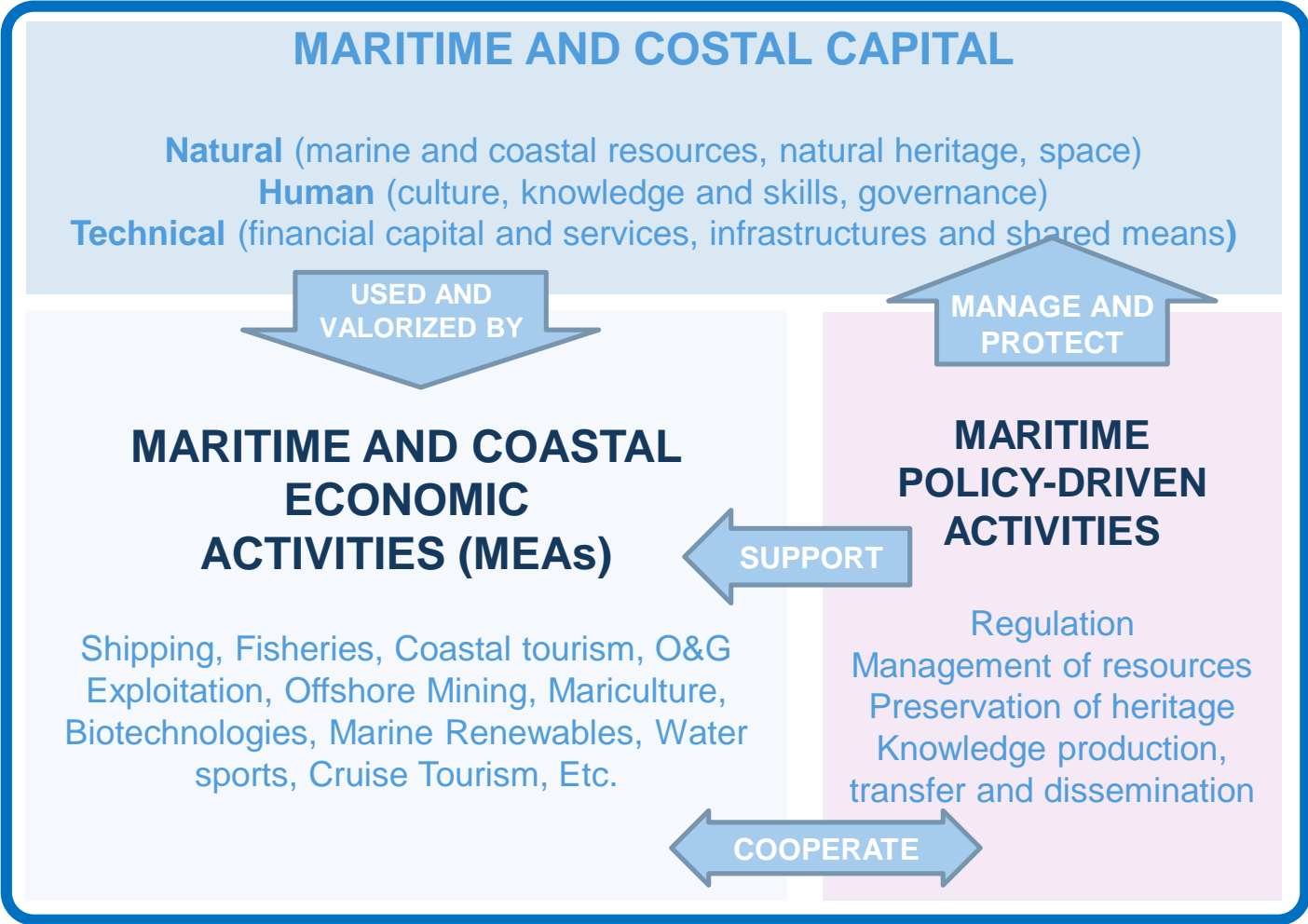

National Workshop Bulgaria

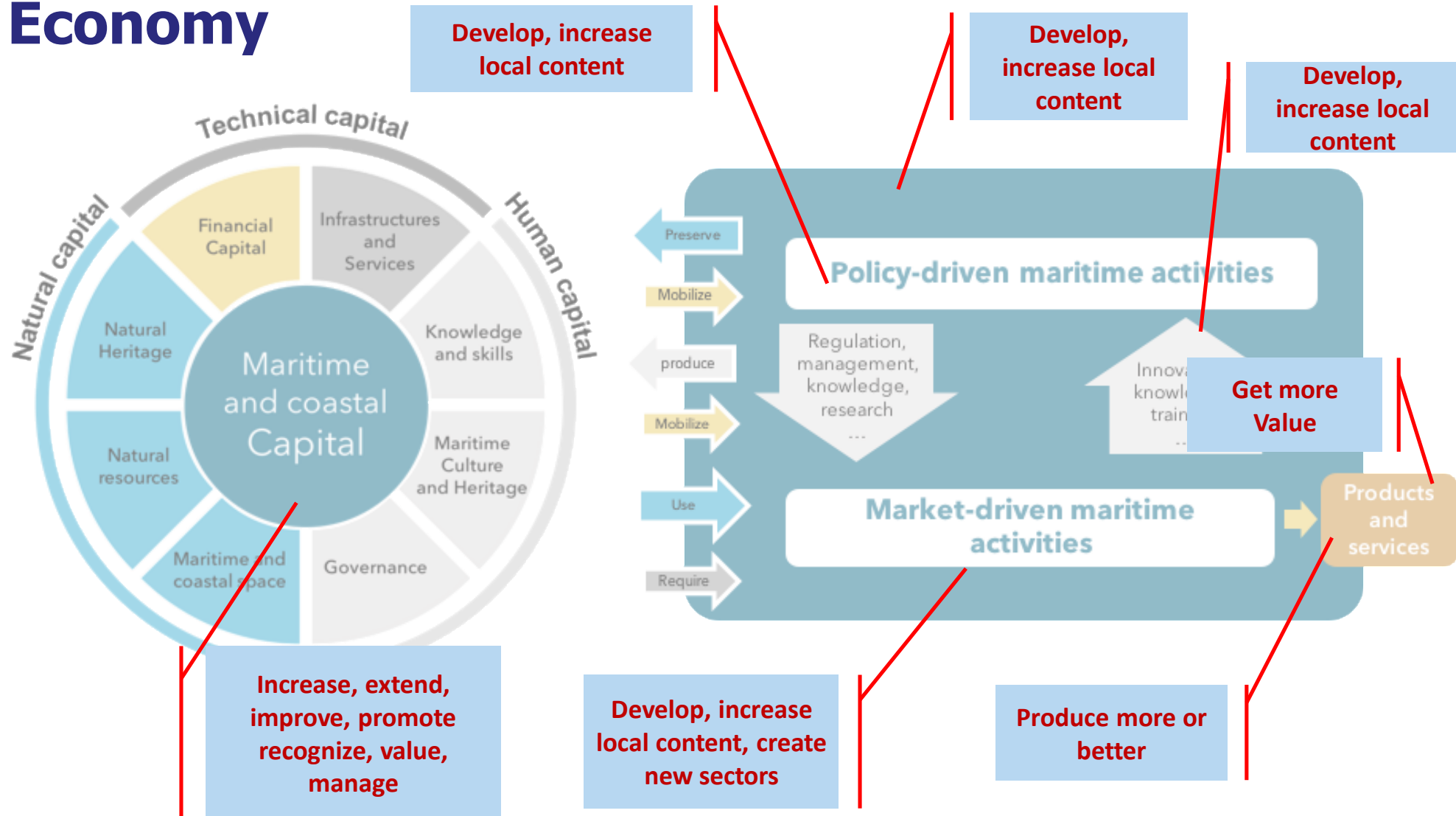
Sofia, April 11 2018

BLUE ECONOMY PRINCIPLES & CONCEPTS

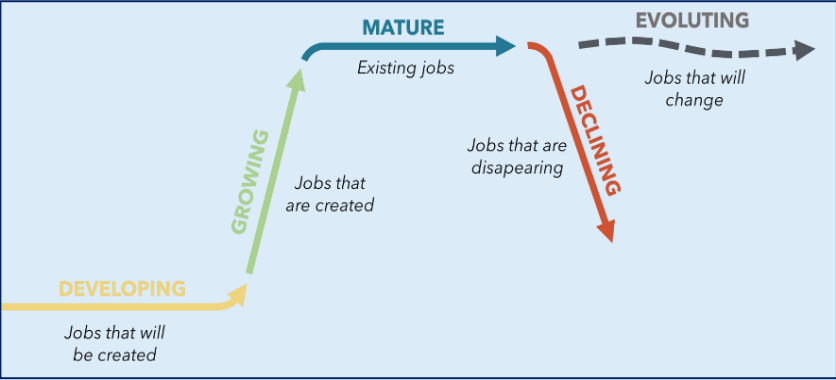
Maritime activities depend on maritime and coastal assets.



Recommendations for developing Blue Economy



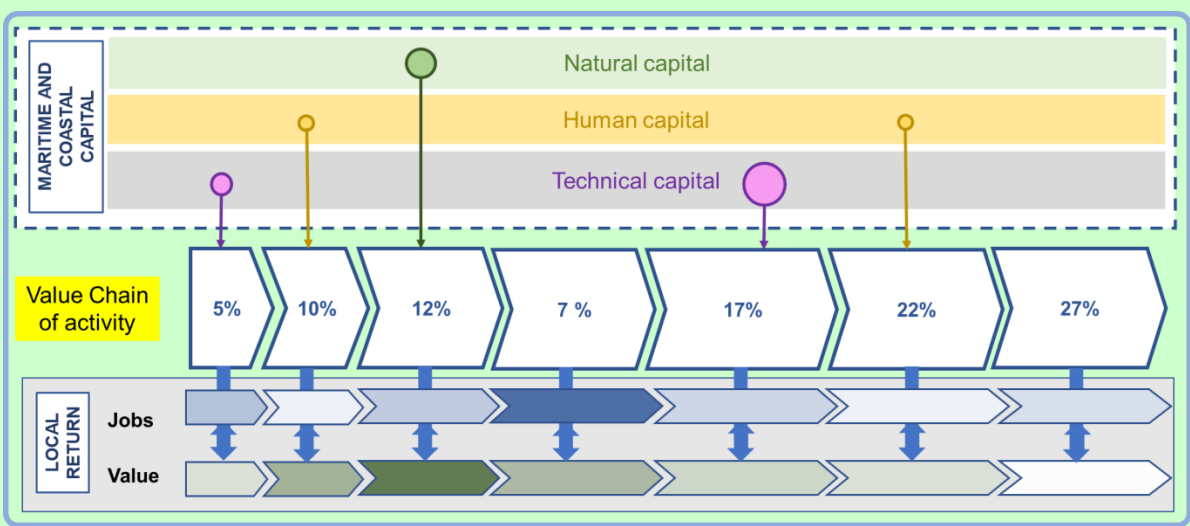
Possible ways to assess potential for development of Maritime Economic Activities



Assess status of activity in « life cycle »: is there a potential for further development, or a need for change?

<p>Growth of sector</p>
<p>Growth of regional share</p>
<p>Take larger share of the value chain</p>
<p>Change model</p>
<p>Develop new options</p>

Which strategic options are available ?



Is it possible to capture more value from the value chain?

BLUE ECONOMY NATIONAL ASSESSMENT

Maritime Economic Activities (MEA)

Sector	Status
Maritime transport	Well developed – potential improvement of connection with land networks
Ferry – short sea shipping	Low development at regional level
Coastal and maritime tourism	Well developed but unevenly and mainly focused on " sun, sand and sea"
Cruise	Limited, mainly large ships and extension of Mediterranean trips
Fisheries	Fully developed - gaps in regulation, enforcement and safety
Aquaculture	Little developed but growing sector, with some potential
Oil & Gas	Emerging sector (only exploration (TBC))
Yachting and boating	Barely developed - some potential within the navigation basin
Marine renewable energy	Some potential (wind)
Marine mineral resource mining	Mainly research projects
Blue biotechnologies	Mainly research projects

Coastal and maritime capital

	component	Status
Natural capital	Marine and coastal heritage	Unique marine environment (numerous habitats but relatively low biodiversity under high anthropic pressures)
	Marine natural resources	<u>Biological resources</u> : unsustainable exploitation <u>Mineral resources</u> : regional competition rather than cooperation <u>Marine Energy</u> : Limited assessment of resources
	Maritime and coastal space	High attractiveness High coastal erosion and climate change effects
Human capital	Knowledge and skills	Gaps in basic marine knowledge – Limited innovation maritime education is good but not enough developed for emerging sectors of BE
	Maritime culture	Limited - limited promotion of maritime heritage
	Governance	No “integrated” regional maritime governance Business oriented clusters Limited maritime focus (BESC) mono thematic (BSC) or sectoral (GFCM)
Technical capital	Infrastructures and services	Numerous but low regional coordination and shared services Limited land-sea connections
	Financial capital	No specific maritime financial instruments or services

Maritime Policy Driven Activities (MPDA)

Sector	Status
Maritime safety and risk management	Limited at both national and regional level - gaps
Marine protection	Few marine protected areas - little regional cooperation
Marine and maritime information dissemination	Few examples of integration of maritime and/or marine knowledge
Monitoring of the marine and coastal environment	Underdeveloped monitoring of environment and impacts
Maritime surveillance	Good cooperation between national Coast Guards
Research and education	Limited strategies – gaps, limited coordination
Planning and management	No (or very little) integrated planning or management despite some capacity and experience (ICZM)

First conclusions

- There are many marine and maritime **shared issues** (e.g. fisheries, environment), calling for *coordinated actions*.
- The Black Sea region **maritime and coastal capital is significant**, relatively unexploited, and could be used to support potential opportunities, through both sustainable development/adaptation of existing activities and creation of new activities.
- There is a **well-established record of cooperation**, with a number of regional organizations already mobilized on maritime issues, or which could extend their scope towards maritime and coastal issues.
- There is **need for coordinated actions to promote the Black Sea** (e.g. maritime and coastal tourism) beyond the region itself.
- Many **benefits could be expected from enhancing synergies** between sectors (e.g. environmental protection, fisheries and maritime and coastal tourism).

BLUE ECONOMY NATIONAL ASSESSMENT BULGARIA

Maritime Economic Activities (MEA)

Sector	Status
Maritime transport	Foreign owned sector – low share of national goods exchange by sea (20%)
Ferry – short sea shipping	Short sea shipping significant sector (oil transportation) principal sector for national goods exchange by sea (80%) <ul style="list-style-type: none"> - many connections with Black sea ports - ferry and RoRo lines between Burgas or Varna and Novoruiysk; Burgas and Batumi - local fast ferries - Nessebar, Sozopol - seasonal passengers ferries across Ropotamo River
Shipbuilding, repair and deconstruction	Historical and important sector (GVA, Employment) but declining since 2010 - main activities focused in ship repair and equipment maintenance
Coastal and maritime tourism	Coastal tourism: biggest maritime economic sector in terms of GVA and employment. Ongoing diversification based on national human and natural capital valorization with sustainable and resilient objectives.
Cruise	Large ships cruise tourism has little socio-economic impact yet as trips are infrequent (Varna, Burgas, Nessebar) and the attractors are little developed
Fisheries	Traditional activity (small size and obsolete fleet), high employment but low GVA; Poor fleet performance and major source of ecological pressure - trawling and high rate of by catches of non-targeted species
Aquaculture	Fish, mussel and algae production. Marine Aquaculture is not considered as an alternative for fishing sector regarding the limited number of suitable locations. Opportunities of development with offshore solutions
Oil & Gas	Fastest developing maritime sector with domestic gas (1,310 ⁶ m ³ (2015)). Expectation to be a high offshore oil producer with Block 1-21 Khan Asparuch field
Yachting and boating	Investments in infrastructures but limited sector with low domestic use
Marine renewable energy	Not identified as a key issue in comparison with hydro-power and land biomass- some potential with wind and wave potentials
Marine mineral resource mining	No marine aggregate mining
Blue biotechnologies	No activity identified in the field

SWOT of MEA in Bulgaria

STRENGTHS

- Good availability of infrastructures supporting MEA : maritime transport, maritime and coastal tourism, shipbuilding/ repair, etc.
- Good practices in port services (port community system) for business
- Increasing offshore O&G exploration and exploitation
- National updated sectoral strategies (tourism, maritime transport, energy, fisheries, ...)
- Political will to diversify touristic for more resilience
- Good maritime connections with Black sea countries
- Awareness of maritime sectors on sustainability and marine environment issues. On going adaptation of fisheries sectors to reduce pressures on marine environment
- Maritime and river activities linkage

WEAKNESSES

- High level of pressures on coastal zone
- Limited innovation whereas existing skills (institutes)
- Only foreign companies for maritime transport
- Fisheries: better control of data and control of quality, as well as better conditions and prices for fishermen needed
- High dependence on Oil & Gas price for offshore exploration and exploitation
- Limited dialogue between public and private sectors (information sharing and dissemination)
- Brain and skills drain

SWOT of MEA in Bulgaria

OPPORTUNITIES

- Synergies within sectors to develop new offers: ecotourism, pescatourism, ...
- Offshore O&G resources availability and energy independence
- Regional and EU cooperation
- Significant capital not fully exploited (natural and cultural maritime and coastal heritage)

THREATS

- Environmental conditions degradation
- Climate change effects
- Unbalanced model between activities development and environmental protection
- Lack of transfer from public research outputs to MEA limiting innovation
- Inadequacy of education with BE sectors needs limiting capacity to seize opportunities
- Jobs lost in declining sectors not compensated by jobs in new sectors

Coastal and maritime capital

	component	Status
Natural capital	Marine and coastal heritage	High diversity in habitats (estuaries, coastal lagoon) - rare and threatened species (some on IUCN Red list) no complete assessment of marine and coastal biodiversity – ongoing improvement with EU legislation (MSFD, Natura 2000) – numerous pressures: fishing, eutrophication (agriculture), tourism and recreation
	Marine natural resources	Biological: decreasing stocks and commercial fish species Mineral: Important offshore O&G resources (Galata & Kaliakra regions), no metals or aggregates MRE: wave power assessment
	Maritime and coastal space	Space diversity but also areas with low human presence Coastal zones threatened by coastal erosion and climate change effects
Human capital	Knowledge and skills	Strong network of maritime science and education: Technical University of Varna, Bulgarian Academy of Sciences (Institute of Oceanology, National institute of meteorology and hydrology), Institute of Fishery resources, University of Sofia, Naval Academy Good regional cooperation and involvement to support public polices and EU legal implementation - MSFD, WFD, cf. Black Sea Integrated Monitoring System (MISIS)
	Maritime culture	Many underwater heritage sites to be protected and valorized from the Kaliakra to the Romanian Border (cooperation – Heras EU project) – to be included in underwater heritage tours
	Governance	Interministerial committee created in 2009, no visible action found- No national consultative body on maritime and coastal affairs has been identified Sectoral governance- maritime Cluster (focused on shipping) – numerous NGOS 3 coastal provinces/28, deconcentrated rather than decentralized. Regional development boards contribute to implementation of national maritime policies
Technical capital	Infrastructures and services	22 ports: 1 deep-draught in Burgas (Free zone port) - investments for modernization of Varna port and its 2 main terminals Burgas & Varna in Pan-European Transport Corridor N° 8 - port management is centralised and managed by the national authorities - 5 shipyards in Burgas and Varna - several underwater communication and electric cables projects
	Financial capital	No specific maritime financial instruments or services. Good level of national control (ports investments) Private (including foreign) and public investors

Coastal and maritime capital for Bulgaria

No specific maritime financial instruments or services
national control on ports investments
Private (foreign included) and public investors

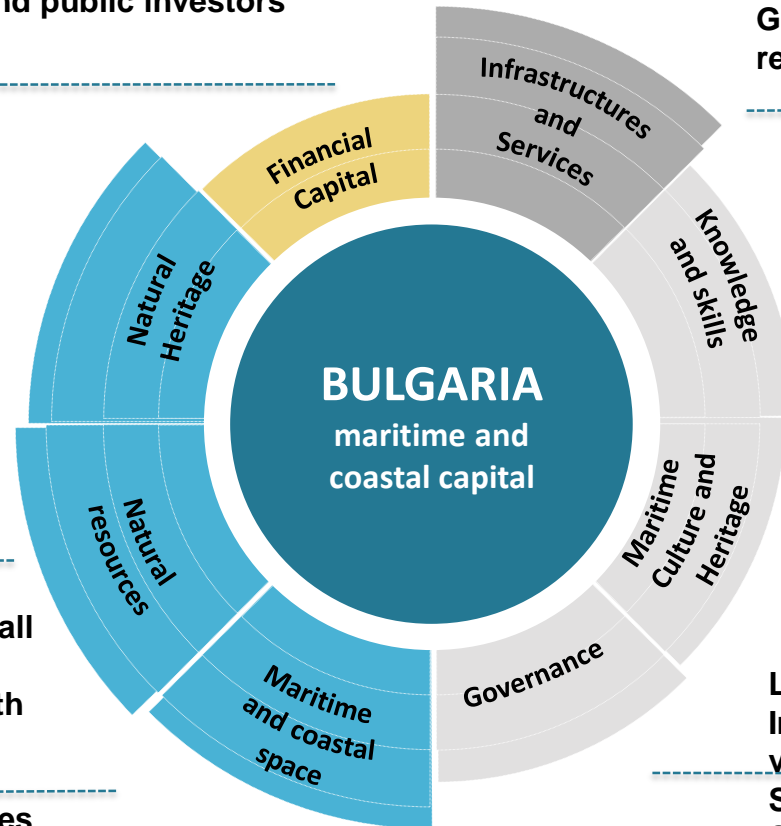
Good port infrastructures for deep-sea and short-sea shipping, ferries and cruise
Improving inland connection (TEN-T)
Good infrastructures for shipbuilding and repair

Large diversity
Anthropic pressures
Mid level of protection

Decreasing fishing stocks
Huge offshore O&G reserves
Low MRE (not assessed)

High level of coastal erosion along all the coast
Extensive coastal construction (with low regulation)

High human density on coastal zones versus inland - tourism overcrowding



Good marine knowledge even if gaps
Several important academic institutes
No dedicated portal for knowledge dissemination

Limited maritime culture and important underwater human heritage
Improving valorisation and protection

Limited public participation/association
Interministerial committee created but no visible action

Sectoral public action
Strong NGOs and maritime cluster (shipping oriented)

Maritime Policy Driven Activities (MPDA)

Sector	Status
Maritime safety and risk management	Linked to EU policies (MSFD, WFD), Cross Border Cooperation, Bucharest Convention Elaboration of management plans for protection against flooding
Marine protection	Mid/low level of protection two designated MPAs (Kaliakra and Koketrays sandbank) and Natura 2000 network (about 10% of TW and 3% of EEZ). No established MPA network (TBC) Set up of a joint managed MPA with Romania
Marine and maritime information dissemination	No identified national portal for accessing knowledge of marine and maritime issues or disseminating marine and maritime information to stakeholders (further MARSPLAN BS project experience)
Monitoring of the marine and coastal environment	Important issues to be addressed under the Bucharest Convention, WFD and MSFD Water monitoring: BULGARIAN NATIONAL OPERATIONAL MARINE OBSERVING SYSTEM (NOMOS) Involvement in Regional monitoring program BSIMAP (Black Sea Integrated Monitoring and Assessment Program) Efforts to e done to improve data collection
Maritime surveillance	Integrated surveillance, in cooperation with Romania Coastal surveillance system, mainly focused on safety and security (NATIONAL MARITIME SINGLE WINDOW) and on going integration and data sharing (InBulMars project)
Research and education	Good level of education, expertise and research related to shipping, with strong network, more limited in other marine science fields. Research bodies involvement in Bulgarian maritime cluster
Planning and management	Even if some ICZM experiences (Danube islands & Shalba) have been identified for coastal protection, no effective Integrated Coastal Zone Management (ICZM) The planning is strongly divided between national and local level. Regional level is weakly represented in this process. This is not easing the harmonisation of Land and Maritime spatial planning. Cooperation with Romania on common maritime spatial planning in the EU framework of MSPD (EU MARSPLAN BS project)

SWOT of MPDA in Bulgaria

STRENGTHS

- EU legislation implementation (WFD, MSFD, MSPD) developing and supporting national public capacities for monitoring and protection
- Good cooperation within Black sea (Research, Environment, Maritime surveillance)
- Good crossborder cooperation with Romania
- Full coastline coverage by coastal surveillance system with on going data integration and sharing in accordance with confidentiality rules at national and EU agencies level
- Demonstration of MSP implementation with MARSPLAN BS project
- Linkage between real time surveillance and MSP process with maritime activities mapping production
- Maritime and river activities linkage

WEAKNESSES

- No national maritime policy has been defined
- No visible strategy for maritime and marine research and innovation
- Lack of involvement/responsibilities of local authorities
- Low level of policy integration (MSP, Marine Protected Areas, Fishery policy and Transport safety) but improving with MSP/MSFD process
- Lack of regional autonomy and limited empowerment of local actors but improving with MSP process
- Dependance on EU funds for implementation
- Lack of awareness of maritime and marine issues/assets
- Brain and skills drain

SWOT of MPDA in Bulgaria

OPPORTUNITIES

- EU legislation implementation (environment sustainability, safety and security)
- Integration in public processes
- Cross-border and cross-sectoral maritime surveillance
- Regional cooperation on marine/maritime and BE issues
- Measures to mitigate Climate Change
- EU CISE2020 (interoperability)
- Development of marine and maritime education to raise interest and vocations

THREATS

- Lack of public funding and means (CAPEX/OPEX)
- Lack of interest in public action/priorities
- Inability to meet EU objectives (WFD, MSFD, MSPD)
- Lack of innovation preventing BE opportunities
- Further degradation of marine and coastal environment
- Impacts of Climate Change
- Low sustainability of funded projects (OPEX)

First conclusions

- **Maritime and coastal governance**

- Maritime governance could be improved through more efficient coordination (administrations) and stakeholder consultation setups. The representation of maritime stakeholders is still low for some sectors. MSP implementation is improving the situation.
- There is a need for building awareness and capacity among public and private maritime and coastal stakeholders

- **Maritime and coastal policies**

- Bulgaria has not yet defined a comprehensive maritime vision and policy document, strategy with objectives and indicators, monitoring and evaluation
- Cross-cutting maritime policies are mainly related to EU policies (WFD, MSFD, MSPD)

- **Blue Economy**

- Sectoral policies should be more elaborated for coastal and maritime components, through a consistent set of sectoral strategies for each of the main maritime activities (including O&G and coastal tourism).
- Next opportunities for developing MEAs lie in an improved regional cooperation and synergies between marine and maritime activities (e.g. nature protection and tourism)

- **Cross-cutting or integrated instruments**

- The following instruments could be developed or improved:
 - ICZM and MSP based on the MARSPLAN BS experience and outputs (methodology, skills, governance,...)
 - National portal for maritime and marine information and knowledge
 - Integrated surveillance (environment and activities) for management objectives based on NATIONAL MARITIME SINGLE WINDOW and InBulMars project

Potential – Preliminary assessment

- **Maritime and coastal capital**

- Potential linked to better protection, management and valorisation that can support sustainable MEAs
- Limited potential based on biological resource or MRE production costs (wave). Some maritime and coastal potential not fully exploited (heritage)

- **MEAs: need for innovation and capacity building**

- Existing activities: potential for development but also (mainly?) for new models (more local value and jobs, better use of national maritime and coastal capital), more innovation and more synergies between activities
 - Potential synergies identified for small-scale cruise (nature, culture, small ships), coastal tourism (heritage: culture, nature; quality) and short-sea shipping
- New activities: potential not fully assessed (lack of data/studies), model not yet developed
 - Marine offshore aquaculture
 - Marine renewable energies (floating offshore wind, wave)
 - Unknown potential: blue biotechnologies

- **Policy-driven activities**

- Potential for new high-skilled jobs - protection, management, services, research, innovation...
- Development needed to better manage national assets and support MEAs

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