WHAT IS THE WESTERN CAPE STATE OF THE COAST?

The State of the Coast Report (SoCR) describes the condition of the biophysical, socio-economic and institutional environments as they relate to the coastal zone. The SoCR describes the current condition as the baseline and uses historical information, where available, to assess changes to the coast over time. The SoCR also describes the impacts of projected climate change manifestations on the coastline.

The **DRIVER**-**PRESSURE**-**STATE**-**IMPACT**-**RESPONSE** (DPSIR) was used to assess the state of the coast based on a set of indicators.

The Western Cape SoCR (WC SoCR) 2018 is the first SoCR report that specifically focusses on aspects of the coastal environment in the Province. Nine coastal themes were assessed in the WC SoCR:

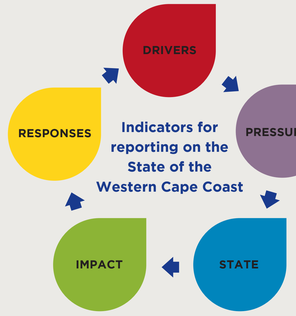
1. Coastal Biodiversity
2. Estuaries
3. Coastal Socio-economic Conditions
4. Coastal Resource Use
5. Coastal Land Use
6. Pollution and Waste
7. Coastal Vulnerability
8. Cooperative Governance
9. Awareness, Education and Training

Knowledge about the current coastal pressures and their associated impacts as well as tracking trends over time, enables us to understand coastal issues and respond by adapting behaviour, modifying our activities and directing our management actions in a more meaningful and effective way, to achieve sustainability. It also assists us with the development of business intelligence in order to enhance our natural capital.

PURPOSE OF THE PROJECT

The ultimate purpose is to:

- Gain empirical knowledge on the condition of the coast;
- Achieve sustainability though providing business intelligence to enable evidence-led policy;
- Inform strategy and targets by setting goals for management interventions to reduce pressures and mitigate impacts;
- Detect emerging issues;
- Inform and guide the Western Cape Coastal Management Programme in terms of supplying information pertaining to the selected priority areas and providing direction for Coastal Management Objectives and resource prioritisation.



WHAT IS THE DPSIR FRAMEWORK?

The **DRIVER**-**PRESSURE**-**STATE**-**IMPACT**-**RESPONSE** (DPSIR) framework was used to report on the state of the coast. It begins with understanding the causes of change **(drivers)** in the coastal areas, how these changes result in **pressure** on the coast and the changes to the **state** of the coasts caused by specific impacts on the coastal environment, and finally what we do about it **(our response)**. Indicators are used to report on the extent or significance of a particular driver, pressure, state, **impact** or response.

Garden Route, South Africa. Image source: Dominique de La Croix/Shutterstock.com
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THEME	DPSIR	INDICATOR
COASTAL BIODIVERSITY		**PROTECTION OF PRIORITY AREAS:** The distribution of protected areas along the coast in the key habitat areas (terrestrial and marine).
		TRANSFORMATION OF THREATENED ECOSYSTEMS: Percentage of threated ecosystems transformed.
		INVASIVE ALIEN SPECIES: Number of invasive alien species per taxonomic group that are found in the marine, estuarine and terrestrial coastal environment. If possible, the spatial distribution of invasive alien species per taxonomic group in the form of a map.
		VULNERABLE AND ENDANGERED COASTAL SPECIES: The population trends of IUCN Red Listed species that occur along the coast (marine, estuarine and terrestrial components), assessed as changes in the species' risk categories.
		STRANDINGS OF MARINE ANIMALS: The number of and type of marine animal strandings.
		CONSERVATION TARGETS: The number of marine and coastal protected areas declared compared to the proposed targets.
		ENTANGLEMENTS WITH NETS: Number of incidents per annum of entanglement of whales.
ESTUARIES		**ESTUARINE HEALTH:** Classification of estuary health as per the SANBI Estuary Health Index.
		BENTHIC COMMUNITIES: Benthic communities index.
		LAND USE IN THE ESTUARINE FUNCTIONAL ZONE: The different types of land uses and covers that occur in the EFZ of estuaries (report on development in the coastal area using type and extent/ %of total area).
		ESTUARINE BREACHING: Number of applications by Responsible Management Authorities for mouth breaching.
		SAND MINING OPERATIONS: Number of licensed salt mining operations in the Western Cape.
		ESTUARINE MANAGEMENT PLANS: The percentage of estuarine management plans completed.
		ESTUARY MANAGEMENT: Percentage of estuaries with bodies (RMAs) implementing management plans inclusive of their monitoring plans.
		ECOLOGICAL RESERVE OF RIVERS: Number of river systems within the Western Cape that have had their ecological reserve determined (in-stream flow requirement and estuarine flow requirement) and secondly, the number of systems meeting the required protocols.
COASTAL SOCIAL AND ECONOMIC CONDITIONS		**CONTRIBUTION OF COASTAL RESOURCES TO THE PROVINCIAL ECONOMY:** Contribution of the coast to Gross Geographic Product (GGP) and GDP.
		VALUE OF MINING ACTIVITIES: Extent and types of mining in the coastal zone (percentage of each) and the Contribution of each mining sector to the provincial GDP.
		AGRICULTURAL ACTIVITIES IN THE COASTAL ZONE: Percentage of coast utilised for agricultural activities and contribution of agricultural activities to the provincial GDP.
		VALUE OF PORTS: Total contribution of ports to the GDP of the province (incl. value of ship cargo) / metric tonnes.
		AQUACULTURE ACTIVITIES: Extent and types of aquaculture activities in the coastal zone (percentage of each) and Contribution of each aquaculture activity to the provincial GDP.
		BLUE FLAG BEACHES (AND WATER QUALITY COMPLIANCE): The total number of Blue Flag beaches per year, as a percentage of the number of major beaches in the province.
		OPPORTUNITIES CREATED FOR EMPLOYMENT: WftC – number of work opportunities created and budget allocated.
		ECONOMIC ACTIVITIES ALONG THE COAST: Change in GDP per coastal district / town.
		POPULATION DENSITY IN THE COASTAL ZONE / MUNICIPALITIES: Change in population density (people /km^2) in coastal municipalities.
		COASTAL HERITAGE RESOURCES (INDEX THAT BEING USED BY SAHRA): Number and type of heritage resources, monuments on the coast that have been declared and are under formal protection; and what percentage of these have a Heritage Management Plan that is being implemented.
		COMMUNICATION OF COASTAL ISSUES: Presence of recognised stakeholder communication platforms below MCC level.
COASTAL RESOURCE USE		**EXPLOITATION OF SELECTED COMMERCIAL AND RECREATIONAL SPECIES:** The number of exploited fish species that are currently: collapsed, overexploited, optimum exploitation, underexploited of SBPR/CPUE/mean size trends.
		EXPLOITATION OF SELECTED COMMERCIAL AND RECREATIONAL SPECIES: No. of people employed per commercial fishery sector.
		CATCHES PER FISHERY SECTOR: The catches (tons) per fishery sector per year (incl. KZN Sardine Run catches).
		NON-CONSUMPTIVE MARINE RESOURCE USE: No. of boat-based whale watching permits and shark cage diving permits issued.
		KELP HARVESTING: The volume of kelp harvested and the main locations of harvesting in the Province (WC and NC).
		TOTAL EFFORT PER FISHING SECTOR: Number of recreational fishing permits issued per year.
		SUBSISTENCE COASTAL LIVELIHOODS: Number of communities dependent on the coast for subsistence.
		SMALL SCALE FISHERIES: Number of permits issued for small scale fisheries operations and what percentage of these have been issued to communities that were previously deprived of these rights.
		AVAILABILITY OF RESOURCE SPECIES: The distribution and abundance of resource species.
		STATUS OF KEY SPECIES: Status of key fisheries species - i.e. IUCN, SASSI.
		NUMBER OF FISHING/ GATHERING PERMITS: Number of people fishing / gathering (permits).
		PERCENTAGE/NUMBER OF SPECIES MANAGEMENT PLANS: Percentage / number of species management plans in place.
		TOPS MONITORING: Percentage / number of species designated as TOPS.
		SCUBA DIVING PERMITS ALLOCATED FOR MPAs: The number of recreational scuba diving permits allocated annually for MPA's.
COASTAL LAND USE		**EQUITABLE ACCESS POINTS (OPEN, CONTROLLED, RESTRICTED):** Number and type of access points along the coast, and the number of Coastal Access audits conducted in the Province (District Level and Metro).
		THE NUMBER OF COASTAL UNIVERSAL ACCESS POINTS: The number of coastal universal access points.
		PROVISION OF COASTAL ACCESS: The number of coastal access strips per municipality across private land.
		LAND TENURE: The percentage of the coastline that is owned by the state versus community entities in the Province.
		PUBLIC LAUNCH SITES: Number of registered and unregistered launch sites.
		USE OF 4x4 VEHICLES IN THE COASTAL ZONE: Number of 4x4 permits issued for use within the coastal zone – Disaggregate and ensure that the Marine Living Resources Act permitted use is included.
		USE OF 4x4 VEHICLES IN THE COASTAL ZONE: Number of reports of illegal 4X4 driving reported to DEA.
		COASTAL ACCESS MONITORING: Number of people available for monitoring access.
		PROPORTION OF COASTLINE DEVELOPED: Percentage of coastline developed, showing change over time in order to give an indication as to the rate of urbanisation.
		COASTAL LAND USE AND CHANGE: The different types of land use and covers that occur. Ideally it would report on development in the coastal area using: type and extent / % of total area.
		AGRICULTURAL ACTIVITIES IN THE COASTAL ZONE: Number of coastal leases issued by CapeNature.
COASTAL POLLUTION		**COST OF WASTE COLLECTION:** Kilometres of accessible coastline cleaned by WftC and budget allocated for this task.
		POLLUTION INCIDENTS ALONG THE COAST (OIL SPILLS ETC.): The annual amount (in tonnes) of recorded oil spills and other spillage accidents/alerts along the coast and in South Africa's EEZ.
		PREVENTION /MANAGEMENT OF POLLUTION INCIDENT: Number of Section 30 approvals granted relating to coastal pollution incidents.
		PREVENTION /MANAGEMENT OF POLLUTION INCIDENT: (1) number of discharge outfalls in full compliance with their authorisation, (2) number of discharge outfalls in partial compliance with their authorisation, (3) the number of discharge outfalls currently applying for authorisation, and (4) the number of discharge outfalls that are not authorised.
		NO. OF LICENCED DISCHARGE PERMITS, UNLICENSED DISCHARGE POINTS, COMPLIANCE WITH PERMIT: Total annual wastewater discharged into the marine environment per district municipality and per province.
		POLLUTANT LOAD ENTERING THE SEA FROM LAND-BASED SOURCES OF POLLUTION: The location and nature (indicating severity of pressure) of discharge points in relation to sensitive marine and terrestrial coastal areas and Protected Areas. Wastewater excludes stormwater.
		WASTEWATER MANAGEMENT SCORE (GREEN DROP STATUS): Status of wastewater treatment works along the coast.
COASTAL VULNERABILITY		**COASTAL MANAGEMENT LINES (CML):** Percentage of coastline with an established CML delineated on maps of zoning schemes.
		COASTAL PROTECTION ZONE (CPZ): Percentage of coastline that has an established CPZ.
		EXTREME WEATHER EVENTS: Number of extreme weather events that have been reported including: storm surges, flooding, and coastal events.
		TIDAL DATA AT PORTS: Tidal level at major ports to detect long-term changes in sea level.
		INTERNATIONAL SEA-LEVEL RISE DATA: Climate projections of the Intergovernmental Panel on Climate Change (released every 4 years).
		PEOPLE AT RISK: Percent / number of people located in high risk coastal areas.
		DISASTER MANAGEMENT: Disaster management budget allocated towards response to risk.
		COASTAL RISK PROFILE: Regular updates of Provincial risk profile with new coastal and estuarine risks.
COOPERATIVE GOVERNANCE		**BUDGET FOR ICM IN THE PROVINCE:** Percentage of province budget allocated to the lead agency (DEA&DP) and number of staff employed by the lead agent for ICM.
		DIVERSITY OF PARTICIPATION IN PCC: The number of stakeholders participating regularly in the PCC and the range of organisations participating regularly in the PCC.
		MUNICIPAL BUDGET FOR ICM ISSUES: Municipal budget allocated and number of staff with a dedicated coastal management responsibility at Metro, District, and Local level.
		MUNICIPAL COASTAL COMMITTEES (MCCs): Number of municipalities that have established MCC's.
		DIVERSITY OF PARTICIPATION IN MCC: The number of people participating regularly in MCCs and the range of organisations participating regularly in MCCs.
		COASTAL MANAGEMENT PLANS: Percentage of municipalities with adopted CMP's.
		CAPACITY FOR ENFORCEMENT ALONG THE COAST: Number of Environmental Management Inspectors (EMIs) and Fisheries Control Officers employed in the Western Cape Province.
		NON-COMPLIANCE: Total number of notices issued for non-compliance against the number of patrols undertaken.
		FREQUENCY OF UPDATING CMPs: Coverage, review and reporting cycles implemented for all spheres of government's CMPs.
		ICM GOVERNANCE: The number of written agreements that are in place between district and local municipalities to implement municipal functions in terms of the ICM Act, to address capacity and resource constraints.

Western Cape Government
Environmental Affairs and Development Planning
BETTER TOGETHER.

STATE OF THE COAST WESTERN CAPE: A Review of the State of the Coastal Zone in the Western Cape
Achieving sustainability in the way that we respond to the ever-changing State of our Coasts **BETTER TOGETHER.**

For more information and tips visit **www.westerncape.gov.za/eadp/environmental-sustainability/biodiversity-and-coastal-management**