

Conclusions and Recommendations

The COR-GEST Coast and Hydrography Cluster met in Ankara, Turkey on 12-13 March 2013 and reviewed the proposal of the UNEP-MAP with respect to approaches to setting GES and targets for coast and hydrography related EOs (7 and 8) and agreed as follows:

- Enhance integration and links between GES descriptions and targets and ensure further harmonization and integration within and between clusters;
 - o the following joint GES description can be used as a reference: *'The nature and scale of any permanent changes to the prevailing hydrographical conditions (including but not limited to salinity, temperature, pH and hydrodynamics) resulting from anthropogenic activities (individual and cumulative), having taken into account climatic or long-term cyclical processes in the marine environment, do not lead to significant long term impacts on those biological components considered under EOs 1,4, and 6);*
- enhance the country capacities to implement these targets to reach GES (capacity building) and establish platforms for experience sharing;
- taking into consideration the complexity of the coastal ecosystems/landscapes and hydrographic processes, further work is needed to define relevant thresholds to facilitate the quantification of targets and revising/enhancing the indicators additional investigation on relation between human activities and impact on the ecosystem;
- as an important part of the Mediterranean landscapes and seascapes, consider archaeological and cultural sites as a parameter during implementation of Ecosystem Approach;
- Recalling that the effective implementation of EcAp in the Mediterranean will require a high level degree of ownership and active participation of countries, it is essential that the regional process is supported by aligned national processes according to relevant national priority and strategies;
- encourage countries to identify experts in line with each EO. These experts can support the Correspondence Group representative of each country so as to ensure relevant and adequate contribution of the countries in an integrated manner to the objectives of the Correspondence Group meetings.
- Use tools like EIA, SEA and cumulative impact assessment in realization of targets identified, where applicable.

Ecological Objective 7

Alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems.

7.1 Impacts to the marine and coastal ecosystem induced by climate variability and/or climate change are minimized

7.1.1 Large scale changes in circulation patterns, temperature, pH, and salinity distribution

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7.1.2 Long term changes in sea level

GES description	Targets
Ecosystems healthy enough to cope with the expected climate change impacts	Ecosystem health maintained and improved
Ecosystems healthy enough to cope with the expected climate change and existing AND FUTURE anthropogenic impacts	Anthropogenic additional impacts which may alter ecosystems' adaptive capacity are reduced

7.2 Alterations due to permanent constructions on the coast and watersheds, marine installations and seafloor anchored structures are minimized

7.2.1 Impact on the circulation caused by the presence of structures

GES description	Targets
With new structures in place, nearshore wave- and current patterns maintain as natural as possible.	Marine and shore based structures planned and implemented to include aspects of maintaining the natural wave- and current pattern
With new structures in place, nearshore wave- and current patterns maintain as natural as possible.	Marine and shore based structures planned, constructed and operated IN A WAY TO maintain the natural wave and current pattern as much as possible

7.2.2 Location and extent of the habitats impacted directly by the alterations and/or the circulation changes induced by them: footprints of impacting structures

GES description	Targets
<p>Negative impacts are minimal with no influence on the larger scale coastal and marine system</p>	<p>Planning of structures takes into account environmental health of surrounding areas</p> <p>Planning of structures takes into account all possible mitigation measures in order to minimize the impact on coastal and marine ecosystem and its services integrity and cultural/historic assets</p>

7.2.3 Trends in sediment delivery, especially in major deltaic systems

GES description	Targets
<p>Stable delta outline, stable water depth and biodiversity not affected by sedimentation</p> <p>Natural variability of delta outline, water depth in delta and other ecosystems' functions are maintained and biodiversity not affected by changes in sediment budget</p>	<p>Management of upper river catchments and reservoir operation designed for naturalized sediment inflow from rivers</p> <p>The sediment coming from the watershed and longshore drift IS SUFFICIENT to maintain less or not impacted coastal ecosystems (including major deltaic systems)</p> <p>Sufficient sediment budget is provided to restore damaged coastal ecosystems, where applicable</p>

7.2.4 Extent of area affected by coastal erosion due to sediment supply alterations

GES description	Targets
<p>Stable sediment budgets with regards to the natural erosion and deposition patterns and processes, partly tailored to anthropogenic needs</p> <p>Natural or near natural erosion, deposition and sediment movement patterns are maintained</p>	<p>Understanding of natural erosion, deposition and sediment movement situation especially at points where changes or threats occur</p> <p>The coastal and marine structures that will alter the sediment transport and accelerate erosion/accretion are planned, constructed and operated with minimum negative impact</p>

7.3 Impacts of alterations due to changes in freshwater flow from watersheds, seawater inundation and coastal freatic intrusion, brine input from desalination plants and seawater intake and outlet are minimized

7.3.1. Trends in fresh water/sea water volume delivered to salt marshes, lagoons, estuaries, and deltas; desalination brines in the coastal zone

GES description	Targets
<p>Natural conditions and specifically salinity levels below threshold levels maintained as much as possible</p> <p>Water circulation in coastal and marine habitats, including salinity and temperature threshold, allows for natural/ecological processes take place (sustain, maintain)</p>	<p>System understanding obtained, regulations for respective environmental impact assessments and mitigation requirements developed</p> <p>Provide ADEQUATE freshwater inflow to salt marshes, lagoons, estuaries and deltas to ensure water circulation balance</p>

7.3.2 Location and extent of the habitats impacted by changes in the circulation and the salinity induced by the alterations

GES description	Targets
<p>Natural conditions and specifically salinity levels below threshold levels maintained as much as possible</p> <p>Water circulation in coastal and marine habitats, including salinity and temperature threshold, allows for natural/ecological processes take place (sustain, maintain)</p>	<p>System understanding obtained, regulations for respective environmental impact assessments and mitigation requirements developed</p> <p>Cumulative negative impacts on coastal and marine habitats are avoided while planning, construction and operating of coastal and marine infrastructure AND DO not hinder habitat integrity</p>

7.3.3 Changes in key species distribution due to the effects of seawater intake and outlet

GES description	Targets
<p>Natural conditions and specifically salinity levels below threshold levels maintained as much as possible</p> <p>Water circulation in coastal and marine habitats, AND CHANGES IN THE LEVELS OF salinity and temperature ARE WITHIN thresholdS, TO MAINTAIN natural/ecological processes</p>	<p>System understanding obtained, regulations for respective environmental impact assessments and mitigation requirements developed</p> <p>Site specific tolerable limits of key species in immediate proximity of seawater intake and outlet structures are considered while planning, construction and operation of such infrastructure</p>

Ecological Objective 8

The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved.

8.1 The natural dynamic nature of coastlines is respected and coastal areas are in good condition

8.1.1 Areal extent of coastal erosion and coastline instability

GES description	Targets
<p>Coastal erosion is the result of predominantly natural factors and caused by natural dynamics</p> <p>Coastal resilience maintained and improved; and coastal uses made adaptable to coastal erosion</p>	<p>Impacts of coastal erosion caused by man made factors anticipated and prevented</p> <p>Coastal erosion management allows for natural fluctuation of the coast</p> <p>Coastal erosion risk minimized by defining coastal setback</p> <p>Impacts of coastal erosion caused by man made factors anticipated and prevented through Coastal erosion management allowing for natural fluctuation of the coast and minimizing coastal erosion risk</p>

8.1.2 Changes in sediment dynamics along the coastline

GES description	Targets
<p>Sediment dynamics is the result of natural processes</p> <p>Long term sediment dynamics is within natural patterns</p>	<p>Improve Integrated River Basin Management to reduce disturbance in sediment inflows</p> <p>Disturbance in sediment inflows reduced through improved Integrated River Basin Management and coastal sand management practices</p>

8.1.3 Areal extent of sandy areas subject to physical disturbance

GES description	Targets
<p>Physical disturbances of sandy areas (beaches) minimized</p> <p>Human activities (mechanical cleaning, sand mining, dune destruction, etc.) cause no physical disturbance in sandy coastal areas</p>	<p>Implement beach nourishment measures</p> <p>Appropriate management measures are implemented (artificial beach nourishment, dune management etc.) to minimize negative impacts of human activities on sandy coastal areas</p>

8.1.4 Length of coastline subject to physical disturbance due to the influence of manmade structures

GES description	Targets
<p>Physical disturbances caused by man made structures minimized</p> <p>Physical disturbances on coastline caused by man made structures do not impair coastline integrity</p>	<p>Implement beach nourishment measures</p> <p>Appropriate management measures TO AVOID cumulative NEGATIVE impactS are implemented to minimize negative impacts of coastal infrastructure on coastline</p>

8.2 Integrity and diversity of coastal ecosystems, landscapes and their geomorphology are preserved

8.2.1 Change of land-use

GES description	Targets
<p>Perpendicular coastal development, with linear development minimised</p> <p>Mixed land-use structure achieved[in coastal spatial units, to be established]</p> <p>Perpendicular and linear coastal development IS in balance with integrity and diversity of coastal ecosystems AND LANDSCAPE</p>	<p>No further construction within 100 m width setback zone; established in majority of countries</p> <p>Change of coastal land use structure, dominance of urban land use reversed</p> <p>Adaptive carrying capacity established and implemented</p> <p>Cumulative NEGATIVE impacts of coastal development are not increasing by means of coastal spatial planning with the aim OF CREATING A BALANCED coastal land use structure</p>

8.2.2 Change of landscape types

GES description	Targets
<p>Coastal landscape becomes strategic element of local identity</p> <p>Different landscape types form a harmonious and balanced whole</p> <p>Diversity of landscape types form a harmonious and balanced whole, where coastal landscape becomes strategic element of local identity</p>	<p>Expand network of protected coastal landscapes</p> <p>Limited extent of mono- type coastal landscapes</p> <p>Mixed landscape structure maintained</p> <p>Mixed landscape structure maintained, which avoids dominance of mono- type coastal landscapes and where network of protected coastal landscapes IS expanded</p>

8.2.3 Share of non-fragmented coastal habitats

GES description	Targets
Coastal habitats are not fragmented to a level that prevents them from providing ecological functions and environmental services	Share of non-fragmented coastal habitats higher than [60%] within a coastal landscape unit Share of non-fragmented coastal habitats is maintained at the present level or increasing