





ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

Blue Growth Initiative for Research and Innovation in the Mediterranean Institute of Marine Sciences

Assoc. Prof. Baris Salihoglu
Director

baris@ims.metu.edu.tr

Assoc. Prof. Mustafa Yucel
myucel@ims.metu.edu.tr

Blue Growth Related National Strategic Plans



- **The Ministry of Energy and Natural Resources**

- Strategic plan 2014-2018
- Increasing green energy capacity from solar, wind and wave energy.
- Exploration of new marine hydrocarbon resources in Turkish and international waters
- Generating new geological, geophysical and oceanographic dataset for natural hazard, climate change, coastal protection researches

- **The Ministry of Transport, Maritime Affairs and Communication**

- Strategic plan 2017-2021
- Developing action plans for short and long term maritime transport
- Contributing to the development of the maritime affairs
- Developing combined transport
- Developing maritime security strategies



Blue Growth Related National Strategic Plans

- **The Ministry of Environment and Urbanisation**

- Strategic Plan 2013-2017
- Preparing marine spatial plans
- Implementation of Integrated Coastal Zone Management
- Preparing action plans to decrease the marine pollutants including marine litter
- Creating a water quality monitoring action plan from watershed to deep sea



- **The Ministry of Food, Agriculture and Livestock**

- Strategic Plan 2013-2017
- Creating a Vessel Monitoring System
- Controlling the quality of water sources for aquaculture
- Common Fisheries Policy (CFP)



- **The Ministry of Forestry and Water Affairs**

- Strategic plan 2017-2021
- Creating a national water information system to protect the water res
- Monitoring the quality of water to comply the related EU directives.



Blue Growth Related National Strategic Plans



The Ministry of Development

- Responsible for national infrastructure investment
- Marine Ecosystem and Climate Research Centre (DEKOSİM) – 2012
- The Turkish National Marine Research Strategy (TUDAS) – 2014
- Evaluation of the Marine Research Capacity in Turkey – 2017
- DEKOSİM2 - 2019



Blue Growth Related National Strategic Plans

Middle East Technical University - Institute of Marine Sciences

Center for Marine Ecosystems and Climate Research

Novel Labs - Networked Observation – Time Series

(DEKOSIM) Project (2012-2018) – DEKOSIM2 Project 2019-2023

- Supported by the Turkish Government
 - New Observing Systems: Mooring, Argo, Scanfsh, Gliders, Time Series, ...
 - New Laboratory dedicated to Marine Sciences
 - Cruises in Eastern Mediterranean and Black Sea



Blue Growth Related National Strategic Plans

Other Strategic Plans

- National Biological Diversity Strategy and Action Plan (2008-2017) of the 9th Developmental Plan
- Turkish Climate Change Strategy (2010-2023)
- National Sciences and Technology Policy (2003-2023): Developing new technologies for sustainable water management resources, and for marine pollution
- National Basin Management Strategy (2014-2023)
- National Strategy for Marine and Coastal Protected Areas (2014-draft)
- United Nations Decade on Biodiversity - Aichi Targets agreement that contributes to the implementation of the Strategic Plan for Biodiversity for the period 2011-2020.
- Marine ecosystem research is also a strategic field of activity for Middle East Technical University along with renewable energy and sustainability (jointly entitled I-REES, <http://yesap.metu.edu.tr/about>).
- Ministry of Development, National Strategy For Regional Development (2014-2023)



European challenges:

- Adapt to and mitigate climate change
- Ensure food- and energy-security
- Preserve biodiversity
- Promote superior alternatives to our fossil-based economies
- Foster economic growth and social prosperity.



Alignment with BLUEMED themes and priorities

Theme 1: Key enabling knowledge for the Mediterranean

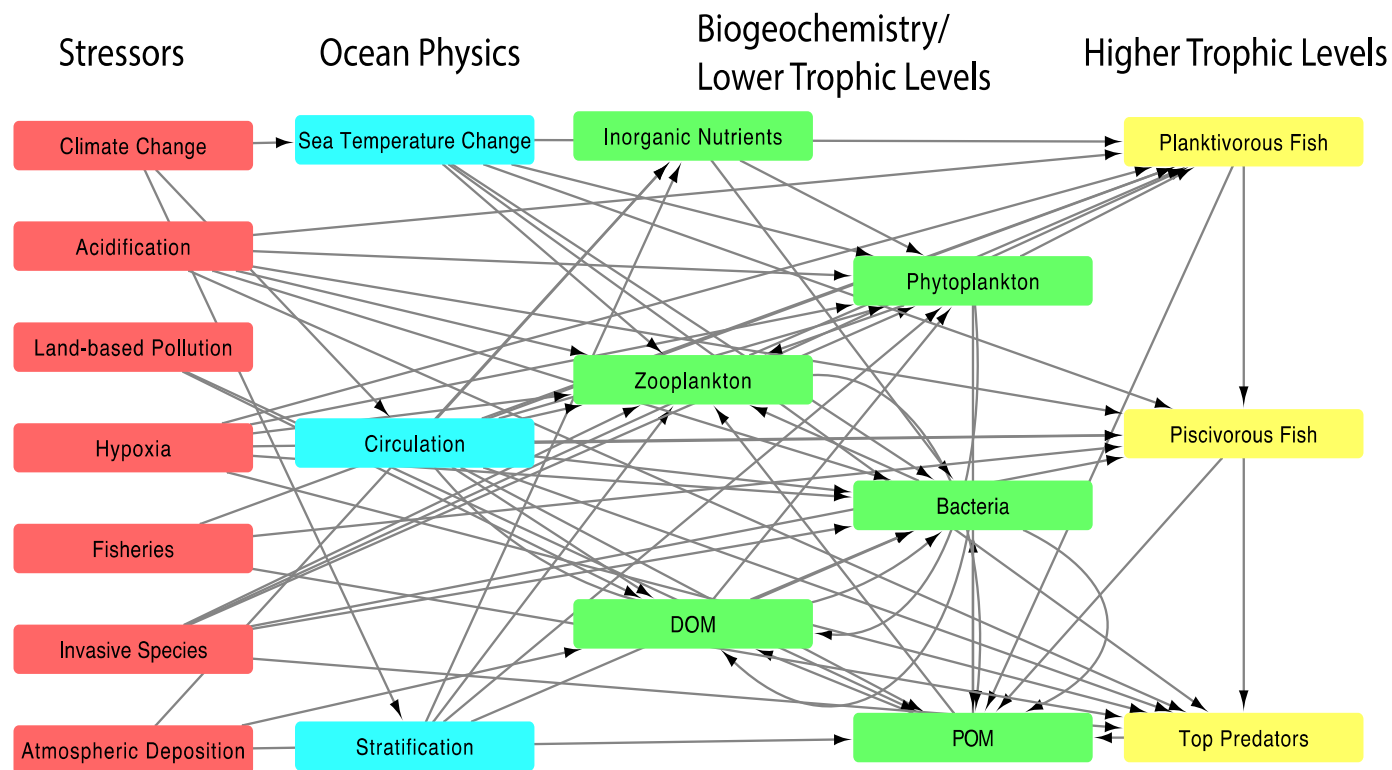
ACTIONS and PRIORITIES

- A coordinated network of marine institutes, universities, stations, observatories and companies
- Assess inputs from atmosphere-land-sea and anthropogenic pressures leading to change in marine and coastal ecosystems
- Understanding environmental conditions conducive to invasions, effects on habitats, identifying conditions for ecological resilience
- Assessment of litter, micro- nano-pollutants
- Identifying/disentangling the effect of multiple stressors
- Assessment of climate related risks
- Synoptic surveys/observations
- Long term monitoring



Stressors on ecosystems at the Mediterranean system level

Human activities and natural variability result in a range of stressors that may interact and have greater impacts than expected, compounding direct and indirect effects on different levels of the ecosystems



Alignment with BlueMed themes and priorities

Theme 2: Key sectoral enablers in the Mediterranean

New Regional Vision for the Mediterranean

Development of products with high economic (along the whole value chains) and by guaranteeing environmental benefits

Selling Products

- Sustainable and cost-effective fishing and aquaculture practices
- Early warning systems for water quality
- Energy efficient maritime routes
- Innovative monitoring instruments
- Marine spatial plans
- Marine energy generation devices
- Cost-efficient biodiesel production methods
- Sustainable domestic and industrial discharge policies
- Coastal construction policies
- Cost effective harbour dredging
- Early warning systems
- Sustainable domestic and industrial, domestic discharge and litter
- Laboratory services
- Required MSFD related reports for Turkey
- Environmental awareness education

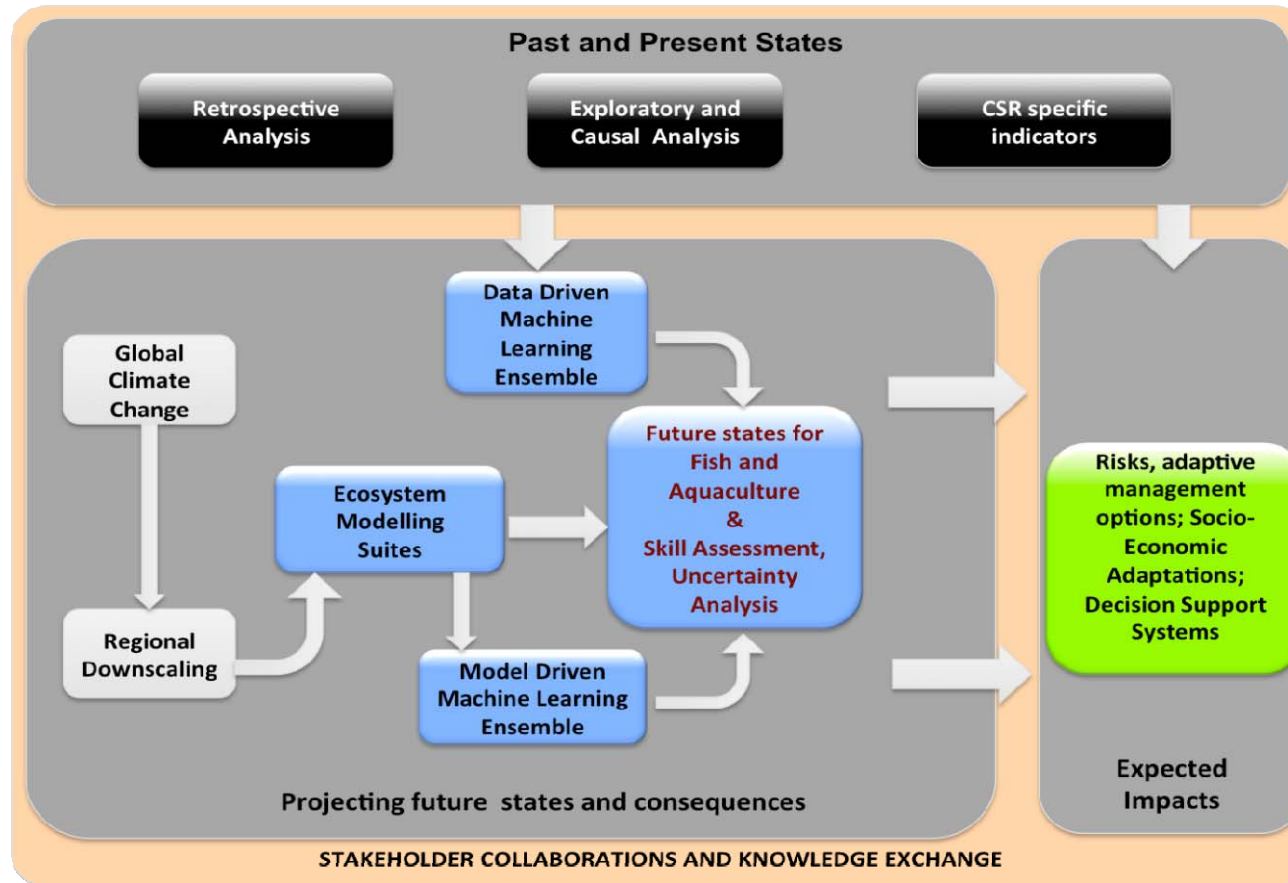
Decision Support Unit

Technology and Knowledge Transfer Bridge

Ocean sectors

Ship building and repair
Marine business services
Capture fisheries
Ports
Maritime and coastal tourism
Marine R&D and education
Offshore oil and gas
Seafood processing
Shipping
Marine manufacturing
Dredging
Marine construction
High-tech marine products and services
Ocean renewable energy
Marine aquaculture
Marine and seabed mining
Maritime safety and surveillance
Ultra-deep water oil and gas
Offshore wind energy
Marine biotechnology

New holistic approaches



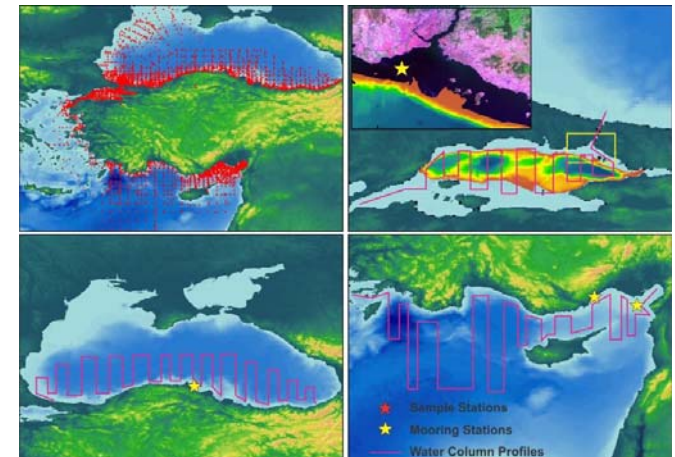
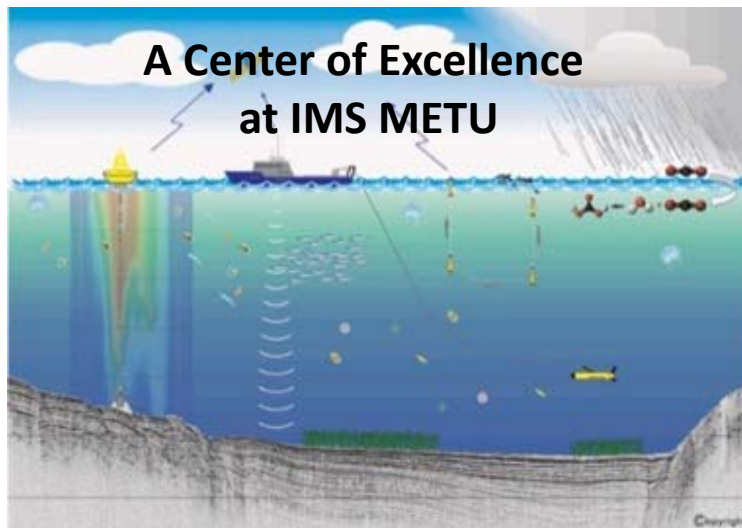
The SEAFACETS' two complementary holistic approaches to generating knowledge base for risk assessment and model prediction and decision support framework



Theme 3: Enabling technology and capacity creation for the Mediterranean

Innovative human potential and infrastructure required

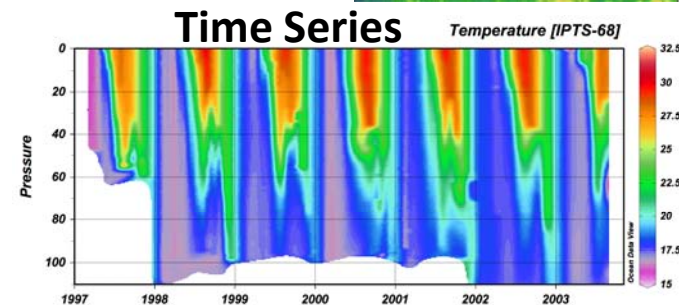
Strong regional expertise in the Eastern Mediterranean, IMS METU and DEU that started POEM projects and FP programmes)



Innovative Oceanographic Equipment



Scanfish



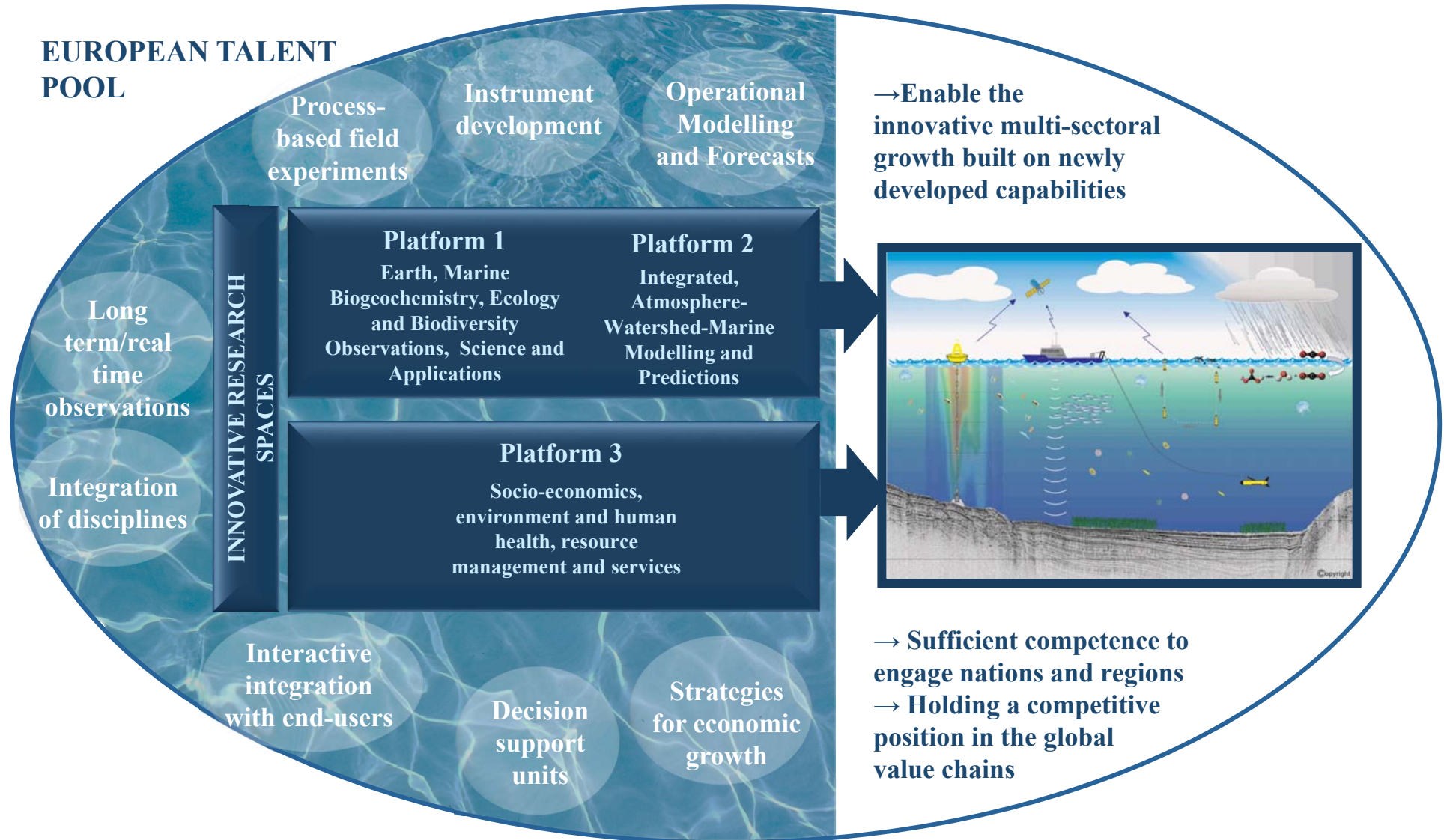
Specific partnership actions that bring together all stakeholders in the field such as a Technology Platform can be an effective way.

Eastern Med countries should be well informed and included as part of the initiative otherwise plans and achievements be partial and regional.



Regional approach for the Eastern Mediterranean towards partnership

Connecting knowledge to provide real services and that address citizen's needs



National, regional and EU level strategies
BLUE GROWTH, CFP, WFD, MSFD, MSP, IMS, TUDAS

The Turkish Eastern Mediterranean Region Potential for Blue Growth

OPPORTUNITIES

- Existing sectors such as Tourism, Maritime, Agriculture
- Wide shelf area and deep sea area, potential for new energy, mineral and deep sea fisheries resources
- Existing Key knowledge base, Human capacity and institutions
- National plans for a logistical hub, superimposed by global trends such as 'belt and road' project

CHALLENGES

- Multiple stressors: increasing temperatures, pollution and lessepsian migration.
- Changing climate is influencing the hydrological systems as well as the formation of dense waters
- Lack of a science based integrated management plan for important sectors such as tourism, aquaculture, energy and transportation in the region.

WAY FORWARD:

Blue Valley: A proposal for Centre of Blue Growth in Mersin, Turkey

- *Facilitate stakeholder and scientist exchange*
- *Coordinate marine spatial planning in the region*
- *Generate science-based products and solutions*
- *New high value products*
- *(e.g., pharmaceuticals, enzymes)*



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