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# Advancing Blue Economy as enabler of Sustainable Development: UNIDO approach and experiences

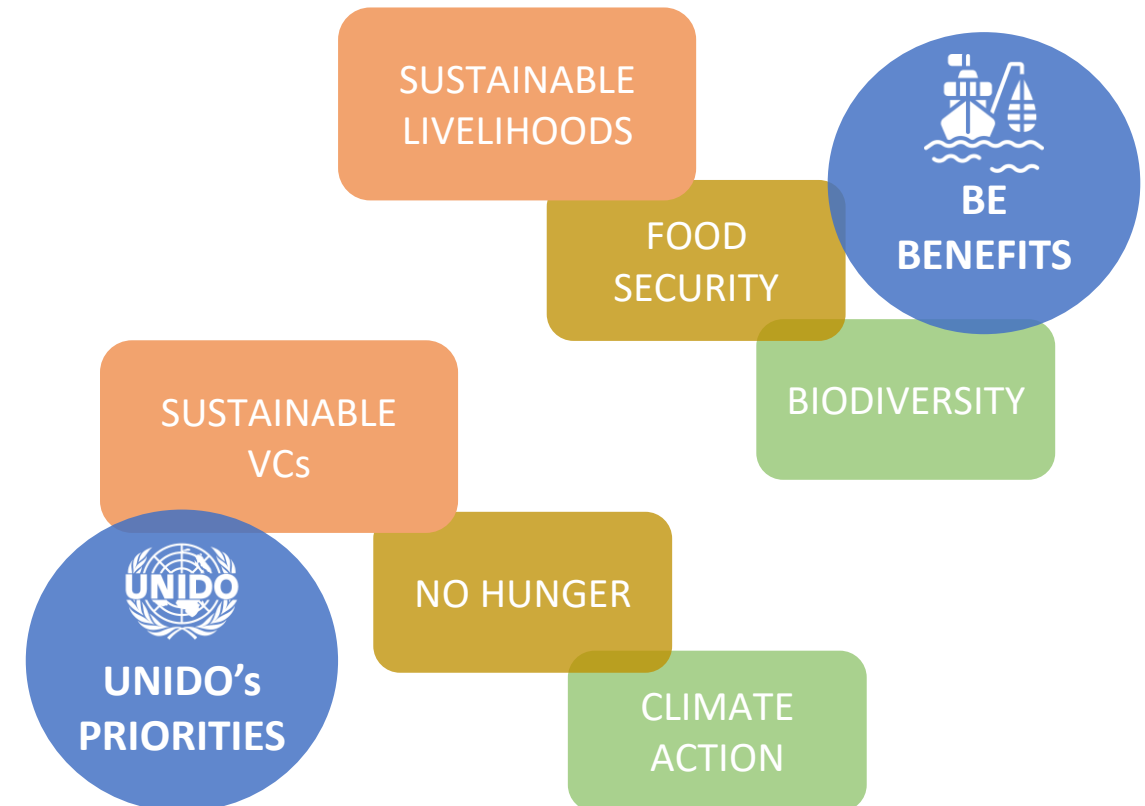
Alejandro Rivera Rojas

World Seafood Congress, 24<sup>th</sup> September 2023



## UNIDO's mandate: Inclusive and Sustainable Industrial Development (ISID)

- The Blue Economy (BE) is an important enabler of sustainable development and an increasingly **strategic priority** for UNIDO.
- UNIDO's mandate to promote ISID, alongside its vast experience and its well-established **systematic approach to value chain development for creating sustainable livelihoods**, provides an all-around assistance mechanism that has proved to be of great value to Blue Economy interventions.
- The establishment of a **dedicated, multidisciplinary in-house task force led by TCS/SME** will guide and upscale the contribution of the Organization to the BE through strategic positioning and a UNIDO-wide strategy development.





## Blue Economy: in the quest for a common definition



“A marine-based economy that:

- Provides social and economic benefits for current and future generations
- Restores, protects, and maintains the diversity, productivity, resilience, core functions, and intrinsic value of marine ecosystems
- Is based on clean technologies, renewable energy, and circular material flows
- Is governed by public and private processes that are inclusive, well-informed, cross-sectoral [...]



WORLD BANK GROUP

“Sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem”

“A range of economic sectors and related policies that together determine whether the use of ocean resources is sustainable”

“Use of the sea and its resources for sustainable economic development”

“All economic activities related to oceans, seas and coasts, covering a wide range of interlinked established and emerging sectors”



European Commission

...but still no widely accepted definition of the term



## Blue Economy: traditional and emerging industries



Sectors	Established industries	Emerging industries	Innovative trends	Drivers for future growth
<b>Marine food</b>	Fisheries	Sustainable fisheries	Food processing industry	Food security
	Traditional aquaculture	Freshwater aquaculture and mariculture	Coastal and shore farming of fish, crustaceans, aquatic plants, etc.	Demand for protein and fish consumption
<b>Marine biotechnology</b>		Biotechnology for healthcare products	Functional food	R&D in healthcare and industry
<b>Energy</b>	Offshore wind energy	Tidal and wave energy	Ocean thermal energy conversion	Demand for alternative energy
<b>Transport and trade</b>	Shipping, port infrastructure and services	E-logistics and sustainable shipbuilding	Digitization, automation and environmental technologies	Changes in logistics requirements and regulations
<b>Tourism and recreation</b>	Tourism and coastal development	Ecotourism and authentic experiences		Growth of tourism and coastal urbanization

## Blue Economy: a complex system of interlinked sectors

- Traditional sectors like sustainable fisheries and aquaculture represent UNIDO's major areas for potential contribution to the BE
- Emerging industries include marine biotechnology and pharmaceuticals, ocean renewable energy, ecotourism, sustainable shipbuilding...
- The BE is a complex system that encompasses many industries so, to maximize its impact, cross-sectoral linkages have to be stimulated





## The sustainable development of the BE requires transformational change



- The three aspects of development must be mutually reinforcing, but this is not always given
- Multiple factors affect the development of the sector; therefore isolated and narrow interventions will have limited impact if not within a wider framework of change
- Multiple actors hold stake, and their ownership and coordinated action is key in the change process
- Local to global geographical scales are highly interlinked
- Adaptation to megatrends and external shocks is key as they influence the state of ecosystems, societies and markets expected and unexpected ways



## Fisheries and Aquaculture: A driver for Sustainable Development of Blue Economy

Income generation

Sustainable livelihoods

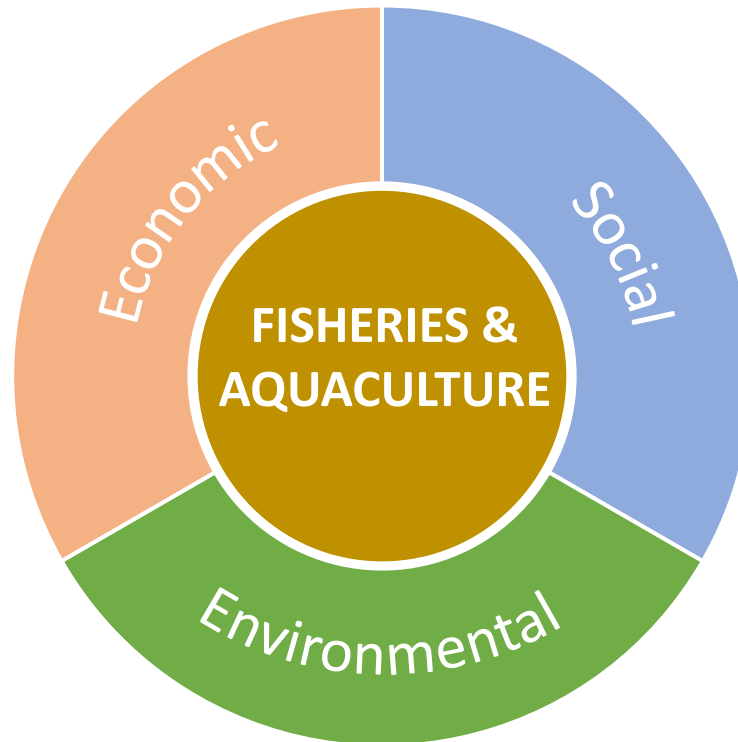
Investment

Value addition

Ecosystem preservation/restoration

Climate change adaption/mitigation

Sustainability of fisheries resources



Community empowerment

Women empowerment

Poverty reduction

Food security and nutrition

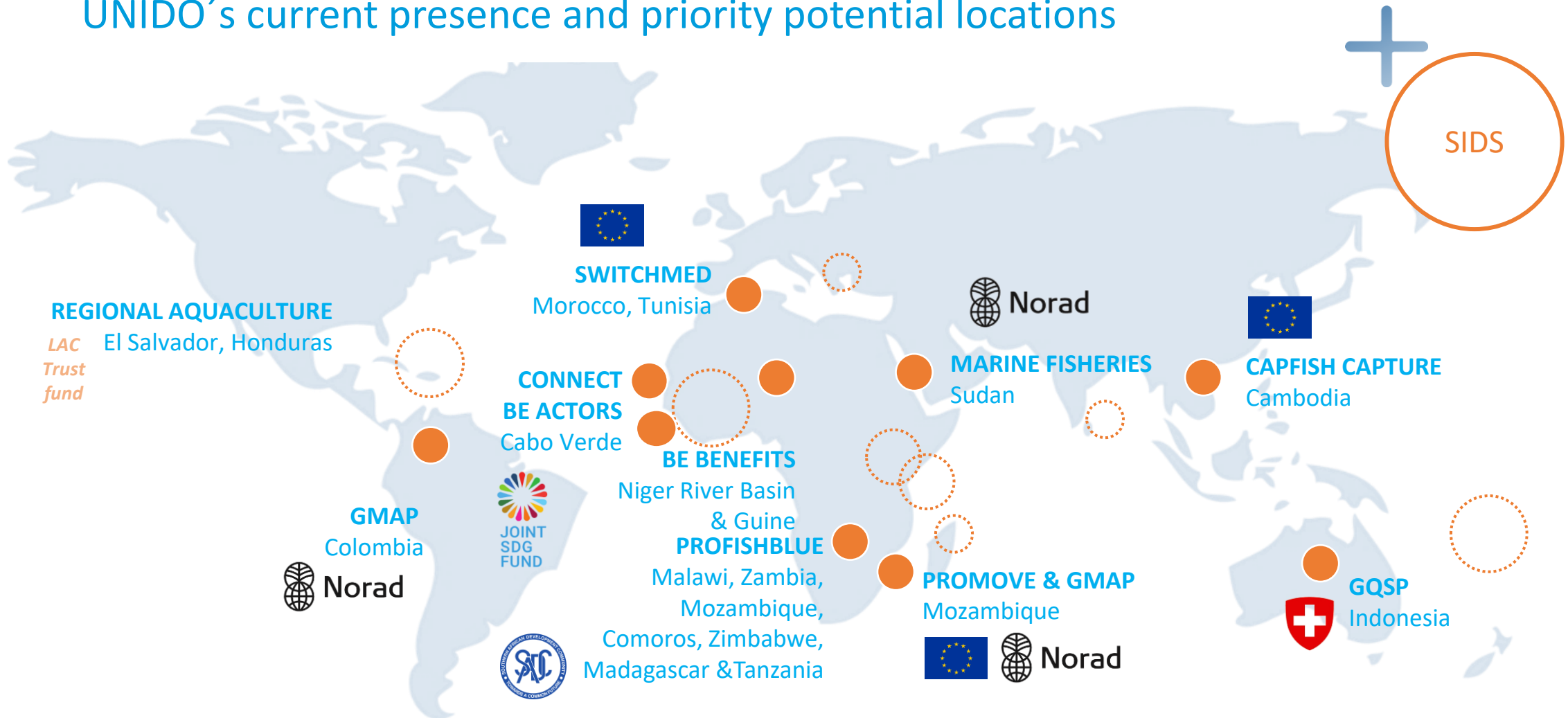
Job creation

Reduce food waste and loss

Energy efficiency



## UNIDO's current presence and priority potential locations







## The impact of the Blue Economy: SMART-Fish (2014-2019) and GQSP phase 1 (2019 – today)



EUR 16.2 million  
Investment by public  
and private sector



EUR 10.9 million benefits  
due to new technologies  
and practices



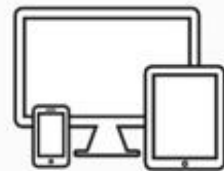
+450 MSMEs adopted  
enhanced processing  
technologies and certified



+2000 farmers adopted  
new farming  
technologies



Tropical Seaweed  
Innovation Network  
[www.seaweednetwork.id](http://www.seaweednetwork.id)



25 digital  
platforms  
established

Increased  
contribution of the  
seaweed sector to  
economic  
development,  
climate change  
adaption and  
mitigation

UNIDO's expertise  
has led to the co-  
chairing of the  
National Blue  
Agenda Actions  
Partnership  
and leading of the  
Blue Food pillar





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- 🌀 Demonstrate the business case for resource efficiency in the fish/seafood processing industry using the UNIDO TEST methodology;
- 🌀 Promote better valorization of fish and seafood value chain into by-products, including the use of innovative technologies;
- 🌀 Share best practices and solutions, promoting business partnerships and investments to improve the environmental and economic performance of the aquaculture industry;
- 🌀 Explore the potential for establishing circular business models to up-cycle fishing equipment (both for fishing and aquaculture) to reduce marine plastic pollution.



# Transforming Cambodia's Fisheries Sector

## Official Control Systems

Support the Competent Authority for delivering an efficient food safety official control system in post-harvest fisheries, harmonizing Cambodian products with food safety standards and international market requirements. This could trigger the expansion of formal exports to regional and international markets including the EU.



## Upgrading Value Chain Operations

Support to post-harvest fisheries will focus on innovative and motivated operators in the value chain. This will integrate all chains of suppliers and services to ensure food safety compliance throughout the value chains to enhance business competitiveness.



# CAPFish CAPTURE



## R&D and Innovation

Support innovations in fishery products and processing technology through networking of institutes, improving research capacities and skills development to attract more entrepreneurs and investments into the fisheries sector.





## Improving Sustainability of Guinea-Bissau Artisanal Fishery

- Promotion of sustainable fishing techniques, resource management, and enhancement of the fishery value chain
- Empowerment of local communities and improvement of livelihoods
- Improvement of economic resilience





## Enhancing Sustainable Industries in the Niger River Basin: UNIDO's TEST Initiative

- Technology transfer and improvement of environmental and social responsibility of industries
- Enhancement of quality, safety, and sustainability of industrial processes and products within the Niger Basin region
- Fostering innovation through a reliable framework of for research, development and introduction of new technologies
- Facilitation of trade and market access



## Enhancing Sustainable Industries in the Niger River Basin: UNIDO's Test Niger Initiative

- ✓ Technology transfer and improvement of environmental and social responsibility of industries
- ✓ Enhancement of quality, safety, and sustainability of industrial processes and products within the Niger Basin region
- ✓ Fostering innovation through a reliable framework of for research, development and introduction of new technologies
- ✓ Facilitation of trade and market access





## UNIDO's potential contribution to the domains of the BE

### Public Sector Interventions

- Strengthening national and regional quality infrastructure institutions and services
- Integrating a demand-driven approach throughout the VC to ensure sustainability
- Boosting digitalization as part of the wider industrialization strategy

### Inclusive Skills & Job Creation

- Upgrading national training infrastructure to cater to the needs of modern industry
- Promoting inclusive entrepreneurship development and maximizing cross-sectoral linkages
- Building capacities of local communities to ensure their participation in fisheries/aquaculture VC

### Private Sector Development

- Building an enabling business environment (incl. business support organizations)
- Improving private sector competitiveness and capacity to comply with domestic and international market requirements
- Strengthening collective efficiency of VC actors and reaping economies of scale

### Investment & Techn. Transfer

- Improving networking opportunities (UNIDO ITPO) and brokering partnerships
- Facilitating investment (incl. impact investment), sustainable business linkages and access to finance
- Promoting (clean) technology transfer and building local absorption capacities

### Sustainable & Circular Economy

- Supporting industrial symbiosis and resource efficiency
- Enabling the adoption of circular business models and better valorisation of by-products
- Introducing innovative and sustainable energy solutions for BE industrial sectors

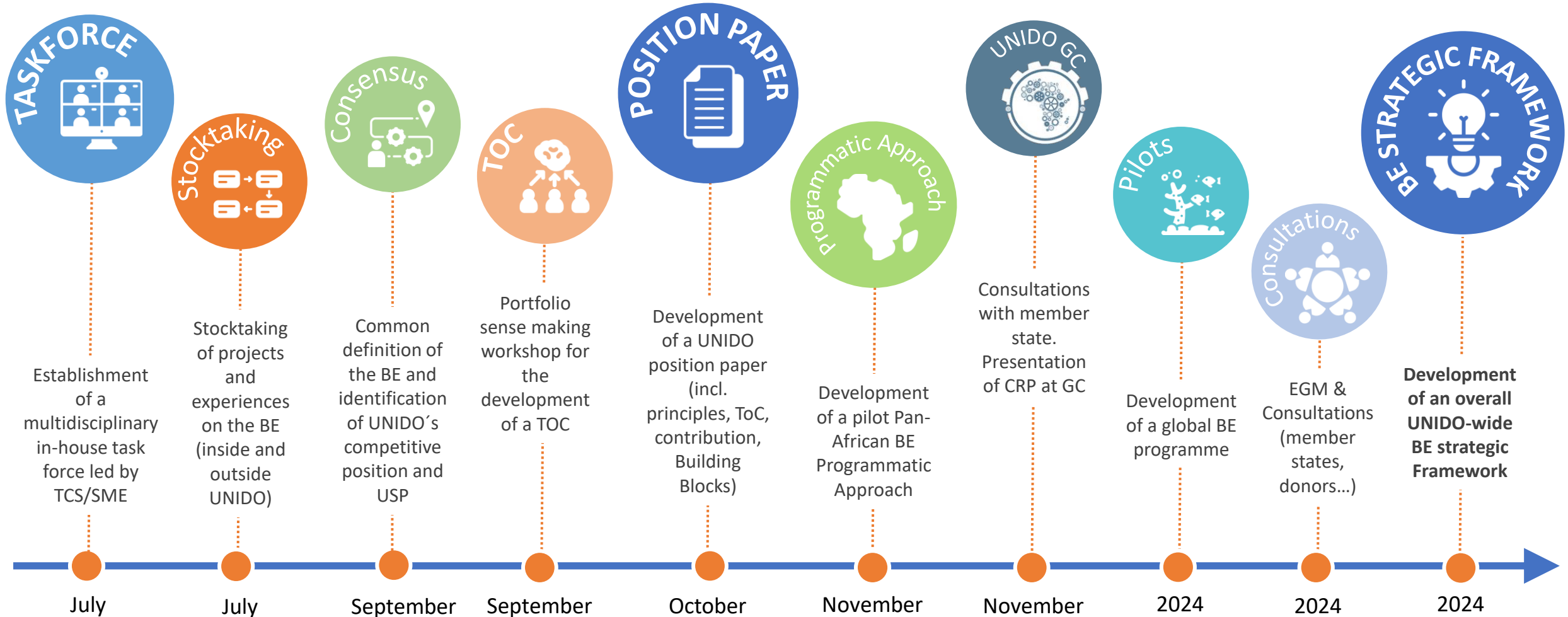
### Awareness & Culture of Quality

- Raising awareness within the industry and creating a culture of quality
- Promoting the use of voluntary sustainability standards and certification schemes
- Supporting policy development (e.g. quality policy, laboratory policy, industrial policy), and providing advice for informed policy decisions

And much more...



## Towards the development of a wide strategy for the Blue Economy







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**THANK YOU!**

