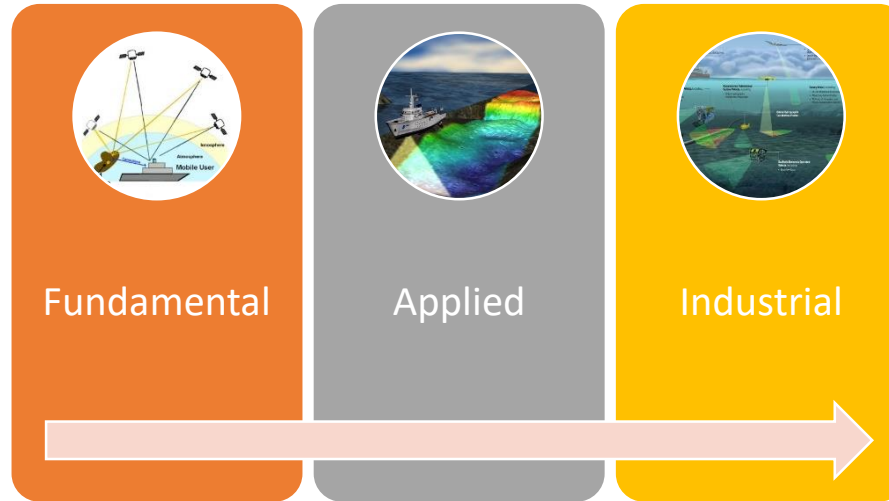


GEOMARIN LABORATORY ROAD MAP



Geomarin Lab road map can be explained as a matrix and diagram below:

Research Topic	Targets						
	2020	2021	2022	2023	2024	2025	2021 - 2026
Marine	Analysis of Low and Medium Resolution Satellite Imagery Algorithms for the Determination of Sea Surface Temperature		Analysis of NOAA-AVHRR and Modis Satellite Imagery Empirical Algorithms for the Determination of Coastal Sedimentation		Dissemination of Information System for Sea Surface Temperature Distribution as an Indicator for Fishing Ground Area Based on WebGIS		Development of Marine Technology as an Effort to Increase Fishermen's Fishing Ground
Coastal and Marine Environment	Analysis of Satellite Imagery Algorithms for the Determination of Total Suspended Sediment (TSS) and Shoreline Changes		Analysis of IKONOS and QUICKBIRD Satellite Imagery Algorithms for the Determination of Regional Growth Distribution Patterns		Creation of Information System for Regional Growth Distribution Patterns in Coastal Area Based on GIS		Dissemination of Information System for Regional Growth Distribution Patterns Based on GIS

Research Topic	Targets						
	2020	2021	2022	2023	2024	2025	2021 - 2026
Coastal and Marine Environment	Analysis of Low and Medium Resolution Satellite Imagery Algorithms for the Determination of Mangrove Biodiversity		Creation of Information System for Distribution of the Coastal Environmental Quality Based on GIS			Dissemination of Information System for Distribution of the Environmental Quality Based on GIS	
Coastal and Marine Disaster Mitigation	Analysis of Low and Medium Resolution Satellite Imagery Algorithms for the Determination of Tsunami-prone Areas		Creation of Information System for Prone Areas Based on GIS			Dissemination of Information System for Prone Areas Based on GIS	
Energy and Natural Resources of Coastal and Marine Area	Analysis of Satellite Imagery Algorithms for the Determination of Potential Mining Materials Distribution and Studies on Land Changes due to Community Mining Activities in Coastal Area		Creation of Information System for Distribution of Potential Mining Exploration and Land Changes due to Community Mining Activities Based on GIS		Dissemination of Information System for Distribution of Potential Mining Exploration and Land Changes due to Community Mining Activities Based on WebGIS		Enhancement of Potential Mining Materials Production and Land Changes due to Community Mining Activities

	Fundamental Research
	Applied Research
	Industrial Research

Research Fields

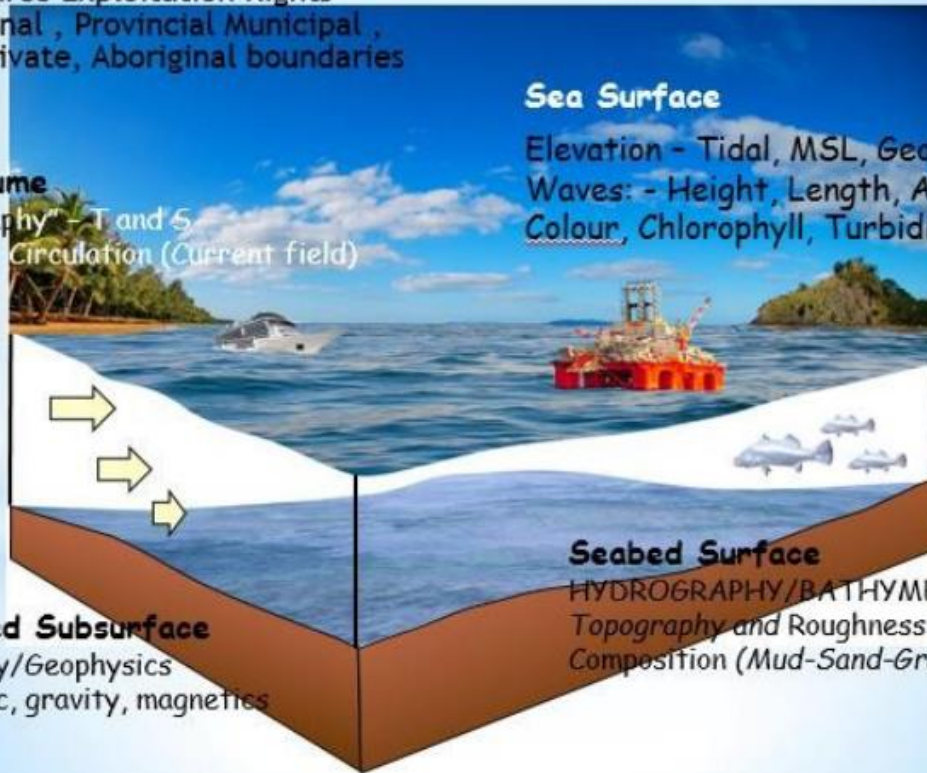


Law at the Sea UNCLOS

- Marine Parks (MPA's)
- Fishing Rights
- Resource Exploitation Rights
- National, Provincial Municipal, Private, Aboriginal boundaries

Sea Volume

"hydrography" - T and S
Fisheries Circulation (Current field)



Sea Surface

Elevation - Tidal, MSL, Geoid, Ellipsoid
Waves: - Height, Length, Azimuth
Colour, Chlorophyll, Turbidity

Seabed Surface

HYDROGRAPHY/BATHYMETRY
Topography and Roughness
Composition (Mud-Sand-Gravel-Rock)

Seabed Subsurface

Geology/Geophysics
Seismic, gravity, magnetics

Research and Community Service Profiles

Some of the **research topics** conducted by lecturers of the Geomarin Laboratory, including:

- a. Analysis of the Impact of Beach Accretion and Abrasion on the Development Direction of the Surabaya City – Gresik Coastal Area, 2020
- b. Analysis of the Condition and Potency Tidal Flood Impacts due to Sea Level Rise in the Coastal Area of the Surabaya City, 2019
- c. Evaluation of Land Cover in Coastal and Marine Areas in the Waters of Lamong Bay due to Sidoarjo Mud Disposal, 2019
- d. Evaluation of Land Cover in Coastal and Marine Areas in the Waters of Lamong Bay due to Sidoarjo Mud Disposal, 2018

Some of **community service activities** carried out by Geomarin Laboratory, including:

- a. Provision of Basic Marine Data for the Development of Marine and Fisheries Potentials in the Campurejo Village, Panceng District, Gresik Regency, 2020
- b. Training on a Creating Land Database of Land Acquisition Results Outside the Map of the Affected Areas of Sidoarjo Mud, 2019
- c. Inventory of the Potential of Village Tourism as an Effort to Improve Community Welfare in the Dalegan Coastal Area Gresik East Java, 2018