

UDA

UNDERWATER DOMAIN AWARENESS

E-NEWSLETTER



3RD QUARTER AT A GLANCE

500+

Internship
Applications
Received

300+

Social Media
postings

8

UDA Digest
Articles

2

Webinars
Conducted

2 Lac+

Social Media
Reach

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WITH US



On September 27, 2024, we hosted an online workshop for Capgemini. This online session was led by our Founder and Director, Dr. (Cdr) Arnab Das, and the session focused on the “UDA Framework for Digital Transformation,” engaging over 500 employees from Capgemini.

[READ MORE](#)

On September 25, 2024, we hosted Dr. PV Rao, a maritime researcher, at our UDA Center in Pune. The MRC team explained our ongoing projects on topics such as Underwater Radiated Noise, Sediment Management, and Climate Change and our outreach initiatives. We are grateful for Dr. Rao’s valuable feedback and support.



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Dr. (Cdr) Arnab Das led a workshop with the Indian Navy at the Anti-Submarine Warfare School in Kochi, Kerala on September 21, wherein he shared insights on Underwater Domain Awareness (UDA) and its role in strategic security space and for noise management in the Indo-Pacific’s Tropical Waters.

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On September 20, we participated in the 4th Project Steering Committee meeting of the 'Indo-Norway Integrated Ocean Management and Research Initiative'. Dr. (Cdr) Arnab Das led a session on Underwater Domain Awareness (UDA), focusing on its relevance for maritime security. Key discussions included lessons from Marine Spatial Planning (MSP) in Puducherry and future directions for the project.

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On September 12, Rear Admiral Nelson D'Souza, Commandant of MILIT, visited the UDA Centre in Pune. During his visit, he toured the UDA Skilling Center and held discussions that focused on topics such as Sediment Management, Marine Spatial Planning, and sustainable growth in the Indian Ocean Region (IOR).

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Ms. Sevtap OZDOGAN, Project Manager of the GloNoise Partnership at the IMO, joined us for an engaging online session on September 5, 2024. Dr. (Cdr) Arnab Das led discussions on Underwater Radiated Noise (URN) and strategies for international cooperation, sharing insights on URN Management, Marine Spatial Planning (MSP), and the Blue Economy.

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Mr. Sergio Bryton, Former Portuguese Navy Commander, joined the MRC team for an online session on September 3.

Dr. (Cdr) Arnab Das led discussions on potential collaboration in maritime security, focusing on AIS data spoofing detection and safeguarding underwater cables. The MRC team showcased its capabilities in advancing maritime security.

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Dr. (Cdr) Arnab Das met with Mr Ashwin Shroff, Chairman, Excel Industries Private Limited, on August 23. Dr. Das spearheaded discussions on advancing the concept of Underwater Domain Awareness (UDA) from a strategic security standpoint.



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On August 28, 2024, Mr. Ashwin Shroff, Chairman of Excel Industries Ltd., launched our new Marine Spatial Planning (MSP) webpage at the UDA Center. The page features our position paper on MSP, highlighting our approach to managing ocean activities amidst increasing pressures on marine resources.

[READ MORE](#)

Shri Shyam Jagannathan, DG Shipping, GOI, launched our 'Underwater Radiated Noise (URN) Management' webpage on August 9th in Mumbai. The platform provides valuable resources for URN management in the Indian Ocean Region (IOR) and beyond.

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On August 9, 2024, Dr. (Cdr) Arnab Das presented on "Underwater Radiated Noise (URN) Management in the Indian Ocean Region" at the URN event in Mumbai. He emphasized a holistic approach of 'Outreach, Engage, and Sustain' through seminars, stakeholder engagement, and ongoing projects to manage URN effectively.

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On July 5, 2024, the Maritime Research Center (MRC) participated in the 6th East Asia Summit (EAS) Conference on Maritime Security Cooperation in Mumbai. Dr. (Cdr) Arnab Das presented on "Cooperative Adaptation—Measures against Climate Change Maritime Impacts."

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World Maritime Day 2024

Webinar on Indian Ocean Framework



World Maritime Day 2024

Webinar on Indian Ocean Framework

Underwater Domain Awareness (UDA) for Safe, Secure, and Sustainable Growth in Tropical Waters





Thursday | 26 Sep 2024 | 1600 hrs

HOSTS		ESTEEMED SPEAKERS		
 DR. (CDR.) ARNAB DAS Founder & Director, MRC	 MR. PRAFUL TALERA MRC's Adviser on Blue Economy	 AMB. ANUP K MUDGAL Member, Blue Economy Task Force at FICCI	 DR. MALINI V. SHANKAR Vice Chancellor, Indian Maritime University (Former DG Shipping)	 DR. TIM CURTIS Director, UNESCO, New Delhi Regional Office
 MR. SHRIDHAR PRABHURAMAN Deputy Director, MRC	 MS. NISHTHA VISHWAKARMA Head of Communications, MRC	 SHRI. P K SRIVASTAVA Sc. G, Ministry of Earth Sciences, Government of India	 MS. DEVLEENA BHATTACHARJEE Chief Operations Officer (COO) at ClimaCrew	 SHRI W BHARAT SINGH Director, Ministry of Environment, Forest and Climate Change, Government of India



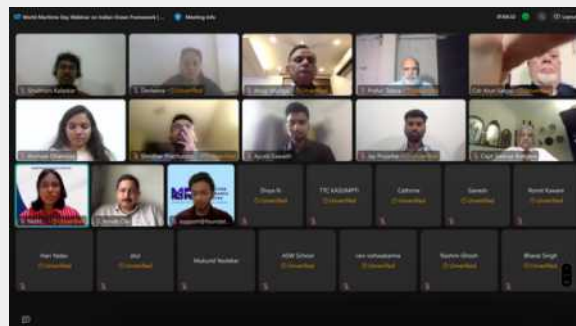


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YouTube

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UDA SUMMER INTERNSHIP 2024

Final Presentations | 6th July and 9th July 2024

MRC MARITIME RESEARCH CENTER
FOUNDATION FOR UNDERWATER DOMAIN AWARENESS

INDO-SWISS
CENTRE OF EXCELLENCE

NIR TECHNOLOGIES
DHWANI

UDA Summer Internship 2024

FINAL PRESENTATIONS

06 July and 09 July 2024 | 4:00 pm to 6:00 pm IST

ESTEEMED GUESTS		HOSTS	INTERNS			
			IIT BOMBAY		IIT MADRAS	
AMB. ANUP K MUDGAL Member, Blue Economy Task Force at FICCI	ASHWIN C. SHROFF Chairman of the board of directors of Excel Industries, Ltd.	DR. CDR. ARNAB DAS Founder & Director MRC				
			IIT KHARAGPUR			
AMAR KAUL Chief Data Officer at Barclays India	VIJAY BHOSALE Partner at Zeta Capital	MR. SHRIDHAR PRABHURAMAN MRC Deputy Director				
		MR. PRAFUL TALERA MRC Advisor on Blue Economy				

[Webex](#) | [REGISTER NOW](#) | [YouTube](#)

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A Comprehensive Overview of Projects Delivered

MRC MARITIME RESEARCH CENTER
FOUNDATION FOR UNDERWATER DOMAIN AWARENESS

Shridhar Prabhuraman

Shridhar Prabhuraman,
Deputy Director, MRC

[DAY 1- FULL VIDEO](#)

UDA Summer Internship 2024
FINAL PRESENTATIONS

06 July and 09 July 2024 | 4:00 pm to 6:00 pm IST

MRC INTERNAL TEAM

J. CATHERINE Head of Programme at MRC	A YOGA SURESH Programme Director at MRC	JAY PILLAYARAJ Resource Engineer at MRC	SHREYA WADHWANI Resource Engineer at MRC	SHUBHAM KALADKAR Resource Engineer at MRC	NISHITA JOSHIKARNAR Internship Mentor at MRC
SHILPA SHIRAM Sr. Analyst	ROHINI KAMBE Sr. Analyst	NICHITA BANGAL Sr. Analyst	SHWETA GADHIRELI Analyst & Lead for Internship	DIYTA PAI Sr. Analyst	

[DAY 2- FULL VIDEO](#)



Machine Learning Application In Underwater Channel Modelling

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Radiated Noise Generation

[READ MORE](#)




A Machine Learning Model for Estimation of Shipping Noise in the Indian Ocean Region

[READ MORE](#)




Duct-Borne Noise and Vibration onboard Maritime Vessels for Underwater Radiated Noise Management

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DID YOU KNOW?



Low-frequency noise can negatively affect marine mammal species, particularly big whales, whose auditory range overlaps with the frequency range of ship-generated noise

www.nirdhwani.in

Analysis of Underwater Radiated Noise Based On Vessel Hull Vibrations

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DID YOU KNOW?

International Maritime Organization (IMO) has imposed regulations to mitigate oceanic noise pollution, driving the need for Underwater Radiated Noise (URN) Management in the maritime industry.

www.nirdhwani.in

Underwater Radiated Noise Management.


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URN MANAGEMENT AND THE LARGER FRAMEWORK

Understanding and managing Underwater Radiated Noise (URN) is imperative for marine conservation and naval stealth. Join us as we navigate the complexities of URN to ensure a harmonious balance between maritime progress and environmental preservation.

For more information, please visit:
www.nirdhwani.in



URN Management And The Larger Framework

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Effective Detection Model For Passive SONAR Simulator

Research Publication



Key Highlights

- Sonar detection range is crucial for evaluating sonar equipment, especially in passive sonar systems.
- Passive sonar detects targets amidst ambient noise and considers transmission loss in underwater sound propagation.
- Mathematical models like the passive sonar equation, transmission loss curve, noise mapping, and ROC curves are essential.

[MORE INFO](#)

Effective Detection Model For Passive SONAR Simulator

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The ground situation of Underwater Domain Awareness (UDA) in the Indo-Pacific strategic space

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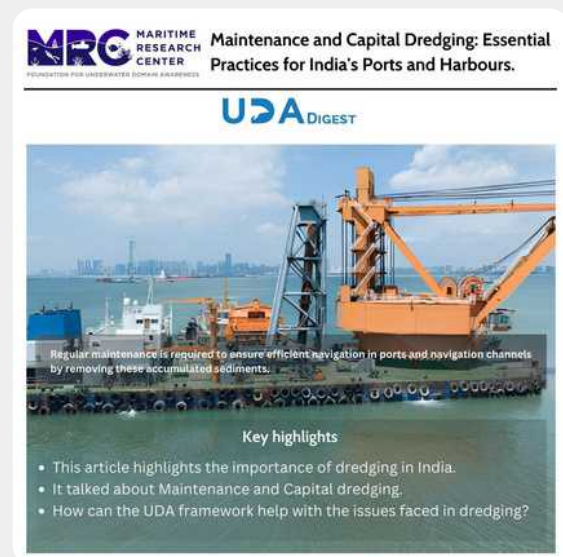
How does UDA help in Climate Change Risk Assessment? A case for the Indian Ocean Region (IOR)

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Modern Techniques in the Underwater Sediment Classification: Can Machine Learning (ML) provide another path?

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Maintenance and Capital Dredging: Essential Practices for India's Ports and Harbours

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FOUNDATION FOR UNDERWATER DOMAIN AWARENESS

Averting Disaster: Navigating the Perilous Seas of Maritime Collisions

UDA DIGEST

Key highlights

- Maritime collisions are a growing threat to lives, economies, and ecosystems.
- Human errors, navigational hazards, and adverse weather are key causes.
- These incidents often lead to oil spills and significant environmental damage.

Averting Disaster: Navigating the Perilous Seas of Maritime Collisions

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From Crisis to Solution: Tackling Water Quality Issues in India

UDA DIGEST

Key highlights

- India faces significant water pollution issues
- Poor water quality has extensive economic implications
- Effective water management requires collaborations
- Improving water quality in India involves strengthening regulations

digest.udafoundation.in

From Crisis to Solution: Tackling Water Quality Issues in India

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MRC MARITIME RESEARCH CENTER
FOUNDATION FOR UNDERWATER DOMAIN AWARENESS

UDA Digest | JULY 2024

Marine Spatial Planning (MSP) Implementation, based on Modelling & Simulation (M&S), driven by the Underwater Domain Awareness (UDA) framework

KEY HIGHLIGHTS

- UN Intergovernmental Ocean Commission (IOC) prioritizes Marine Spatial Planning (MSP) for water body management.
- MSP involves modeling and simulation (M&S)
- M&S-based MSP aims to revolutionize global water management
- Developed nations have significant MSP expertise and hardware

LEARN MORE

VISIT UDA DIGEST
<https://digest.foundationforuda.in>

Marine Spatial Planning (MSP) Implementation, based on Modelling & Simulation (M&S), driven by the Underwater Domain Awareness (UDA) framework

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ADVANCING SEDIMENT MANAGEMENT: INSIGHTS FROM COMPREHENSIVE TRANSPORT STUDIES

UDA DIGEST

Advancing Sediment Management: Insights from Comprehensive Transport Studies

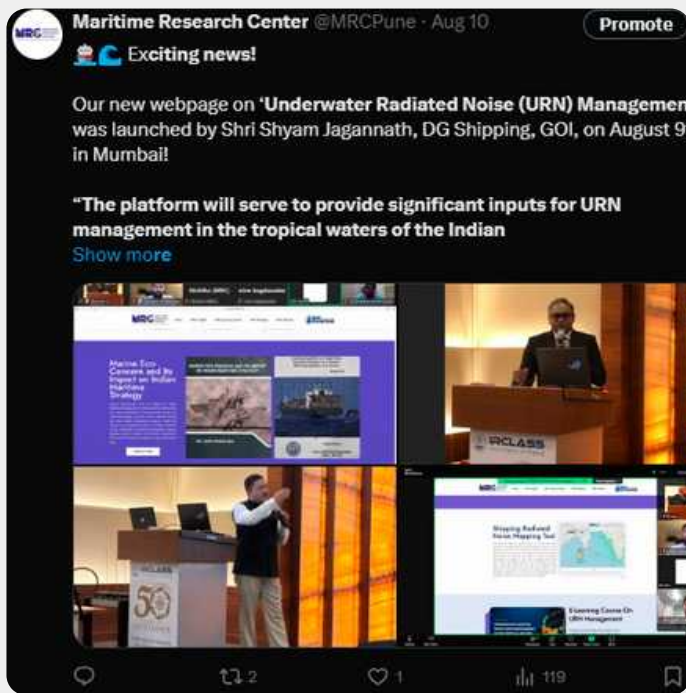
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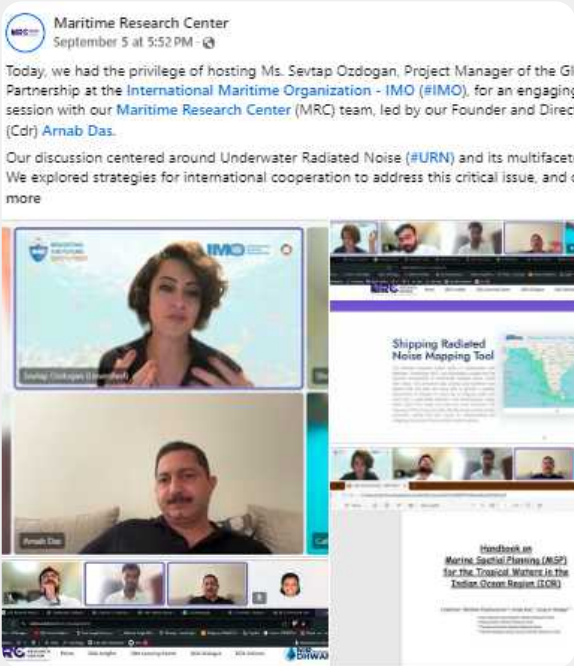
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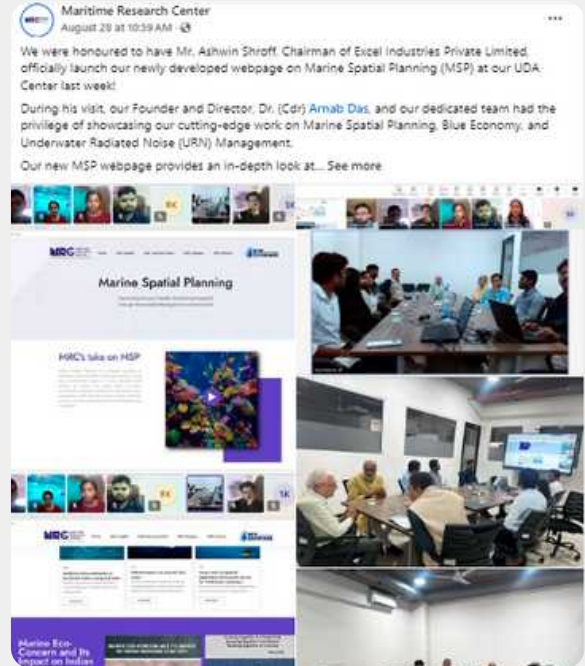
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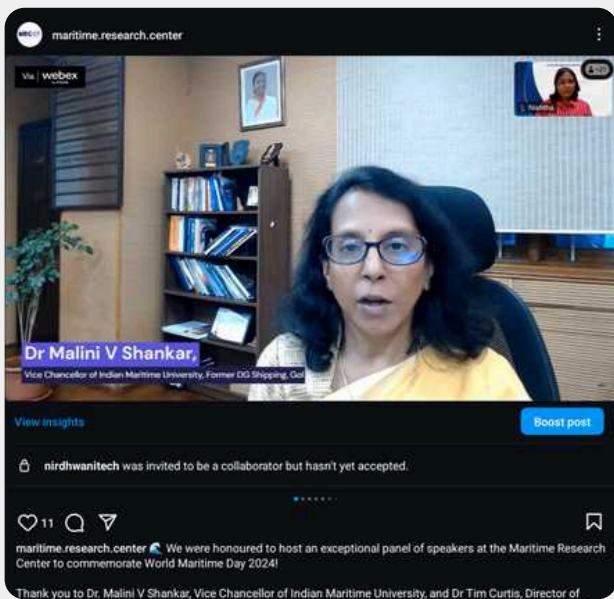
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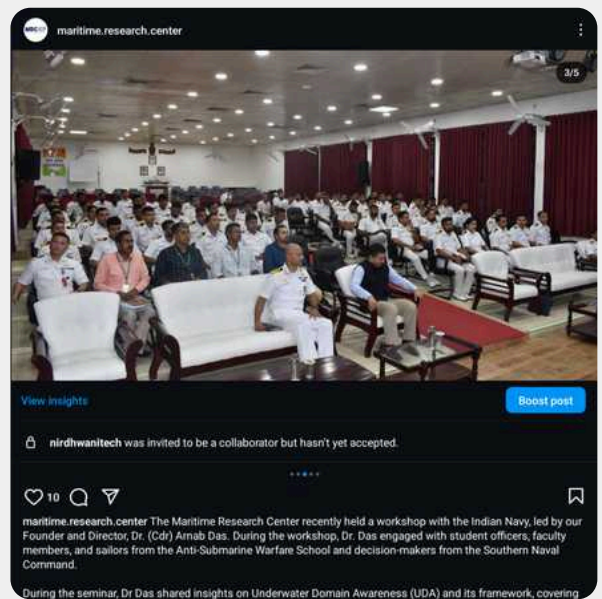
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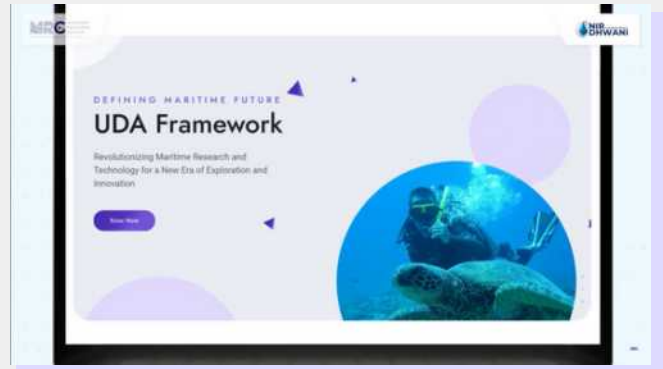


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100 Coastal Warriors

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UDA Website launch

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URN Management video

WATCH THE VIDEO



August 2024 highlights video

WATCH THE VIDEO

**S Arulanandan**

IIT Kharagpur
Sediment Management
(Focused on Dredging)

Final Presentation**Anjali Kumari**

IIT Kharagpur
Water Resource
Management

Final Presentation**Shwetha Varshini**

IIT Madras
Underwater Radiated
Noise Management

Final Presentation**Aaryan Awadh**

IIT Kharagpur
Collision Avoidance
System using AIS data

Final Presentation**Susank Chigilipalli**

IIT Kharagpur
Aquaculture
Demographic Digital
Mapping

Final Presentation

**Shradha Gajavelli**

Symbiosis School
of Liberal Arts
Maritime Security

[Final Presentation](#)**Bhavin Jain**

IIT Bombay
Sediment Classification
ML Model

[Final Presentation](#)**Akash Prasad**

IIT Bombay
Statistical Inference of
Climate Change Impact
in the IOR

[Final Presentation](#)**Pradnya Kumbhare**

IIT Bombay
Sediment Management
(Transport Study)

[Final Presentation](#)**ARGAW ALARO**[More Details](#)

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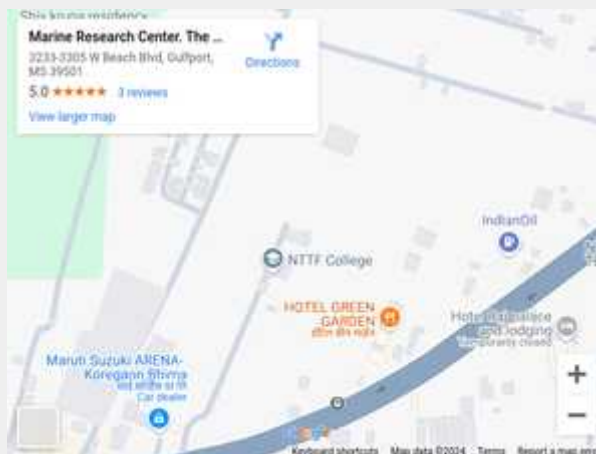
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