF PHILOSOPHY

ln

BOTANY

by

TANAY BARMAN

HIMALAYAN FOREST RESEARCH INSTITUTE
CONIFER CAMPUS PANTHAGHATI, SHIMLA 171 013.
HIMACHAL PRADESH, INDIA

and

DEPARTMENT OF BOTANY, D.S.B. CAMPUS KUMAUN UNIVERSITY, NAINITAL-263 002, UTTARAKHAND, INDIA

**AUGUST 2022** 

# DEPARTMENT OF BOTANY

D.S.B. CAMPUS, KUMAUN UNIVERSITY NAINITAL-263002 UTTARAKHAND, INDIA

### CERTIFICATE

I hereby certify that the work which is being presented in thesis entitled "STUDY ON POPULATION ASSESSMENT AND ECOLOGICAL NICHE MODELING OF QUERCUS OBLONGATA D. DON IN HIMACHAL PRADESH, NORTH WESTERN HIMALAYA FOR CONSERVATION" in partial fulfilment of the requirements for the award of Doctor of Philosophy in Botany and submitted in the Department of Botany, Kumaun University, Nainital is an authentic record of my own work carried out during a period from August 2017 to April 2021 under the joint supervision of Dr. S. S. Samant, Director, Himalayan Forest Research Institute, Conifer Campus, Panthaghati, Shimla and Dr. L. M. Tewari, Director, Research and Extension & Professor, Department of Botany, D.S.B. Campus, Kumaun University, Nainital.

The matter presented in this thesis has not been submitted by me for the award of any other degree of this or any other University/Institution.

(Tanay Barman)

This is to certify that the candidate has put more than 200 days attendance during the course of his Ph. D. thesis and the above statement made by him is correct to the best of our knowledge.

Prof. Lalit Mohan Tewar

Co-Supervisor

Supervisor

It is pleasure for me to forward the Ph. D. thesis of Mr. Tanay Barman

Prof. S. S. Bargali

Convenor and

Head of the Department

Prof. & Head Deptt. of Botany O.S.B. Campus Kumeun University. National - 2610"

Date: V August, 2022

# HYDRO-GEOMORPHIC RESPONSES OF REJUVENATION ACTIVITIES IN THE UPPER KOSI WATERSHED, KUMAUN HIMALAYA

#### A THESIS

Submitted in partial fulfilment of the requirements for the award of the degree

of

DOCTOR OF PHILOSOPHY

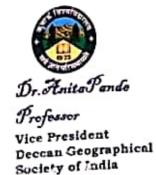
in

GEOGRAPHY

By

MEENU RANI

DEPARTMENT OF GEOGRAPHY KUMAUN UNIVERSITY NAINITAL NAINITAL – 263001 (INDIA) FEBRUARY-2022



(DGSI)

### DEPARTMENT OF GEOGRAPHY

D.S.B. Campus KUMAUN UNIVERSITY NAINITAL-263001 UTTARAKHAND Ph.: +915942-232578 (Dept)

Mob.:+919411793991 +916396352036 Fax: +915942-235576

E-mail

dranitapande@kunainital.ac.in anita.ku.ntl@gmail.com

anni pan@rediffmail.com

Date: 25/02/2022

# CERTIFICATE

I, the undersigned, hereby certify that the research work embodied in the thesis entitled "HYDRO-GEOMORPHIC RESPONSES OF REJUVENATION ACTIVITIES IN THE UPPER KOSI WATERSHED, KUMAUN HIMALAYA" submitted by Ms Meenu Rani, for the award of degree of Doctor of Philosophy in Geography from Kumaun University. Nainital is original work and carried out under my supervision and guidance, and this work has not been submitted for any degree of any other University.

It is further certified that the candidate has worked for a period of more than twenty four months and has put in more than 200 days attendance in supplicating for the PhD work.

Supervisor

(Prof. Anita Pande)



# G.B. Pant 'National Institute of Himalayan Environment'(NIHE) (An Autonomous Institute of Ministry of Environment, Forest & Climate Change, Govt. of India)

Contact :+91-9412930889

Email: darwansr@rediffmail.com

# CERTIFICATE

I, the undersigned, hereby certify that the research work embodied in the thesis entitled "HYDRO-GEOMORPHIC RESPONSES OF REJUVENATION ACTIVITIES IN THE UPPER KOSI WATERSHED, KUMAUN HIMALAYA" submitted by Ms Meenu Rani, for the award of degree of Doctor of Philosophy in Geography from Kumaun University, Nainital is original work and carried out under my supervision and guidance, and this work has not been submitted for any degree of any other University.

It is further certified that the candidate has worked for a period of more than twenty four months and has put in more than 200 days attendance in supplicating for the PhD work.

Co-Supervisor

(Dr. D S Rawat)

Dar

Sexientist 'G' (Retd.)

G.B. Pant National Institute of Himalayan Environment,

Kosi-Katarmal, Almora-263 643, Uttarakhand, India



# DEPARTMENT OF GEOGRAPHY KUMAUN UNIVERSITY NAINITAL

# CERTIFICATE

1 hereby certify that the work which is being presented in the thesis entitled "HYDRO-GEOMORPHIC RESPONSES OF REJUVENATION ACTIVITIES IN THE UPPER KOSI WATERSHED, KUMAUN HIMALAYA" in partial fulfilment of the requirements for the award of the Degree of Doctor of Philosophy in Geography and submitted in the Department of Geography of the Kumaun University, Nainital is an authentic record of my own work carried out during a period from 15 September, 2018 to 17 February, 2022 under the supervision of Dr. Anita Pande, Professor, Department of Geography, Kumaun University Nainital.

The matter presented in this thesis has not been submitted by me for the award of any other degree of this or any other University/Institution.

(MEENU RANI)

### Candidate

This is to certify that the candidate has put more than 200 days attendance during the course of his Ph.D. thesis and the above statement made by him is correct to the best of my knowledge.

(R C Joshitment of University

Date: 25 | 02 | 2022

(Anita Pande)

Supervisor

Dr. Anita Pande
Professor
Department of Geography
D.S.B. Campus Kumaun University
Nainital - 263002



# गोविन्द बल्लम पंत राष्ट्रीय हिमालयी पर्यावरण एवं सतत विकास संस्थान G.B. Pant National Institute of Himalayan Environment & Sustainable Development

कोसी-कटारमल, अल्मोड़ा - 263 643, उत्तराखंड, भारत Kosi-Katarmal, Almora- 263 643, Uttarakhand, India

## CERTIFICATE

l hereby certify that the work which is being presented in the thesis entitled "A geographic evaluation of the linkage among urbanisation and environmental problems in the Indian Himalayan Region (IHR)", in partial fulfillment of the requirements for the award of the Degree of Doctor of Philosophy in Geography and submitted in the Department of Geography of the Kumaun University, Nainital. It is an authentic record of my work carried out during a period from 16<sup>th</sup> August, 2018 to 7<sup>th</sup> August, 2021 under the co-supervision of Dr. D. S. Rawat, Scientist G (Retd.), Centre for Socio-economic Development, G. B. Pant National Institute of Himalayan Environment (GBP-NIHE), Uttarakhand, India.

The matter presented in this thesis has not been submitted by me for the award of any other degree of this university or any other university/institution.

MOHD YAHYA KAZMI (Candidate)

This is to certify that the candidate has put more than 200 days attendance during the course of his PhD thesis and the above statement made by him is correct to the best of my knowledge.

Dr. D. S. RAWAT (Co-Supervisor)

Date: 18/04/2022



# DEPARTMENT OF GEOGRAPHY KUMAUN UNIVERSITY, NAINITAL

### CERTIFICATE

I hereby certify that the work which is being presented in the thesis entitled "A geographic evaluation of the linkage among urbanisation and environmental problems in the Indian Himalayan Region (IHR)", in partial fulfillment of the requirements for the award of the Degree of Doctor of Philosophy in Geography and submitted in the Department of Geography of the Kumaun University, Nainital. It is an authentic record of my work carried out during a period from 16<sup>th</sup> August, 2018 to 7<sup>th</sup> August, 2021 under the supervision of Professor Ravindra K. Pande, Head of the Department of Geography, Kumaun University, Nainital, Uttarakhand, India.

The matter presented in this thesis has not been submitted by me for the award of any other degree of this university or any other university/institution.

MOHD YAHYA KAZMI (Candidate)

This is to certify that the candidate has put more than 200 days attendance during the course of his PhD thesis and the above statement made by him is correct to the best of my knowledge

Prof RAVINDRA K. PANDE

I have pleasure in forwarding the thesis of Mr. Mohd Yahva Kazmi for the degree of Doctor of Philosophy in Geography.

Date: 15 4 2022

Prof. RAVINDRA K. PANDE

Head
Department of Geography
Kumaun University
NAINITAL - 263 002

# A Geographical Evaluation of Linkages among Urbanization and Environmental Problems in the Indian Himalayan Region (IHR)

# **A THESIS**

Submitted in partial fulfilment of the requirements for the award of the degree

of

DOCTOR OF PHILOSOPHY

in

**GEOGRAPHY** 

by

MOHD. YAHYA KAZMI (Enrolment No-KU17155067)



Department of Geography
Kumaun University, Nainital - 263001,
Uttarakhand, India
(April, 2022)