

A **PHD** JOURNEY THROUGH **BRIDGING** THE BLACK SEA

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This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No:101000240.

BRIDGE-BS PHD PROGRAMME



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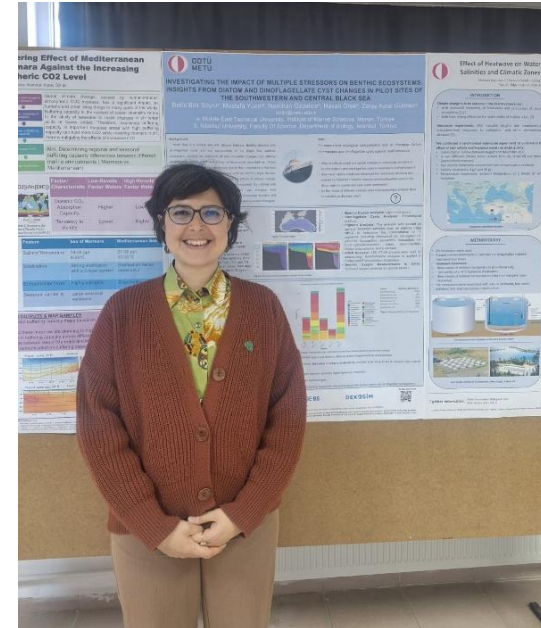
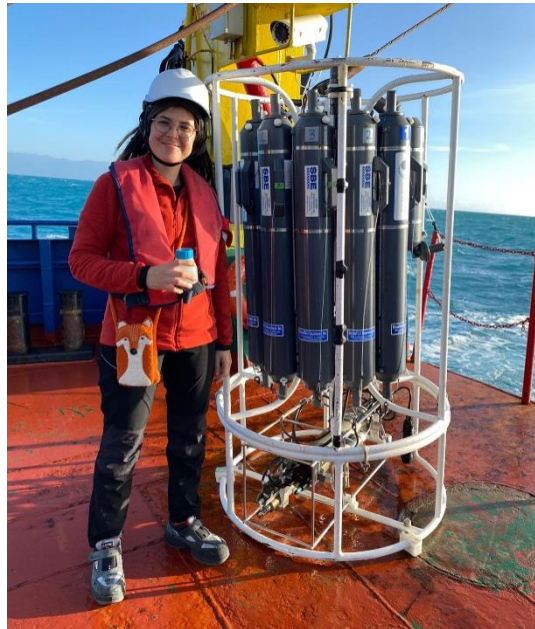
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- Molecular Biologist with 7 years of experience
- Doctoral Researcher in Marine Biology at METU- IMS and BRIDGE- BS Student

The Impact of Multiple Stressors on Benthic Ecosystems: Insights from **Diatom and Dinoflagellate Cyst Changes** in Pilot Sites of the Southwestern and Central **Black Sea**

Traditional Taxonomy



Environmental DNA

Gymnodinium catenatum

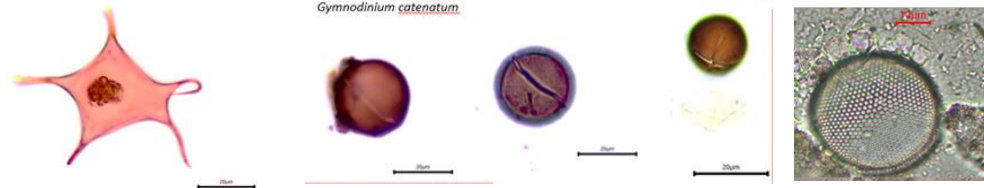


Figure. Observed diatoms and dinoflagellate cysts in the samples identified using traditional light microscopy from the Black Sea pilot sites.

Class

Bacteriota	Mammellophycyceae
Bifidobacteria	Methylophycyceae
Chloroflexi	Nitrospirophycyceae
Chrysiophycyceae	Oligotrichophycyceae
Ciliata	Pavlovophycyceae
Coccolithophycyceae	Peridiniophycyceae
Coxioidiophycyceae	Phaeophycyceae
Cryptophycyceae	Protistomata
Dicystidophycyceae	Pyramimonadophycyceae
Dinophycyceae	Spirotrichea
Labidinihutea	Syndinophycyceae
Litostomata	

Genus	Relative_Abundance
<i>Karlodinium sp.</i>	20.64
<i>Gymnodinium sp.</i>	1.82
<i>Prorocentrum sp.</i>	0.71
<i>Alexandrium sp.</i>	0.42
<i>Pseudo-nitzschia sp.</i>	0.02
<i>Aureococcus sp.</i>	0.01

Figure. Phytoplankton group abundances at one of the pilot site and detected potential **Harmful Algal Bloom (HAB)** species in the samples based on bioinformatics analysis.

Collaboration with Leading Experts from Different Countries

My Advisor: Prof. Mustafa Yücel

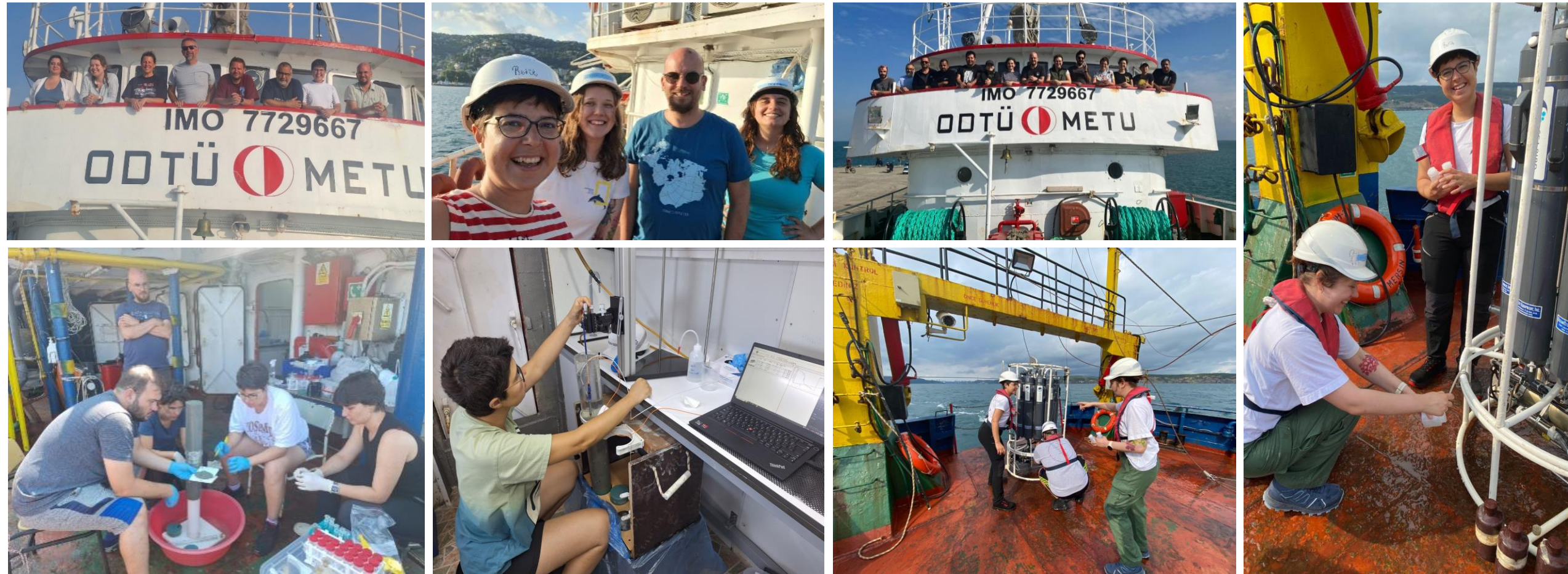
Co-Advisor in BRIDGE-BS: Dr. Nina Dzhembekova

DNA Wet Lab Support: Dr. Arzu Karahan

Dinoflagellate Taxonomy: Prof. Neslihan Özdelice



Together Across the Black Sea with National and International Colleagues



Summer, 2023 & 2024 BRIDGE-BS Scientific Expeditions in Sinop and Southwestern Region of Black Sea

ACTIVITIES: SUMMER SCHOOL, WINTER SCHOOL, GENERAL ASSEMBLY



Winter School: Science for Policy towards a Sustainable Blue Economy in the Black Sea, Athens, GREECE 🇬🇷



2nd BRIDGE-BS Summer School: Blue Biotechnology and Sustainable Blue Economy Tbilisi, GEORGIA 🇬🇪



BRIDGE-BS Work Package 5, Science Meeting Varna, BULGARIA 🇧🇬

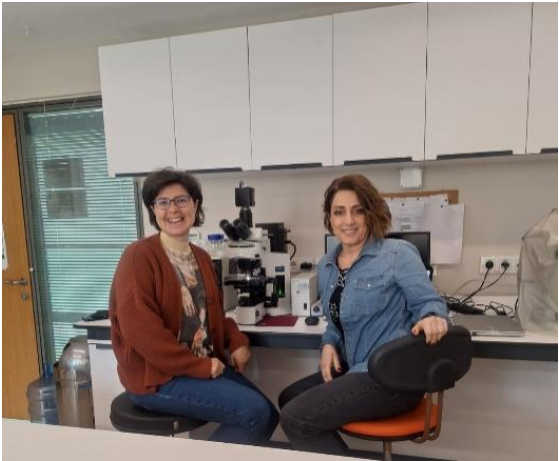


BRIDGE-BS General Assembly Mersin, TÜRKİYE 🇹🇷

CHALLENGES		STRATEGIES		ACHIEVEMENTS
Extensive Time Bound Workload	»»»	Developed New Critical Time Management Skills that Strengthened Teamwork	»»»	Completed Multiple Tasks, Including Contribution to Tech Deliverables and Organisational Duties
Limited Expertise in Bioinformatics	»»»	Participated in Bridge-BS Supported Workshops, co-advicing Support	»»»	Implemented Multiple Samples that Produced Results for My Thesis
Limited Expertise in Dinocysts Taxonomy	»»»	Engaged with Leading Experts in The Field	»»»	Enhanced Knowledge and Application to Benthic Samples



BRIDGE-BS eDNA Webinar

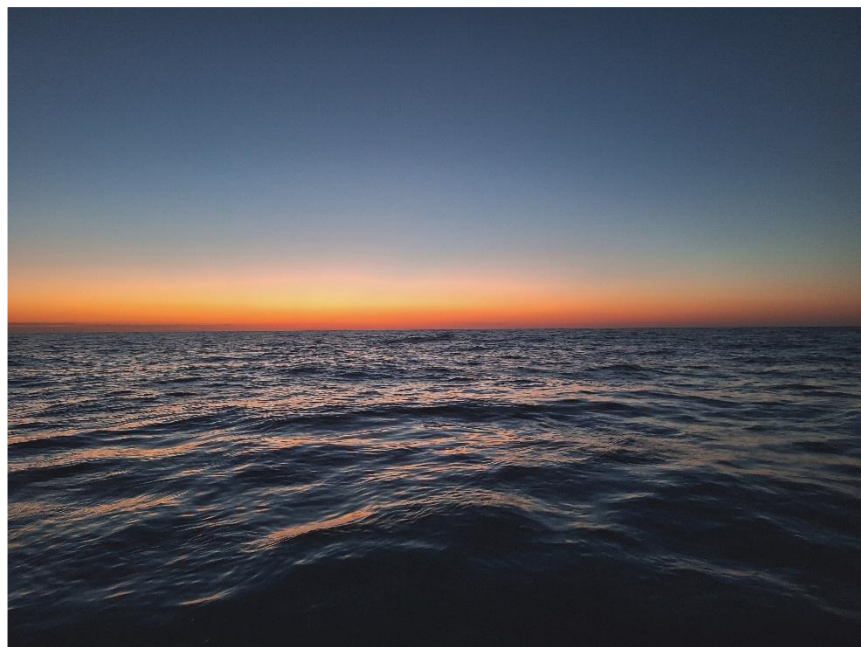


Colloboration with IÜ Phytoplankton Laboratory



BRIDGE-BS

Together for the Future of the Black Sea



A sunset from the expedition.



THANK YOU!