Dr. K PRIYA

Asst. Professor Department of Marine Geology

Mobile No: 91-9741627654

E-mail: priyak@mangaloreuniversity.ac.in



MANGALORE UNIVERSITY

MANGALAGANGOTHRI

MANGALORE, KARNATAKA

INDIA - 574 199

SUPERVISOR'S CERTIFICATE

This is to certify that this dissertation entitled "COASTAL VULNERABILITY ASSESSMENT OF KASARAGOD DISTRICT, KERALA: USING GEOSPATIAL TECHNIQUES" is the bona fide work of ARUN KUMAR C (Reg. No. P05AZ22S075025) carried out under my supervision and guidance, as a partial fulfilment of the requirement for the degree of Master of Science in Marine Geology/Geoinformatics for the academic year 2023-2024, Mangalore University.

Further, it is certified that this work has not been submitted for the award of any degree or diploma in any other University.

Place: Mangalagangothri

Date: 27/7/2024

K PRIYA

Dr. K. PRIYA
Asst. Professor
Dept. of Marine Geology
Mangalore University
MANGALAGANGOTRI - 574 199

EXTERNAL SUPERVISOR'S CERTIFICATE

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28 On 2024

CERTIFICATE

This is to Certify that the project entitled "COASTAL VILNERABILITY ASSESSMENT OF KASARAGOD DISTRICT IN KERALA: USING GEOSPATIAL TECHNIQUES "cannot our under our guidance at Kerala State Remote Sensing and Environment Centres KSREC1. Vikus Shanan. Thirte-ananothapterium during the Period from 5" April 2024 to 25" future 2024 is an original work of the student Shek ARUN KUMAR C (Reg.No.PRSAE215075025) and is being submitted in partial fulfillment of the award of the Master's Degree in M.Sc. Geointformatics, of Mangalore University. Mangalagangoshri, Karnataka This report has not been submitted earlier either to the University distitute for the fulfillment of the requirement of a course of study.

Dr. N. C. Lailkamar Scientise-S. KSREC

Niza mudeen A.IAS Director KSREC



Department of Marine Geology

Geoinformatics Programme

Mangalagangothri-574199

Coordinator Certificate

This is to certify that the dissertation work entitled "COASTAL VULNERABILITY ASSESSMENT OF KASARAGOD DISTRICT, KERALA: USING GEOSPATIAL TECHNIQUES" has been carried out by Mr. Arun Kumar C, a student of the IVth semester MSc course in Geoinformatics, and has been satisfactorily completed under the guidance of Dr. K. Priya, Department of Marine Geology, Mangalore University. This work is submitted in partial fulfilment of the requirements for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date:

Dr. B. R. Manjunatha

Coordinator and Chairman

Department of Marine Geology,

Mangalore University,

Mangalagangothri – 574199

CO-ORDINATOR
Geoinformatics Program
Department of Marine Geology
Mangalore University
Mangalagangotri - 574 199

III



CHAIRMAN'S CERTIFICATE

This is to certify that **Athmika** has successfully completed the project work/dissertation titled GEOSPATIAL ANALYSIS OF 30 YEAR SOUTHWEST MONSOON RAINFALL IN KARNATAKA'S 4 REGION carried out under the guidance of Smt. Yamuna.S.M, Assistant Professor, Department of Marine Geology, Mangalore University and Mr. S.S.M. Sunil Gavaskar, Project Coordinator, KSNDMC for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri Date: 30/07/2014

Dr. B. R. Manjunatha Senior Professor and Chairman, Department Of Marine Geology, Mangalore University, Mangalagangothri – 574199

CHAIRMAN
Department of Marine Geology
Mangalore University
Mangalagangothri-574199
INDIA



CO-ORDINATOR'S CERTIFICATE

This is to certify that Athmika has successfully completed the project work/dissertation titled GEOSPATIAL ANALYSIS OF 30 YEAR SOUTHWEST MONSOON RAINFALL IN KARNATAKA'S 4 REGION, carried out under the guidance Smt. Yamuna.S.M. Assistant Professor, Department of Marine Geology, Mangalore University and Mr. S.S.M. Sunil Gavaskar, Project Coordinator, KSNDMC for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 30/07/2024

Dr. B. R. Manjunatha Senior Professor and Coordinator Department of Marine Geology, Mangalore University, Mangalagangothri – 574199

ijunats

CO-ORDINATOR
Geoinformatics Program
Department of Marine Geology
Mangalore University
Mangalagangotri - 574 199
MANGALORE



CERTIFICATE

This is to certify that dissertation entitled GEOSPATIAL ANALYSIS OF 30 YEAR SOUTHWEST MONSOON RAINFALL IN KARNATAKA'S 4 REGION submitted by Miss Athmika (Reg No: P05AZ22S075036) in partial fulfilment of the award of the Master of science in GEOINFORMATICS from Mangalore University, Mangalagangothri. It has not been submitted elsewhere for the award of any degree or diploma.

The project was carried out under my supervision and was found worthy of acceptance.

Place: Mangalagangothri

Date: 27/07/2024

Smt. Yamuna. S.M

Assistant Proffessor Department of Marine Geology, Mangalore University, Mangalagangothri – 574199



Department of Marine Geology Mangalagangothri - 574199

CHAIRMAN'S CERTIFICATE

This is to certify that Ms. Hridyalakshmi.P has successfully completed the project work/dissertation titled "URBAN FLOOD MANAGEMENT USING GEOSPATIAL : A CASE **TECHNIQUES** AND AHP **METHOD** THIRUVANANTHAPURAM CORPORATION", carried out under the guidance of Smt. Yamuna.S.M, Assistant Professor, Department of Marine Geology, Mangalore University and Dr. N. C. Anilkumar, Scientist, KSREC (Kerala State Remote Sensing and Environment Centre) for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 30/07/2024

Dr. B. R. Manjunatha

Senior Professor and Chairman,

Department Of Marine Geology,

Mangalore University,

Mangalagangothri – 574199

CHAIRMAN

Department of Marine Geology Mangalore University Mangalagangothri-574199 INDIA



COORDINATOR'S CERTIFICATE

This is to certify that Ms. Hridyalakshmi.P has successfully completed the project work/dissertation titled "URBAN FLOOD MANAGEMENT USING GEOSPATIAL TECHNIQUES AND AHP METHOD: A CASE STUDY OF THIRUVANANTHAPURAM CORPORATION", carried out under the guidance of Smt. Yamuna.S.M, Assistant Professor, Department of Marine Geology, Mangalore University and Dr. N.C Anilkumar, Scientist, KSREC (Kerala State Remote Sensing and Environment Centre) for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 30/07/2024

Dr. B. R. Manjunatha

Senior Professor and Coordinator

Department of Marine Geology,

Mangalore University,

Mangalagangothri – 574199

CO-ORDINATOR
Geoinformatics Program
Department of Marine Geology
Mangalore University
Mangalagangotri - 574 199
MANGALORE



Department of Marine Geology MSc. GEOINFORMATICS

Mangalagangothri-574199

SUPERVISOR'S CERTIFICATE

This is to certify that this dissertation entitled "URBAN FLOOD MANAGEMENT USING GEOSPATIAL TECHNIQUES AND AHP METHOD: A CASE STUDY OF THIRUVANANTHAPURAM CORPORATION" is the bonafide work of Ms. Hridyalakshmi.P (Reg. No. P05AZ22S075028) carried out, under my supervision and guidance, as a partial fulfillment of the requirement for the degree of Master of Science in Geoinformatics for the academic year 2023-2024, Mangalore University. Further, it is certified that this work has not been submitted for the award of any degree or diploma in any other University.

Place: Mangalagangothri Date: 30 | 07 | 20 24

Assistant Professor
Department of Marine Geology
Mangalore University
Mangalagangothri-574199
Mangalore



MANGALORE

UNIVERSITY

Department of Marine Geology

Mangalagangothri-574199

CHAIRMAN'S CERTIFICATE

This is to certify that Ms. Khadeejath Asreena A.A has successfully completed the project work/dissertation titled "Spatio-Temporal Analysis of Urban Expansion, Land Use Dynamics and Their Effects on Vegetation Using Remote Sensing and GIS Techniques: A Case Study of Kasaragod District", carried out under the guidance of Dr. R. Nirmala, Department of Marine Geology, Mangalore University and M.S Saran, Scientist, WTD (including GIS), KSCSTE - National Transportation Planning and Research Centre (NATPAC), Thiruvananthapuram. for the partial fulfillment of the requirement for the award of the degree of Master of Science In Geoinformatics

Place: Mangalagangothri

Date: 24/07/2024

Dr. B.R. Manjunatha

Senior Professor and Chairman Department of Marine Geology Mangalore University Mangalagangothri-574199

CHAIRMAN

Department of Marine Geology Mangalore University Mangalagangothri-574199 INDIA



Department of Marine Geology GEOINFORMATICS PROGRAMME

Mangalagangothri-574199

COORDINATOR'S CERTIFICATE

This is to certify that Ms. Khadeejath Asreena A.A has successfully completed the project work/dissertation titled "Spatio-Temporal Analysis of Urban Expansion, Land Use Dynamics and Their Effects on Vegetation Using Remote Sensing and GIS Techniques: A Case Study of Kasaragod District", carried out under the guidance of Dr. R. Nirmala, Department of Marine Geology, Mangalore University and M.S Saran, Scientist, WTD (including GIS), KSCSTE - National Transportation Planning and Research Centre (NATPAC), KSCSTE - National Transportation Planning and Research Centre (NATPAC), Master of Science In Geoinformatics

Place: Mangalagangothri

Date: 24(07)2024

Dr. B.R. Manjunatha

Senior Professor and coordinator Department of Marine Geology Mangalore University Mangalagangothri-574199

CO-ORDINATOR
Geoinformatics Program
Department of Marine Geolog
Mangalore University
Mangalagangotri - 574 199
MANGALORE



Department of Marine Geology MSc. GEOINFORMATICS

Mangalagangothri-574199

CERTIFICATE

This is to certify that this dissertation entitled "Spatio-Temporal Analysis of Urban Expansion, Land Use Dynamics and Their Effects on Vegetation Using Remote Sensing and GIS Techniques: A Case Study of Kasaragod District" is the bona fide work of MS. KHADEEJATH ASREENA A.A(Reg. No. P05AZ22S075019) carried out, under my supervision and guidance, as a partial fulfillment of the requirement for the degree of Master of Science in Geoinformatics for the academic year 2023-2024, Mangalore University. Further, it is certified that this work has not been submitted for the award of any degree or diploma in any other University.

Place: Mangalagangothri

Date: 24/07/24

Assistant Professor
Department of Marine Geology
Mangalore University
Mangalagangothri-574199
Mangalore



KSCSTE - NATIONAL TRANSPORTATION PLANNING AND RESEARCH CENTRE

(An Institution of Kerala State Council for Science, Technology & Environment) K. Karunakaran Transpark, Akkulam, Thuruvikkal P.O Thiruvananthapuram–695011, Kerala Website: www.natpac.kerala.gov.in, Phone: 0471 – 2551282



11-07-2024

CERTIFICATE

This is to certify that the project report titled "Spatio-Temporal Analysis of Urban Expansion, Land Use Dynamics and Their Effects on Vegetation Using Remote Sensing and GIS Techniques: A Case Study of Kasaragod District" is a record of the work carried out by Ms. Khadeejath Asreena A.A. (Reg. No. P05AZ22S075019) under the Department of Marine Geology doing a Master of Science in Geoinformatics from Mangalore University, Mangalagangothri-574199, Karnataka, during the year 2024, under my guidance and supervision as part of the requirement for obtaining her Master of Science degree in Geoinformatics.



M.S.Saran,
Scientist, WTD (Including GIS)
Project Guide



Department of Marine Geology

Mangalagangothri – 574199

Chairman's Certificate

This is to certify that Krithi has successfully completed the project work/dissertation titled Hydrological Modelling and flood analysis of Mangaluru city through Arc-SWAT and HEC-RAS with geospatial techniques, carried out under the guidance of Dr. R. Nirmala, Assistant professor, Department of Marine Geology, Mangalore University and Dr. Shivakumar Naikal H. S, KSNDMC for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 24/07/2024

Dr. B. R. Manjunatha

Senior Professor and Chairman,

Department Of Marine Geology,

Mangalore University,

Mangalagangothri - 574199

CHAIRMAN

Department of Marine Geology

Mangalore University

Mangalagangothri-574199

INDIA



Department of Marine Geology Mangalagangothri – 574199

Coordinator's Certificate

This is to certify that Krithi has successfully completed the project work/dissertation titled Hydrological Modelling and flood analysis of Mangaluru city through Arc-SWAT and HEC-RAS with geospatial techniques, carried out under the guidance of Dr. R. Nirmala, Assistant professor, Department of Marine Geology, Mangalore University and Dr. Shivakumar Naikal H. S, KSNDMC for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 24/07/2024

Dr. B. R. Manjunatha

Senior Professor and Coordinator

Department of Marine Geology,

Mangalore University,

Mangalagangothri – 574199

CHAIRMAN

Department of Marine Geology Mangalore University Mangalagangothri-574199 (NDIA

CO-ORDINATOR
Geoinformatics Program
Department of Marine Geology
Mangalore University
Mangalogo 1574 199
MANGALORE

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Department of Marine Geology

Mangalagangothri – 574199

CERTIFICATE

This is to certify that dissertation work entitled "Hydrological Modelling and Flood Analysis of Mangaluru city through Arc-SWAT and HEC-RAS with Geospatial techniques" Submitted by Ms. Krithi (Reg. No: P05AZ22S075032) in partial fulfillment of the award of the Master of Science in GEOINFORMATICS from Mangalore University, Mangalagangothri. It has not been submitted elsewhere for degree or diploma award. The project was carried out under my supervision and was found worthy of acceptance.

Place: Mangalagangothri

Date: 24/07/24

Dr. R. Nirmala

Assistant professor

Department of Marine Geology,

Mangalore University

Mangalagangotri- 574199



Mangalore

University

Department of Marine Geology

Mangalagangothri - 574199

CHAIRMAN'S CERTIFICATE

This is to certify that Mr. Kushi Subrahmanya has successfully completed the project work/dissertation titled Integrating Web GIS Tools for Comprehensive Spatial Data Analysis and Visualization: A Case Study With MAPOG, carried out under the guidance of Dr.B.R. Manjunatha, Department of Marine Geology, Mangalore University and Ms. Mitali Sanghavi, Senior GIS Engineer, Engineer Philosophy Web Services for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 25th July 2024

Department Of Marine Geology, Mangalore University, Mangalagangothri – 574199

CHAIRMAN

Department of Marine Geology Mangalore University Mangalagangothri - 574 199 INDIA



Mangalore

University

Department of Marine Geology

Geoinformatics Programme

Mangalagangothri - 574199

CO-ORDINATOR'S CERTIFICATE

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Place: Mangalagangothri

Date: 25th July 2024

Dr. B. R. Manjunatha

Senior Professor and Coordinator Department of Marine Geology, Mangalore University, Mangalagangothri – 574199

CO-ORDINATOR
Geoinformatics Program
Department of Marine Geology
Mangalore University
Mangalagangotri - 574 199
MANGALORE



Mangalore

University

Mangalagangothri – 574199

M.Sc. Geoinformatics

CERTIFICATE

This is to certify that dissertation entitled Integrating Web GIS Tools for Comprehensive Spatial Data Analysis and Visualization: A Case Study With MAPOG, submitted by Mr. KUSHI SUBRAHMANYA (Reg No: P05AZ222S075029) for the partial fulfilment of the award of the Master of GEOINFORMATICS Mangalagangothri. It has not been submitted elsewhere for the award of any

The project was carried out under my supervision and was found worthy of

Place: Mangalagangothri

Date: 25th July 2024

Senior Professor. Department Of Marine Geology,

CHAIRMAN

Department of Marine Geology

Mangalore University Mangalagangothri - 574 199 INDIA

Mangalore University Department of Marine Geology Mangalagangothri – 574199

M.Sc. GEOINFORMATICS

Chairman's Certificate

This is to certify that Ms. Lihitha T has successfully completed the project work/dissertation titled LANDSLIDE SUSCEPTIBILITY ZONATION USING ANALYTICAL HIERARCHY PROCESS (AHP) IN BHADRA WATERSHED, CHIKKAMAGALURU DISTRICT OF KARNATAKA, carried out under the guidance Dr. R. Nirmala, Assistant Professor, Department of Marine Geology, Mangalore University and Dr. Shivakumara Naiklal H.S, Scientific Officer (SO), KSNDMC, Bangalore for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 24/07/2024

Dr. B. R. Manjunatha

Senior Professor and Chairman, Department Of Marine Geology,

Mangalore University,

Mangalagangothri – 574199

CHAIRMAN

Department of Marine Geology
Mangalore University
Mangalagangothri-574199
INDIA



M.Sc. GEOINFORMATICS

Coordinator's Certificate

This is to certify that Ms. Lihitha T has successfully completed the project work/dissertation titled LANDSLIDE SUSCEPTIBILITY ZONATION USING ANALYTICAL HIERARCHY PROCESS (AHP) IN BHADRA WATERSHED, CHIKKAMAGALURU DISTRICT OF KARNATAKA, carried out under the guidance Dr. R. Nirmala, Assistant Professor, Department of Marine Geology, Mangalore University and Dr. Shivakumara Naiklal H.S, Scientific Officer (SO), KSNDMC, Bangalore for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 24/07/2024

Dr. B. R. Manjunatha Senior Professor and Coordinator

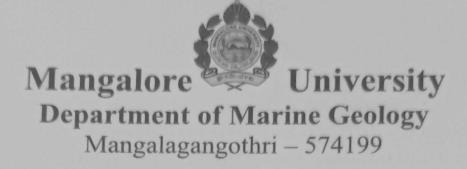
Department of Marine Geology,

inener

Mangalore University,

Mangalagangothri – 574199

CO-ORDINATOR
Geoinformatics Program
Department of Marine Geology
Mangalore University
Mangalagangotri - 574 199
MANGALORE



M.Sc. GEOINFORMATICS

CERTIFICATE

This is to certify that dissertation entitled LANDSLIDE SUSCEPTIBILITY ZONATION USING ANALYTICAL HYRARCHIAL PROCESS (AHP) IN BHADRA WATERSHED, CHIKKAMAGALURU DISTRICT OF KARNATAKA submitted by MS. LIHITHA T (Reg No: P05AZ22S075033) in partial fulfilment of the award of the Master of science in GEOINFORMATICS from Mangalore University, Mangalagangothri. It has not been submitted elsewhere for the award of any degree or diploma.

The project was carried out under my supervision and was found worthy of acceptance.

Place: Mangalagangothri

Date: 24/7/24

Dr. R. Nirmala
Assistant Professor
Department of Marine Geology
Mangalore University
Mangalagangothri-574199



Department of Marine Geology Mangalagangothri – 574199

CHAIRMAN'S CERTIFICATE

This is to certify that Ms. Maya K has successfully completed the project work/dissertation titled "GEOSPATIAL EVALUATION OF LAND USE LAND COVER CHANGES IN AND AROUND KOTTAYAM TALUK, KERALA", carried out under the guidance of Dr. R. Nirmala, Assistant Professor, Department of Marine Geology, Mangalore University and Dr. N.C Anilkumar, Scientist, KSREC (Kerala State Remote Sensing and Environment Centre) for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 24/07/2024

Dr. B. R. Manjunatha

Senior Professor and Chairman,

Department Of Marine Geology,

Mangalore University,

Mangalagangothri - 574199

CHAIRMAN

Department of Marine Geology Mangalore University Mangalagangothri-574 199 INDIA



COORDINATOR'S CERTIFICATE

This is to certify that Ms. Maya K has successfully completed the project work/dissertation titled "GEOSPATIAL EVALUATION OF LAND USE LAND COVER CHANGES IN AND AROUND KOTTAYAM TALUK, KERALA", carried out under the guidance of Dr. R. Nirmala, Assistant Professor, Department of Marine Geology, Mangalore University and Dr. N.C Anilkumar, Scientist, KSREC (Kerala State Remote Sensing and Environment Centre) for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 24/07/2024

Dr. B. R. Manjunatha

Senior Professor and Coordinator

Department of Marine Geology,

Mangalore University,

Mangalagangothri – 574199

CO-ORDINATOR
Geoinformatics Program
Department of Marine Geology
Mangalore University
Mangalagangotri - 574 199
MANGALORE



MANGALORE

Department of Marine Geology MSc. GEOINFORMATICS

Mangalagangothri-574199

Certificate

This is to certify that this dissertation entitled "GEOSPATIAL EVALUATION OF LAND USE LAND COVER CHANGES IN AND AROUND KOTTAYAM TALUK, KERALA" is the bonafide work of MS. Maya K (Reg. No. P05AZ22S075023) carried out, under my supervision and guidance, as a partial fulfillment of the requirement for the degree of Master of Science in Geoinformatics for the academic year 2023-2024, Mangalore University. Further, it is certified that this work has not been submitted for the award of any degree or diploma in any other University.

Place: Mangalagangothri

Date: 24/07/24

Dr. R. NIRMALA

Assistant Professor Department of Marine Geology Mangalore University Mangalagangothri-574199 Mangalore കേരള സർക്കാർ ആസൂത്രണ സാമ്പത്തികകാര്യ വകുപ്പ് കേരള സംസ്ഥാന റിമോട്ട് സെൻസിംഗ് ആന്റ് എൻവയോൺമെന്റ് സെന്റർ

'സ്ത്' ബ്ലോക്ക്, വികാസ് ഭവൻ, തിരുവനന്തപുരം - 695033 ഫോൺ 0471 - 2301167, 0471 - 2302268 ഫാക്സ് 0471 - 2300624 ഇ - ലെയിൽ directorksrec@yahoo.in വെബ് : www.ksrec.kerala.gov.in KS REC

Government of Kerala
Planning & Economic Affairs Department
Kerala State Remote Sensing &
Environment Centre

'C' Block, Vikas Bhavan, Thiruvananthapuram-695033 Phone : 0471-2301167, 0471-2302268

Fax: 0471-2300624

Email: directorksrec@yahoo.in Web: www.ksrec.kerala.gov.in

No A.85/2024/KSREC

28.06.2024

CERTIFICATE

This is to Certify that the project entitled "GEOSPATIAL EVALUATION OF LANDUSE LAND COVER CHANGES IN AND AROUND KOTTAYAM TALUK, KERALA" carried out under our guidance at Kerala State Remote Sensing and Environment Centre (KSREC), Vikas Bhavan, Thiruvananthapuram during the Period from 8th April 2024 to 25th June 2024 is an original work of the student Ms.Maya.K (Reg.No.P05AZ22S075023) and is being submitted in partial fulfillment of the award of the Master's Degree in M.Sc Geoinformatics of Mangalore University, Mangalagangothri, Karnataka. This report has not been submitted earlier either to the University /Institute for the fulfillment of the requirement of a course of study.

Dr.N.C.Anilkumar Scientist-B,KSREC Nizamudeen A.IAS Director, KSREC



MANGALORE

UNIVERSITY

Department of Marine Geology MSc. GEOINFORMATICS

Mangalagangothri-574199

CHAIRMAN'S CERTIFICATE

This is to certify that the dissertation work titled "Impact of land use and land cover change on inland water transport of Kuttanad region" carried out by Mr. Mohammed Afnas K P, IV Semester student of M.Sc. in Geoinformatics under the external guidance of, Dr. Sabitha N M and internal guidance of Smt. Yamuna S M, Asst. Professor, Department of Marine Geology, Mangalore University for the partial fulfillment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangotri
Date: 27/07/2044

Prof. B'R Manjunatha

The Chairman

Dept. of Marine Geology Mangalore University

Mangalagangothri-574199

CHAIRMAN

Department of Marine Geology **Mangalore University** Mangalagangothri - 574 199 INDIA



Department of Marine Geology Mangalagangotri, Karnataka

SUPERVISOR'S CERTIFICATE

This is to certify that this dissertation entitled "IMPACT OF LAND USE AND LAND COVER CHANGES ON INLAND WATER TRANSPORT OF KUTTANAD REGION, KERALA" is the bona fide work of Mohammed Afnas K P (Reg. No P05AZ22S075034) carried out under my supervision and guidance, as a partial fulfillment of the requirement for the degree of Master of Science in Geoinformatics for the academic year 2023-2024, Mangalore University. Further, it is certified that this work has not been submitted for the award of any degree or diploma in any other University.

Place: Mangalagangotri

Date: 27 07 2024

Assistant Professor
Department of Marine Geology
Mangalore University

Smt Yamuna S M

Mangalagangotri, Mangalore



Department of Marine Geology

MSc. GEOINFORMATICS

Mangalagangothri-574199

CO-ORDINATOR CERTIFICATE

This is to certify that dissertation work entitled "IMPACT OF LAND USE AND LAND COVER CHANGES ON INLAND WATER TRANSPORT OF KUTTANAD REGION, KERALA" is carried out by Mr. Mohammed Afnas K P of IVth semester MSc course in Geoinformatics and has satisfactorily completed under the guidance of Smt Yamuna S M, Department of Marine Geology, Mangalore University for the partial fulfilment of the requirement for the award of the degree of Master of science in Geoinformatics.

Place: Mangalagangothri

Date: 26/07/2024

Prof. B R Manjunatha

Co-ordinator

Dept. of Marine Geology Mangalore University

CO-ORDINATOR
Geoinformatics Program
Department of Marine Geology
Mangalore University
Mangalagangotri - 574 199
MANGALORE



KSCSTE - NATIONAL TRANSPORTATION PLANNING AND RESEARCH CENTRE



(An Institution of Kerala State Council for Science, Technology & Environment)

K. Karunakaran Transpark, Aakkulam, Thuruvikkal P.O, Thiruvananthapuram-695011, Kerala E-mail: contactus.natpac@kerala.gov.in, info.natpac@kerala.gov.in

Phone: 0471 - 2551282/2554467/2553701, Website: www.natpac.kerala.gov.in

08-07-2024

CERTIFICATE

This is to certify that the report titled "Impact of land use and land cover changes on inland water transport of Kuttanad region" is a record of the work carried out by Mr. Mohammed Afnas K P (P05AZ22S075034) of the Department of Geoinformatics, Mangalore University, Mangalagangotri, Mangalore, Karnataka, during the year 2023-24 under my guidance and supervision as part of the requirement for obtaining their Master's Degree in Geoinformatics.



Dr Sabitha N M Senior Scientist, Water Transport Division KSCSTE-NATPAC (Project Guide)

Sabisha.

Dr. K PRIYA

Asst. Professor Department of Marine Geology

Mobile No: 91-9741627634

E-mail privaka mangaloreuniversity ac in



MANGALORE UNIVERSITY MANGALAGANGOTHRI MANGALORE, KARNATAKA INDIA - 574 199

SUPERVISOR'S CERTIFICATE

This is to certify that this dissertation entitled "CRASH BLACKSPOT IDENTIFICATION AND IMPACT ANALYSIS OF MOTORIZED TWO-WHEELER LANES ON STATE HIGHWAY 8" is the bona fide work of MRUTHUL M.C (Reg. No. P05AZ22S075024) carried out, under my supervision and guidance, as a partial fulfilment of the requirement for the degree of Master of Science in Geoinformatics for the academic year 2023-2024, Mangalore University.

Further, it is certified that this work has not been submitted for the award of any degree or diploma in any other University.

Place: Mangalagangothri

Date: 27/7/2024

K PRIYA

Dr. K. PRIYA

Asst. Professor

Dept. of Marine Geology

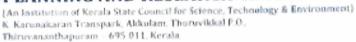
Mangalore University

MANGALAGANGOTRI - 574 199

EXTERNAL SUPERVISOR'S CERTIFICATE



KSCSTE - NATIONAL TRANSPORTATION PLANNING AND RESEARCH CENTRE





CERTIFICATE

This is to certify that the project report titled "Crash Blackspot Identification and Impact Analysis of Motorised Two Wheeler lanes on State Highway-8" is a record of the work carried out by Mr. Mruthul M.C. (Reg. No. P05AZ22S075024) of the Department of Marine Geology, Mangalore University, Mangalagangothri, Karnataka during the academic year 2023-24 under my guidance and supervision as part of the requirement for obtaining his Master of Science degree in Geoinformatics.

Wishing him every success in the future endeavors.

Thiruvananthapuram 11.07.2024



Ebin Sam S
Scientist & Coordinator
Traffic Engineering & Safety Division
KSCSTE-NATPAC



Department of Marine Geology

GEOINFORMATICS PROGRAMME

Mangalagangothri-574199

COORDINATOR'S CERTIFICATE

This is to certify that dissertation work entitled "Crash Blackspot Identification And Impact Analysis Of Motorized Two-Wheeler Lanes On State Highway 8" is carried out by Mr Mruthul M C of IVth semester M Sc. course in Geoinformatics and has satisfactorily completed under the guidance of Dr. K. Priya, Department of Marine Geology, Mangalore University for the partial fulfilment of the requirement for the award of the degree of Master of science in Geoinformatics.

Place: Mangalagangotri

Date: 27/07/2024

Dr. B. Ř. Manjunatha

Coordinator and Chairman

Department of Marine Geology,

Mangalore University,

Mangalagangothri - 574199

CO-ORDINATOR
Geoinformatics Program
Department of Marine Geology
Mangalore University
Mangalagangotri - 574 199
MANGALORE

Identification Of Repeated Pedestrian Vulnerable Corridors Across Kerala

Dr. K PRIYA

Asst. Professor

Department of Marine Geology

Mobile No: 91-9741627654

E-mail: priyak@mangaloreuniversity.ac.in

MANGALORE UNIVERSITY

MANGALAGANGOTHRI

MANGALORE, KARNATAKA

INDIA - 574 199

SUPERVISOR'S CERTIFICATE

This is to certify that this dissertation entitled "IDENTIFICATION OF REPEATED PEDESTRIAN VULNERABLE CORRIDORS ACROSS KERALA" is the bona fide work of Nizamudheen B A (Reg. No. P05AZ22S075022) carried out under my supervision and guidance, as a partial fulfilment of the requirement for the degree of Master of Science in Geoinformatics for the academic year 2023-2024, Mangalore University.

Further, it is certified that this work has not been submitted for the award of any degree or diploma in any other University.

Place: Mangalagangothri

Date: 27/7/2024

Dr. K. PRIYA

Asst. Professor

Dept. of Marine Geology

Mangalore University

MANGALAGANGOTRI - 574 199

1

EXTERNAL SUPERVISOR'S CERTIFICATE



KSCSTE - NATIONAL TRANSPORTATION PLANNING AND RESEARCH CENTRE

(An Institution of Kerala State Council for Science, Technology & Environment)
K. Karunakaran Transpark, Akkulam, Thuruvikkai P.O
Thiruvananthapuram-695011,Kerala
Website: www.natpac.kerala.gov.in. Phone: 0471 - 2551282



CERTIFICATE

This is to certify that Mr. NIZAMUDHEEN B A (P05AZ225075022), Master of Science in Geoinformatics from Mangalore University, Karnataka, has successfully completed a project in our organization from 15th April to 10th July 2024. During this period, he worked on the topic "Identification of Repeated Pedestrian Vulnerable Corridors Across Kerala".

Wishing him the very best for all future endeavors.

Thiruvananthapuram 10.07.2024 The Second State of the Second State of the Second Second

V S Sanjäy Kumar
Principal Scientist & Head
Traffic Engineering & Safety Division
KSCSTE-NATPAC



Department of Marine Geology

Geoinformatics Programme

Mangalagangothri-574199

COORDINATOR'S CERTIFICATE

This is to certify that the dissertation work entitled "Identification of Repeated Pedestrian Vulnerable Corridors Across Kerala" has been carried out by Mr. Nizamudheen B. A (Reg. No.- P05AZ22S075022)., a student of the IVth semester MSc course in Geoinformatics, and has been satisfactorily completed under the guidance of Dr. K. Priya, Asst. professor, Department of Marine Geology, Mangalore University. This work is submitted in partial fulfilment of the requirements for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 27/7/2024

Dr. B. R. Manjunatha

Coordinator and Chairman

Department of Marine Geology,

Mangalore University,

Mangalagangothri – 574199

CO-ORDINATOR
Geoinformatics Program
Department of Marine Geology
Mangalore University

Mangalagangotri - 574 199
MANGALORE

Dr. K PRIYA

Asst. Professor

Department of Marine Geology Mobile No: 91-9741627654

E-mail: <u>priyak@mang</u>aloreuniversity.ac.in



MANGALORE UNIVERSITY

MANGALAGANGOTHRI

MANGALORE, KARNATAKA

INDIA - 574 199

SUPERVISOR'S CERTIFICATE

This is to certify that this dissertation entitled "ASSESSMENT OF LANDSLIDE SUSCEPTIBILITY IN KOZHIKODE DISTRICT, KERALA: A WEIGHTED OVERLAY APPROACH' is the bona fide work of RASHIDA (Reg. No. P05AZ22S075020) carried out under my supervision and guidance, as a partial fulfilment of the requirement for the degree of Master of Science in Marine Geology/Geoinformatics for the academic year 2023-2024, Mangalore University.

Further, it is certified that this work has not been submitted for the award of any degree or diploma in any other University.

Place: Mangalagangothri

Date: 26.7.2024

K PRIYA

Dr. K. PRIYA
Asst. Professor
Dept. of Marine Geology
Mangalore University

MANGALAGANGOTRI - 574 199



CERTIFICATE

10 July 2024

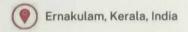
This is to certify that the dissertation work entitled "Assessment of Landslide susceptibility in Kozhikode district, Kerala: A weighted overlay approach" has been done by Ms. RASHIDA under my supervision and guidance at IRIZ GEO SOLUTIONS PVT LTD, Kerala during 23rd April 2024 to 10thJuly 2024 in partial fulfilment of the requirements for the award of Master of Science in Geoinformatics from Mangalore University, Mangalagangothri, Mangalore.

With Regards,
Dr SHIMOD K P
Assistant Professor
Department of Geograph

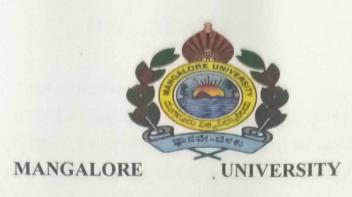
Department of Geography Govt Arts and Science College Tholanur, Palakkad.











MANGALAGANGOTHRI - 574199

M.Sc. GEOINFORMATICS

COORDINATOR and CHAIRMAN CERTIFICATE

This is to certify that dissertation work entitled "ASSESSMENT OF LANDSLIDE SUSCEPTIBILITTY IN KOZHIKODE DISTRICT KERALA; A WEIGHTED OVERLAY APPROACH" is carried out by Rashida of IVth semester MSc Geoinformatics, and has satisfactorily completed under the guidance of Dr. K Priya, Department of Marine Geology, Mangalore University. This Work is submitted in Partial fulfilment of the requirement for the award of the degree of Master of science in Geoinformatics.

Place: Mangalagangothri

Date: 26/07/2026

Dr .B R Manjunatha

Co-ordinator and chairman

Dept.of Marine geology



MANGALORE

UNIVERSITY

Department of Marine Geology

Mangalagangothri-574199

CHAIRMAN'S CERTIFICATE

This is to certify that Ms. Saranya V has successfully completed the project work/dissertation titled "Identification of Crash Prone Areas Using Spatio-Temporal Techniques", carried out under the guidance of Smt. Yamuna S M, Department of Marine Geology, Mangalore University and Ebin Sam S, Scientist, KSCSTE - National Transportation Planning and Research Centre (NATPAC) for the partial fulfillment of the requirement for the award of the degree of Master of Science In Geoinformatics

Place: Mangalagangothri

Date: 27/07/2024

br. B.R. Manjunatha

Senior Professor and Chairman Department of Marine Geology Mangalore University Mangalagangothri-574199

CHAIRMAN

Department of Marine Geology

Mangalore University

Mangalagangothri-574199

INDIA



UNIVERSITY

Department of Marine Geology GEOINFORMATICS PROGRAMME

Mangalagangothri-574199

COORDINATOR'S CERTIFICATE

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Place: Mangalagangothri

Date: 27/07/2024

Dr. B.R. Manjunatha

Senior Professor and coordinator Department of Marine Geology Mangalore University Mangalagangothri-574199



Department of Marine Geology MSc. GEOINFORMATICS

Mangalagangothri-574199

CERTIFICATE

This is to certify that this dissertation entitled "Identification of Crash Prone Areas Using Spatio-Temporal Techniques" is the bona fide work of MS. SARANYA V (Reg. No. P05AZ22S075021) carried out, under my supervision and guidance, as a partial fulfillment of the requirement for the degree of Master of Science in Geoinformatics for the academic year 2023-2024, Mangalore University. Further, it is certified that this work has not been submitted for the award of any degree or diploma in any other University.

Place: Mangalagangothri

Date: 27/07/2024

Assistant Professor Department of Marine Geology Mangalore University

Mangalagangothri-574199

Mangalore



Department of Marine Geology

Geoinformatics Programme

Mangalagangotri – 574199

Chairman's certificate

This is to certify that Miss. Sharanya has successfully completed the project work/dissertation titled A geospatial investigation of cloud-to-ground lightning strikes during pre-monsoon and post-monsoon seasons in Dakshina Kannada District during the years 2021 to 2023, carried out under the guidance of Dr. B. R. Manjunatha, Chairman, Department of Marine Geology, Mangalore University and Mr. S.S.M. Gavaskar, Junior Scientific Officer (JSO), Karnataka State Natural Disaster Monitoring Centre, for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangotri

Date: 26 7/2024

Dr. B. R. Manjunatha

Senior Professor and Chairman,

Department of Marine Geology,

Mangalore University,

Mangalagangotri – 574199

CHAIRMAN

Department of Marine Geology Mangalore University Mangalagangothri-574 199 INDIA



University

Department of Marine Geology

Geoinformatics Programme Mangalagangotri – 574199

Co-ordinator's certificate

This is to certify that Miss. Sharanya has successfully completed the project work/dissertation titled A geospatial investigation of cloud-to-ground lightning strikes during pre-monsoon and post-monsoon seasons in Dakshina Kannada District during the years 2021 to 2023, carried out under the guidance of Dr. B. R. Manjunatha, Chairman, Department of Marine Geology, Mangalore University and Mr. S.S.M. Gavaskar, Junior Scientific Officer (JSO), Karnataka State Natural Disaster Monitoring Centre, for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangotri
Date: 26/07/2024

Mangalore

Dr. B. R. Manjunatha

Senior Professor and Coordinator Department of Marine Geology,

Mangalore University,

Mangalagangotri – 574199



Department of Marine Geology

Geoinformatics Programme Mangalagangotri – 574199

CERTIFICATE

This is to certify that the dissertation entitled "A geospatial investigation of cloud-to-ground lightning strikes during pre-monsoon and post-monsoon seasons in Dakshina Kannada District during the years 2021 to 2023" submitted by Miss. Sharanya (Reg. No: P05AZ22S075035) in partial fulfilment of the award of the Master of Science in Geoinformatics from Mangalore University, Mangalagangotri. It has not been submitted elsewhere for the award of any degree or diploma.

The project was carried out under my supervision and was found worthy of acceptance.

Place: Mangalagangotri

Date: 26/07/2024

Dr. B. R. Manjunatha

prin

Senior Professor and Coordinator

Department of Marine Geology,

Mangalore University,

Mangalagangotri – 574199



MANGALAGANGOTHRI – 574199

Chairman's Certificate

This is to certify that Mr. SHARATH M has successfully completed the project work/dissertation titled "GROUNDWATER POTENTIAL ZONE MAPPING OF KUMARADHARA WATERSHED USING GIS BASED-AHP TECHNIQUE", carried out under the guidance of Dr. R. Nirmala, Assistant professor, Department of Marine Geology, Mangalore University for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 26/07/2024

Br. BR Manjunatha
Senior Prof Senior Professor and Chairman, Department of Marine Geology,

Mangalore University,

Mangalagangothri-574 199

CHAIRMAN

Department of Marine Geology Mangalore University Mangalagangothri - 574 199



Department of Marine Geology Geoinformatics Programme MANGALAGANGOTHRI - 574199

Coordinator's Certificate

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Place: Mangalagangothri

Date: 26/07/2024

Dr. B R Manjunatha

Senior Professor and Coordinator

Department of Marine Geology

Mangalore University

Mangalagangothri-574 199



MANGALAGANGOTRI – 574199

MSc. GEOINFORMATICS

Certificate

This is to certify that dissertation entitled "GROUNDWATER POTENTIAL ZONE MAPPING OF KUMARADHARA WATERSHED USING GIS BASED-AHP TECHNIQUE" Submitted by Mr. SHARATH M (Reg. No: P05AZ22S075031) in partial fulfilment of the award of the Master of science in GEOINFORMATICS from Mangalore University, Mangalagangothri. It has not been submitted elsewhere for the award of any degree or diploma.

The project was carried out under my supervision and was found worthy of acceptance.

Place: Mangalagangothri

Date: 25/7/24

Dr. R. Nirmala Assistant professor

Department of Marine Geology

Mangalore University

Mangalagangothri- 574199



Chairman's Certificate

This is to certify that Mr. SHRIVATHSA has successfully completed the project work/dissertation titled "SPATIAL ANALYSIS OF TEMPERATURE VARIATIONS IN BAGALKOTE, KALABURAGI, RAICHUR, AND YADGIR DISTRICTS OF NORTH KARNATAKA USING GIS", carried out under the guidance of Dr. R. Nirmala, Assistant professor, Department of Marine Geology, Mangalore University and Dr. S. S. M. Gavaskar, Junior scientific officer, KSNDMC for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri
Date: 26/07/2024

Dr. B R Manjunatha

Senior Professor and Chairman, Department of Marine Geology, Mangalore University,

Mangalagangothri-574 199

CHAIRMAN
Department of Marine Geology
Mangalore University
Mangalagangothri-574 199
INDIA



MANGALORE

UNIVERSITY

Department of Marine Geology

Geoinformatics Programme

MANGALAGANGOTHRI - 574199

Coordinator's Certificate

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Place: Mangalagangothri Date: 26/07/2024

Dr. B R Manjunatha
Senior Professor and C

Senior Professor and Coordinator Department of Marine Geology

Mangalore University Mangalagangothri-574 199



MANGALORE

UNIVERSITY

MANGALAGANGOTRI – 574199 MSc. GEOINFORMATICS

Certificate

This is to certify that dissertation entitled "SPATIAL ANALYSIS OF TEMPERATURE VARIATIONS IN BAGALKOTE, KALABURAGI, RAICHUR, AND YADGIR DISTRICTS OF NORTH KARNATAKA USING GIS" Submitted by Mr. SHRIVATHSA (Reg. No: P05AZ22S075030) in partial fulfilment of the award of the Master of science in GEOINFORMATICS from Mangalore University, Mangalagangothri. It has not been submitted elsewhere for the award of any degree or diploma.

The project was carried out under my supervision and was found worthy of acceptance.

Place: Mangalagangothri

Date: 25 7/24

Dr. R. Nirmala

Assistant professor Department of Marine Geology

Mangalore University

Mangalagangothri- 574199

MANGALORE UNIVERSITY

Department of Marine Geology Mangalagangothri – 574199

CHAIRMAN'S CERTIFICATE

This is to certify that Ms. Sreelakshmi.M has successfully completed the project work/dissertation titled "IDENTIFICATION OF POTENTIAL FISHING ZONE IN ANDAMAN AND NICOBAR ISLANDS USING REMOTE SENSING AND GIS TECHNIQUES", carried out under the guidance of Smt. Yamuna.S.M, Assistant Professor, Department of Marine Geology, Mangalore University and Dr. N.C Anilkumar, Scientist, KSREC (Kerala State Remote Sensing and Environment Centre) for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 30/07/2024

Dr. B. R. Manjunatha

Senior Professor and Chairman,

Department Of Marine Geology,

Mangalore University,

Mangalagangothri – 574199

CHAIRMAN
Department of Marine Geology
Mangalore University
Mangalagangothri-574199
INDIA



Department of Marine Geology **Geoinformatics Programme** Mangalagangothri – 574199

COORDINATOR'S CERTIFICATE

This is to certify that Ms. Sreelakshmi.M has successfully completed the project work/dissertation titled "IDENTIFICATION OF POTENTIAL FISHING ZONE IN ANDAMAN AND NICOBAR ISLANDS USING REMOTE SENSING AND GIS TECHNIQUES", carried out under the guidance of Smt. Yamuna.S.M, Assistant Professor, Department of Marine Geology, Mangalore University and Dr. N.C Anilkumar, Scientist, KSREC (Kerala State Remote Sensing and Environment Centre) for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 30/7/2014

Dr. B. R. Manjunatha

Senior Professor and Coordinator

Department of Marine Geology,

Mangalore University,

Mangalagang othri-574199



Department of Marine Geology MSc. GEOINFORMATICS

Mangalagangothri-574199

SUPERVISOR'S CERTIFICATE

This is to certify that this dissertation entitled "IDENTIFICATION OF POTENTIAL FISHING ZONE IN ANDAMAN AND NICOBAR ISLANDS USING REMOTE SENSING AND GIS TECHNIQUES" is the bonafide work of MS. Sreelakshmi.M (Reg. No. P05AZ22S075027) carried out, under my supervision and guidance, as a partial fulfillment of the requirement for the degree of Master of Science in Geoinformatics for the academic year 2023-2024, Mangalore University. Further, it is certified that this work has not been submitted for the award of any degree or diploma in any other University.

Place: Mangalagangothri

Date: 30/07/2024,

Assistant Professor Department of Marine Geology Mangalore University

Mangalagangothri-574199

Mangalore



SUPERVISOR'S CERTIFICATE

This is to certify that this dissertation entitled "SITE SUITABILITY ANALYSIS FOR SOLID WASTE DISPOSAL IN KASARAGOD TALUK, KERALA, INDIA" is the bona fide work of VISHNU CHANDRAN (Reg. No. P05AZ22S075026) carried out under my

Date: 27/7/2024

Dr. K. PRIYA Asst. Professor Dept. of Marine Geology Mangalore University MANGALAGANGOTRI - 574 199 കേരള സർക്കാർ ആസൂത്രണ സാമ്പത്തികകാദ്യ വകൂപ് കേരള സംസ്ഥാന റിമോട്ട് സെൻസിംഗ് ആന്റ് എൻവയോൺമെന്റ് സെന്റർ

'സി' ബോക്ക്, വികാസ് വേൻ, തിദുവനന്തപുരം - 695033 ഫോൺ 0471 – 2301167, 0471 – 2302268 ഫാക്സ് 0471 – 2300624 ഇ - ഉമ്മിൽ directorksrec@yahoo in വെബ് : www.ksrec.kerala.gov.in



Government of Kerala Planning & Economic Affairs Department Kerala State Remote Sensing & Environment Centre

C Block, Vikas Bhavan, Thiruvananthapuram-695933 Phone : 0471-2301167, 0471-2302268 Fax: 0471-2300624 Email: directorksrec@yahoo.in Web: www.ksrec.kerala.gov.in

No A.85/2024/KSREC

28.06.2024

CERTIFICATE

This is to Certify that the project entitled "SITE SUITABILITY ANALYSIS FOR SOLID WASTE DISPOSAL IN KASARAGOD TALUK, KERALA, INDIA" carried out under our guidance at Kerala State Remote Sensing and Environment Centre (KSREC). Vikas Bhavan, Thiruvananthapuram during the Period from 5th April 2024 to 25th June 2024 is an original work of the student Shri.VISHNU CHANDRAN (Reg. No. P05AZ22S075026) and is being submitted in partial fulfillment of the award of the Master's Degree in M.Sc Geoinformatics of Mangalore University. Mangalagangothri, Karnataka. This report has not been submitted earlier either to the University Institute for the fulfillment of the requirement of a course of study.

Dr.N.C.Anilkumar Scientist-B,KSREC Nizemudeen A.IAS Director,KSREC MANGALORE



UNIVERSITY

DEPARTMENT OF MARINE GEOLOGY
GEOINFORMATICS PROGRAMME
MANGALAGANGOTHRI – 574199

COORDINATOR'S CERTIFICATE

This is to certify that VISHNU CHANDRAN (Reg. No. P05AZ22S075026) has successfully completed the project work/dissertation titled "SITE SUITABILITY ANALYSIS FOR SOLID WASTE DISPOSAL IN KASARAGOD TALUK, KERALA, INDIA", carried out under the guidance of Dr. K. PRIYA, Asst. Professor, Department of Marine Geology, Mangalore University and Dr. N.C. Anilkumar, Scientist, KSREC Thiruvananthapuram, for the partial fulfilment of the requirement for the award of the degree of Master of Science in Geoinformatics.

Place: Mangalagangothri

Date: 27/07/202\$

DR. B. R. MANJUNATHA

Coordinator and Chairman

Department of Marine Geology,

Mangalore University,

Mangalagangothri - 574199