

## MANGALAGANGOTHRI – 574199 M.S.C MARINE GEOLOGY

## CHAIRMAN'S CERTIFICATE

This is to certify that dissertation work entitled 'STUDY OF SHORELINE CHANGES ALONG KANNUR TO KASARAGOD USING DSAS (ARCGIS)' is carried out by MS. ANZEELA MARIYAM K V of IVth semester M.Sc. course in Marine Geology and has satisfactorily completed under the guidance of Prof. B.R MANJUNATHA, Department of Marine Geology, Mangalore University for the partial fulfillment of the requirement for the award of the degree of Master of science in Marine Geology.

Place: Mangalagangothri

Date

Dr Shivanna

Chairman

Department of marine geology

Mangalagangothri: 574 199

CHAIRMAN



## Department of Marine Geology

Mangalagangotri, Karnataka

## Chairman's Certificate

This is to certify that the dissertation work titled "Heavy mineral and sand resources in the inner shelf sediments off Vizhinjam, Trivandrum, Kerala" carried out by Ms. Apoorva Gowri D., IV Semester, M.Se. course in Marine Geology under the external guidance of Anupama L. C., Senior Geologist, Geological Survey of India, Mangalore and internal guidance of Dr.K.S.Jayappa, Professor, Department of Marine Geology, Mangalore University for the partial fulfillment of M.Sc. Degree in Marine Geology.

Place: Mangalagangotri

Date:

Prof.Shivanna

Chairman

Department of Marine Geology

Mangalore University

CHAIRMAN





भारत सरकार, खान भंत्रात्वय एम-1ए, समुद्री तथा तटीच सर्वेक्षण प्रमाग भारतीय भृतेज्ञानिक सर्वेक्षण, मंगलुर-575001

Government of India, Ministry of Mines M-1A, Marine & Coastal Surveys Division Geological Survey of India, Mangalum- 575 001

दिनांक / Dated: 23.10.2021

#### CERTIFICATE

This is to certify that the dissertation work entitled "Comparative Study Of Freely Available Bathymetry Data Sets Using ArcGIS: A Case Study In South Andaman Sea" is an authentic work done by Mr Ashithlal.N, Department of Marine Geology, Mangalore University during the month of September- October 2021 at Marine & Costal Survey of India, Geological Survey of India (GSI), Ministry of Mines, Mangaluru under my supervision and guidance in partial fulfilment of the requirements for the M.Sc. Marine Geology, Department of Marine Geology, Mangalore University

(Jishnu B. K.)

पूर्वशानिक/Geo इव इते से.एत.डी./s भारतीय भूवेडामिक Geological Survey भारत सरकार/Govt. संस्कृत/MANGALURU



# MANGALAGANGOTHRI – 574199 M.Sc. MARINE GEOLOGY

#### CHAIRMAN'S CERTIFICATE

This is to certify that dissertation work entitled "USE OF REMOTE SENSING AND GEOGRAPHICAL INFORMATION SYSTEM TO DETERMINE GROUND WATER POTENTIAL ZONES IN MANGALORE TALUK, DAKSHINA KANNADA DISTRICT, KARNATAKA" is carried out by Mr. DERWIN FRANCIS of IVth semester M.Sc. course in Marine Geology and has satisfactorily completed under the guidance of Prof Dr.H. GANGADHARA BHAT, Department of Marine Geology, Mangalore University for the partial fulfilment of the requirement for the award of the degree of Master of science in Marine Geology.

Place: Mangalagangothri

Date:

Dr.Shivanna

Chairman

Department of Marine Geology

Mangalagangothri: 574 199

CHAIRMAN



## MANGALAGANGOTHRI – 574199 M.Sc. MARINE GEOLOGY

#### CHAIRMANS CERTIFICATE

RESOURCES OFF CHAVARA, KOLLAM COAST, KERALA USING GIS TECHNIQUES is carried out by Mr. Dharun K.V of IV<sup>th</sup> Semester M.Sc. course in Marine Geology and has satisfactorily completed under the mindance of Prof. H. Gangadhara Bhat, Department of Marine Geology, Mangalore University for the partial fulfilment of the requirement for the award of the Degree of Master of Science in Marine Geology.

Place: Mangalagangothri

Date

Dr. Shiyanna

Chairman

Department of Marine Geology

Mangalore University

Mangalagangothri: 574199

CHAIRMAN



#### MANGALAGANGOTRI – 574199 MSc. MARINE GEOLOGY

#### CHAIRMAN'S CERTIFICATE

This is to certify that dissertation work entitled "MONITORING OF LANDSLIDE AND ITS IMPACT IN KOTTIYOOR PANCHAYAT, KANNUR DISTRICT, KERALA BY USING GEOSPATIAL TECHNOLOGY" is carried out by Ms. Gopika P of IV<sup>th</sup> semester MSc course in Marine Geology and has satisfactorily completed under the guidance of Smt. R. Nirmala, Department of Marine Geology, Mangalore University for the partial fulfilment of the requirement for the award of the degree of Master of science in Marine Geology

Place: Mangalagangotri

Date:

Dr. Shivanna

Chairman

Department of Marine Geology,

Mangalore University

Mangalagangotri- 574199 CHAIRMAN

#### CERTIFICATE

This is to certify that Mr. Harin R nairhas carried out his project entitled Sensitivity Studies of Tsunamigenic Earthquakes in Indian Ocean Subduction Zones-Andaman-Sumatra Subduction Zone And Makaran Subduction zone With Tsunami Numerical Modelling' towards the partial fulfillment for the award of degree in Master of Science in Department of Marine Geology, Mangalore University, Mangalore. This work has been successfully carried out through online at Indian National Center for Ocean Information Services (INCOIS), Hyderabad under my guidance during 20 August to October 22, 2021. The report contains the original work carried out by him and not submitted by any university. During the project work, he took keen interest in the assigned work. I wish him all success in his academic endeavors and life.

Ch. Patanjali Kumar 20/12/21

Scientist 'E', INCOIS



# MANGALORE UNIVERSITY DEPARTMENT OF MARINE GEOLOGY

MANGALAGANGOTHRI, KARNATAKA.

## Chairman's Certificate

This is to certify that the dissertation work titled Shoreline Changes at Sasihithlu

Region, Dakshina Kannada District is carried out by Mr. Hemanth Shetty., IV Semester,

M.Sc. course in Marine Geology under the guidance of Dr. K Priya, Assistant Professor,

Department of Marine Geology and Dr. Pruthviraj U., Assistant Professor, Department of

Applied Mechanics and Hydraulies National Institute of Technology, Surathkal, Karnataka

Applied Mechanics and Hydraulies National Institute of Technology during the year 2019-21,

for the partial fulfilment of M.Sc. Degree in Marine Geology during the year 2019-21,

Further, I certify that this work or a part thereof has not been the basis for the award of any

degree or diploma.

Place: Mangalagangothri

Date:

Chairman

Dept. of Marine Geology CHAIRMAN



#### CERTIFICATE

This is to certify that this thesis entitled "DELINEATION OF GROUNDWATER POTENTIAL ZONES IN PALLIMAN RIVER BASIN, KOLLAM DISTRICT, KERALA USING GEOSPATIAL TECHNOLOGY" is an authentic record of the work carried out at Inter University Centre for Geospatial Information Science and Technology, University of Kerala by Ms. IYRENE SUSAN GILBERT of Fourth Semester M.Sc. Marine Geology, Mangalore University in partial fulfilment of the requirements for the award of M.Sc. Degree in Marine Geology, during the year 2021.

Place: Mangalagangothri

Date: October 2021

RE UNIVERSITY OF STATE OF STAT

Dr. Shivanna

Chairman Department of Marine Geology Mangalore University

CHAIRMAN



## DEPARTMENT OF MARINE GEOLOGY

MANGALAGANGOTHRI, KARNATAKA.

## Chairman's Certificate

This is to certify that the dissertation work titled Shoreline Changes at Surathkal Region, Dakshina Kannada District is carried out by Mr. Jeevan, K., IV Semester, M.Sc. course in Marine Geology under the guidance of Dr. B R Manjunatha, Professor, Department of Marine Geology and Dr. Pruthviraj U. Assistant Professor, Department of Applied Mechanics and Hydraulics National Institute of Technology, Surathkal, Karnataka for the partial fulfilment of M.Sc. Degree in Marine Geology during the year 2019-21. Further, I certify that this work or a part thereof has not been the basis for the award of any degree or diploma.

Place: Mangalagangothri

Date:

Dept. of Marine Geology CHAIRMAN



## DEPARTMENT OF MARINE GEOLOGY

MANGALAGANGOTHRI, KARNATAKA.

## Chairman's Certificate

This is to certify that the dissertation work titled, "DELINEATION OF GROUND WATER POTENTIAL ZONES OF NETRAVATHI RIVER BASIN USING GEOSPATIAL TECHNOLOGY" is carried out by Mr. Mahesh Krishna K, IV Semester, M.Sc. course in Marine Geology under the guidance of Dr. Priya k, Assistant Professor, Department of Marine Geology and Dr. Ramesh H, Associate Professor, Department of Hydraulics and Ocean Engineering, National Institute of Technology, Surathkal, Karnataka for the partial fulfilment of M.Sc. Degree in Marine Geology during the year 2019-21. Further, I certify that this work or a part thereof has not been the basis for the award of any degree or diploma.

Place: Mangalore University

Date:

Chairman

Dept. of Marine Geology CHAIRMAN Department of Marine Geology Mangalore University Mangalagangotri-574199



## Mangalore

## University

Department of Marine Geology Mangalagangothri,

Karnataka.

## Chairman's Certificate

This is to certify that the dissertation work titled Watershed Management of the Coastal Region near Kundapura, West Coast of India is carried out by Ms. Nagarathna, IV Semester, M.Sc. course in Marine Geology under the guidance of Dr. B R Manjunatha, Professor, Department of Marine Geology for the partial fulfilment of M.Sc. Degree in Marine Geology during the year 2019-21. Further, I certify that this workor a part there of has not been the basis for the award of any degree or diploma.

Place: Mangalagangothri

Date:

Chairman

Dept. of Marine Geology

CHAIRMAN



#### DEPARTMENT OF MARINE GEOLOGY

#### MANGALAGANGOTHRI, KARNATAKA.

#### Chairman's Certificate

This is to certify that the dissertation work titled, "MORPHOMETRIC ANALYSIS OF MONACHI RIVER BASIN OF KASARAGOD" is carried out by Ms. NASLA N, IV Semester, M.Sc. course in Marine Geology under the guidance of Dr. Priya K, Assistant Professor, Department of Marine Geology for the partial fulfilment of M.Sc. Degree in Marine Geology during the year 2019-21. Further, I certify that this work or a part thereof has not been the basis for the award of any degree or diploma.

Place: Mangalore University

Date:

Dept. Marine geology

Mangalore university

Mangalagangothri CHA!RMAN



Department of Marine Geology Mangalagangotri, Karnataka

#### Chairman's Certificate

This is to certify that the dissertation work titled "Heavy mineral and sand resources in the inner shelf sediments off Vizhinjam, Trivandrum, Kerala" carried out by Ms. Pooja, of IV Semester, M.Sc. in Marine Geology under the external guidance of Anupama L. C., Senior Geologist, Geological Survey of India, Mangalore and internal guidance of Dr. K. S. Jayappa, Professor, Department of Marine Geology, Mangalore University for the partial fulfilment of M.Sc. Degree in Marine Geology.

Place: Mangalagangotri

Date:

Professor Shiyanna

Chairman

Department of Marine Geolog

Mangalore University

CHAIRMAN

#### MANGALORE



#### UNIVERSITY

#### DEPARTMENT OF MARINE GEOLOGY

MANGALAGANGOTRI, KARNATAKA

#### Chairman's Certificate

This is to certify that the dissertation work titled "Report on the study on temporal variation of granulometric parameters of sediments collected from the continental shelf, off Gujarat, west coast of India "carried out by Ms. Sana S. Nath, IV Semester, M.Sc. course in Marine Geology under the external guidance of Ms. NISHA N.V., Senior Geologist, Geological Survey of India, Marine and Coastal Survey Division, Mangalore and internal guidance of Dr. Priya K., Assistant Professor, Department of Marine Geology, Mangalore University for the partial fulfilment of M.Sc. Degree in Marine Geology.

Place: Mangalagangotri

Date: 13-10-2021

Prof. SHIVÁNNÁ

Chairman

Department of Marine Geology

Mangalore university CHAIRMAN





## UNIVERSITY

#### DEPARTMENT OF MARINE GEOLOGY

MANGALAGANGOTRI, KARNATAKA

## Chairman's Certificate

This is to certify that the dissertation work titled: "Detection of Oil Spill off Sri Lanka using SAR data" carried out by Mr. Shabarinath K, IV Semester student of M.Sc. in Marine Geology under the external guidance of Dr. S. J. Prasad, Scientist, ARO, OSAR, INCOIS and internal guidance of Dr. K. S. JAYAPPA, Professor, Department of Marine Geology, Mangalore University for the partial fulfilment of M.Sc. Degree in Marine Geology.

Prof. Shivanna

Place: Mangalagangotri

Date:

Chairman
Department of Marine Geology
Mangalore university

#### CHAIRMAN



MANGALAGANGOTRI, KARNATAKA

# Chairman's Certificate

This is to certify that the dissertation work title Study of ground water prospecting along the mangalore region based on remote sensing and gis carried out by Ms.Shamitha S IV Semester, M.Sc. course in Marine Geology under the guidance of YAMUNA S.M., Assistant Professor, Department of Marine Geology, Mangalore University for the partial fulfillment of M.Sc. Degree in Marine Geology.

Place: Mangalagangotri Date:23-10-2021 Prof. Shivanna
Chairman,
Department of MarineGeology
Mangalore university
CHAIRMAN



MANGALAGANGOTRI, KARNATAKA

#### Chairman's Certificate

This is to certify that the dissertation work titled "Mapping of Ground Water prospect zones using Remote sensing and GIS in and around Parappa Block, Kasaragod District" carried out by Mr. SHIRIL LUKE SABU, IV Semester, M.Sc. course in Marine Geology under the internal guidance of YAMUNA S.M., Assistant Professor, Department of Marine Geology, Mangalore University for the partial fulfilment of M.Sc. Degree in Marine Geology.

Place: Mangalagangotri Date:25-10-2021 Prof. SHIVANNA
Chairman,
Department of Marine Geology
Mangalore university
CHAIRMAN



## Chairman's Certificate

This is to certify that the dissertation work title "VOLCANOES: A REVIEW" carried out by Ms.Shreeja S, IV Semester, M.Sc. course in Marine Geology under the guidance of YAMUNA S.M., Assistant Professor, Department of Marine Geology, Mangalore University for the partial fulfilment of M.Sc. Degree in Marine Geology.

Prof. Shivanna

Chairman,

Department of Marine Geology Mangalore university

CHAIRMAN



## MANGALORE UNIVERSITY DEPARTMENT OF MARINE GEOLOGY MANGALAGANGOTHRI, KARNATAKA.

#### Chairman's Certificate

This is to certify that the dissertation work titled Temporal Changes in the Landuse and Landcover of Alankaru Village, Kadaba Taluk, Dakshina Kannada District by Using Remote Sensing and Geographic Information System carried out by Mr. Shreekanth B, IV Semester, M.Sc. course in Marine Geology under the guidance of Dr. B.R. Manjunatha, Professor, Department of Marine Geology, Mangalore University for the partial fulfillment of M.Sc. Degree in Marine Geology.

Place: Mangalagangotri

Date:

Chairman,

Department of Marine Geology

CHAIRMAN



#### DEPARTMENT OF MARINE GEOLOGY

MANGALAGANGOTHRI, KARNATAKA.

#### Chairman's Certificate

This is to certify that the dissertation work titled, "Delineation of Ground Water Potential zones of Karadka Region using Geospatial Technology" is carried out by Mr. Shrisha Narayana K A, IV Semester, M.Sc. course in Marine Geology under the guidance of Dr. Priya K, Assistant Professor, Department of Marine Geology. Further, I certify that this work or a part there of has not been the basis for the award of any degree or diploma.

Place: Mangalore University

Date:

Chairman

Dept. of Marine Geology CHAIRMAN



#### DEPARTMENT OF MARINE GEOLOGY

#### MANGALAGANGOTRI, KARNATAKA

#### CHAIRMAN'S CERTIFICATE

This is to certify that dissertation entitled "Potential Fishing Zone analysis along Karnataka Coast Using Remote Sensing and GIS Techniques" is carried out by Mr. SREERAJ M of fourth semester M.Sc. course in Marine Geology and has satisfactorily completed under the guidance of Dr. H. Ganghadhara Bhat, Department of Marine Geology, Mangalore University for the partial fulfilment of the requirements for the award of the Degree of Master of Science in Marine Geology.

Place Mangalagangothri

Dute:

Dr. Shiyanna

Chairman

Department of Marine Geology

Mangalore University

Mangalagangothri, 574 199

CHAIRMAN



MANGALAGANGOTRI, KARNATAKA

#### Chairman's Certificate

This is to certify that the dissertation work titled "Preparation of an Earthquakes/Tsunami events catalog for Andaman & Nicobar Islands and description of the events based on the Geological patterns and Earthquake focal mechanisms" carried out by Mr. SRIVATHSA.K, IV Semester, M.Sc. course in Marine Geology under the external guidance of Shri Ajay Kumar B., Scientist D, INCOIS and internal guidance of YAMUNA S.M., Assistant Professor, Department of Marine Geology, Mangalore University for the partial fulfilment of M.Sc. Degree in Marine Geology

Place: Mangalagangotri

Date:13-10-2021

Prof. SHIVANNA
Chairman,
Department of Marine Geology
Mangalore university
CHAIRMAN



## DEPARTMENT OF MARINE GEOLOGY

## MANGALAGANGOTHRI, KARNATAKA.

#### Chairman's Certificate

This is to certify that the dissertation work titled, "Morphometric analysis of Mogral river basin of Kasaragod, Kerala" is carried out by Ms. Sruthipambalath, IV Semester, M.Sc. course in Marine Geology under the guidance of Dr. Priya k, Assistant Professor, Department of Marine Geology for the partial fulfilment of M.Sc. Degree in Marine Geology during the year 2019-21. Further, I certify that this work or a part thereof has not been the basis for the award of any degree or diploma.

Place: Mangalore University

Date:

Chairman

Dept. Marine geology Mangalore University

Mangalagangotri

CHAIRMAN



#### CERTIFICATE

This is to certify that this thesis entitled "DELINEATION OF SUITABLE SITES FOR THE ARTIFICIAL AUGMENTATION OF GROUNDWATER RECHARGE IN PALLIMAN RIVER BASIN, KOLLAM DISTRICT, KERALA USING GEOSPATIAL TECHNOLOGY "is an authentic record of the work carried out at Inter University Centre for Geospatial Information Science and Technology, University of Kerala by Ms. SRUTHI SURENDREN of Fourth Semester M.Sc. Marine Geology, Mangalore University in partial fulfilment of the requirements for the award of M.Sc. Degree in Marine Geology, during the year 2021.

Place: Mangalagangothri

Date: October 2021

Dr. Shivanna

Chairman Department of Marine Geology Mangalore University

CHAIRMAN



Place: Mangalagangotri

Date: 13-10-2021



## UNIVERSITY

## DEPARTMENT OF MARINE GEOLOGY

MANGALAGANGOTRI, KARNATAKA

## Chairman's Certificate

This is to certify that the dissertation work titled "Report on the study on spatial variation of granulometric parameters of sediments collected from the continental shelf, off Gujarat, west coast of India" carried out by Ms. SUDHEESH S.T., IV Semester, M.Sc. course in Marine Geology under the external guidance of Ms. NISHA N. V., Senior Geologist, Geological Survey of India, Marine and Coastal Survey Division, Mangalore and internal guidance of YAMUNA K., Assistant Professor, Department of Marine Geology, Mangalore University for the partial fulfilment of M.Sc. Degree in Marine Geology.

(Prof. SHIVANNA)

Chairman

Department of Marine Geology

Mangalore university

CHAIRMAN



## Mangalore

## University

Department of Marine Geology Mangalagangothri, Karnataka.

#### Chairman's Certificate

This is to certify that the dissertation work titled Assessment of geological and Human influences of Landslide in Talakaveri-Bhagamandala Region of Kodagu district, Karnataka is carried out by Mr. Suraj B M, IV Semester, M.Sc. course in Marine Geology under the guidance of Dr. B R Manjunatha, Professor, Department of Marine Geology and Dr. Ramesh H, Associate Professor, Department of Hydraulics and Ocean Engineering, National Institute of Technology, Surathkal, Karnataka for the partial fulfilment of M.Sc. Degree in Marine Geology during the year 2019-21. Further, I certify that this work or a part thereof has not been the basis for the award of any degree or diploma.

Place: Mangalagangothri

Date:

Chairman

Dept. of Marine Geology
CHAIRMAN



Department of Marine Geology Mangalagangothri, Karnataka.

## Chairman's Certificate

This is to certify that the dissertation work titled A Study on Landslides of Kodagu District is carried out by Ms. Veekshitha, IV Semester, M.Sc. course in Marine Geology under the guidance of Dr. Priya. K. Asst. Professor, Department of Marine Geology for the partial fulfilment of M.Sc. Degree in Marine Geology during the year 2019-21. Further, I certify that this work or a part thereof has not been the basis for the award of any degree or diploma.

Place: Mangalagangothri

Date:

Dept. of Marine Geology CHAIRMAN

Chairman



## Mangalore

## University

Department of Marine Geology Mangalagangothri, Karnataka.

#### Chairman's Certificate

This is to certify that the dissertation work titled *Preliminary Exploration and Characteristics of the Lime Mud Deposits in the offshore of Porbandar, Gujarat, India* is carried out by Ms. Vidya Vincent, IV Semester, M.Sc. course in Marine Geology under the guidance of Dr. B R Manjunatha, Professor, Department of Marine Geology and Mrs. Rachna Pillai, Senior Geologist of GSI, Mangalore for the partial fulfilment of M.Sc. Degree in Marine Geology during the year 2019-21. Further, I certify that this work or a part thereof has not been the basis for the award of any degree or diploma.

Place: Mangalagangothri

Date:

Chairman

Dept. of Marine Geology

CHAIRMAN