

DETERMINATION OF METALS IN MANGROVE  
SEDIMENTS AND SPECIES (*Avicennia officinalis* and  
*Sonneratia caseolaris*) TO UNDERSTAND METAL  
DISTRIBUTION AND PHYTOREMEDIATION POTENTIAL  
OF MANGROVES IN THE CHAPORA  
ESTUARY, GOA



Dissertation

Submitted to

GOA UNIVERSITY

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FOR THE DEGREE OF

**MASTER OF SCIENCE**

IN

**MARINE SCIENCE**

BY

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## CERTIFICATE

*This is to certify that this dissertation is a bonafied and an authentic record of the research carried out by **Vishal Vishram Gawas**, student of Marine Sciences, under my guidance at the School of Earth, Ocean and Atmospheric Sciences, Goa University, Goa, in the partial fulfilment of M.Sc. Marine Science Degree of the University and that no part has been presented before for any other degree or diploma in any University.*

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