

I would like to dedicate this thesis to my family, who has supported and encouraged me throughout this endeavour: Thank you for your love and support throughout my entire life and helping me to realize who I am today!



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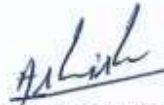
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ACKNOWLEDGEMENT

Through this page, I offer my salutation to the creator of this pious seat of learning Bharat Ratna Mahamana Pt. Madan Mohan Malviya Ji.

It is indeed my proud privilege to express my deep sense of gratitude and indebtedness to my supervisor, Dr. B. K. Shrivastva, Professor, Department of Mining Engineering, Indian Institute of Technology (BHU), Varanasi and co-supervisor Dr. Rajesh Rai, Associate Professor, Department of Mining Engineering, Indian Institute of Technology (BHU), Varanasi for their immense help, co-operation and valuable guidance that they have extended to me for the successful completion of this investigation. I am grateful to them for their constant encouragement, sustained interest and parental care throughout the research period.

I am obliged very much to express my sincere thanks to HOD, Prof. Suprakash Gupta, Department of Mining Engineering, Indian Institute of Technology (BHU), for providing necessary facilities and constant motivation throughout my research work,

It is my privilege to express my thanks to the RPEC members Prof. Aarif Jamal, Department of Mining Engineering, IIT (BHU) and Prof. Rajesh Kumar, Department of Civil Engineering, IIT (BHU) for appropriate suggestions and kind cooperation.

I am grateful to Dr. A. P. Singh, Professor and Head, Department of Soil Science and Agricultural Chemistry, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi, for his valuable support throughout my Ph.D. work,

I am obliged very much to express my sincere thanks to all the faculty members, Department of Mining Engineering, IIT (BHU), for their support and encouragement. I reserve special thanks for all the non-teaching staff of the Department of Mining Engineering, IIT (BHU), as this work would have never been completed without their technical support.

I also gratefully acknowledge to the Ministry of Human Resource and Development (MHRD), Govt. of India, New Delhi, and Director, IIT (BHU) for the financial support in the form of teaching assistantship.

I would like to thank my friends, Dr. Vijay Kumar, Mr. Ashwani Kumar Sonkar, Mr. Ajeet Kumar Vishwakarma, Mr. Tusarkanta Behera, Dr. Sachin Kumar Mishra, Mr. Anand Kumar, Mr. Pushkar Singh, Mr. Brijesh Kumar, Mr. Puneet Shrivastva, Mr. Anand Kumar Gond, Mr. Apurva Shrivastva, Dr. Akhilesh Kumar, Mr. Sachin Kumar Vishwakarma; labmates, Mr. Arunav Ray, Mr. Shailendra Chawla and Mr. Rizwan Hasim, for the moral support and making the journey happy.

I am grateful to my seniors Dr. Varun Narayan Mishra, Centre for Climate Change and Water Research, Suresh Gyan Vihar University, Jaipur, Rajasthan, India and Dr. Hira Lal Yadav, Department of Civil Engineering, G.B. Pant Institute of Engineering & Technology, Pauri - Garhwal, Uttarakhand, India for their encouragement and valuable suggestions during my research period.

*It's been possible with the blessings of my father, **Shree Chhangur Prasad Vishwakarma** and untiring efforts and prayers of my mother, **Late Smt. Prabhawati Devi** that provided me all the wisdom, strength and guidance to carry on this journey which at times became very tough and tedious.*

I express my gratitude to my beloved family members who stood by me at all times, rendering me motivation and more support. I am especially very much grateful to my grandmother Smt. Hirawati Devi, elder brothers Mr. Munna Lal Vishwakarma, Mr. Pramod Vishwakarma and Mr. Rajesh Vishwakarma, younger brother Mr. Manish Vishwakarma, elder sisters Ms. Gayatri Devi, Ms. Baby Devi, Ms. Meera Devi and Ms. Rekha Devi, younger sister Ms. Shweta, elder sister in law Dr. Arti, wife Ms. Poonam lata, nephews Mr. Ashwini Vishwakarma, Ambuj, Sunil, Shubham, Rhythm, Ankit and Aryan, nieces Ruby and Nikki, for their constant blessings and support that could enable me to achieve this success.

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LIST OF ABBREVIATIONS

ACCUPAR LP-80	Instrument used to measure Leaf Area Index
AK	Available Potassium
AN	Available Nitrogen
AP	Available Phosphorous
ATP	Adenosine Triphosphate
BM	Biomass
Ca	Calcium
CC	Chlorophyll Content
CCRS	Canada Centre for Remote Sensing
Cd	Cadmium
Cr	Chromium
Cu	Copper
CZ	Compressive Zone
DNA	Deoxyribonucleic Acid
ENVI 5.1	Image Processing Software
Fe	Iron
GIS	Geographical Information Systems
HCl	Hydrochloric Acid
ICP-MS	Inductively Coupled Plasma Mass Spectrometer
K	Potassium
LAI	Leaf Area Index
LANDSAT	Earth observation satellite system
LC	<i>Lantana camara</i>
LULC	Land Use Land Cover
Mg	Magnesium
Mn	Manganese
N	Nitrogen
NASA	National Aeronautics and Space Administration

NDVI	Normalized Difference Vegetation Index
NH ₄ ⁺ -N	Ammonia Nitrogen
NH ₄ F	Ammonium Fluoride
NH ₄ OAc	Ammonium acetate
Ni	Nickel
NIR	Near-Infrared
NO ₃ ⁻ -N	Nitrate Nitrogen
NOAA	National Oceanic and Atmospheric Administration
OLI	Operational Land Imager
P	Phosphorus
Pb	Lead
PH	Plant Height
R	Red
RNA	Ribonucleic Acid
S	Sulphur
<i>ShR</i>	<i>Shorea robusta</i>
SM	Soil Moisture
SPAD Value	Relative Index of Chlorophyll Content
TZ	Tensile Zone
USGS	United States Geological Survey
UZ	Undisturbed Zone
VWC	Vegetation Water Content
W_{dry}	Weight of Soil Samples after drying
W_{wet}	Weight of Soil Samples before drying
Zn	Zinc