SAMSA

INDICATOR PROTOCOL SHEET

Strategic Objective (3.3)
Initiatives implemented to enhance Marine Pollution Combating Capabilities

Programme Performance Indicator
Prepare a detailed Capability Plan for Earth Observation Technology and integrate into Capability Roadmap under Initiative 6[1] (of Operation Phakisa)

{Financial Reporting Period}

2015-16

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[1] Establishing an Ocean & Coastal Information Management System and Extending oceans and coasts earth observation capabilities

SAMSA Indicator Protocol Sheet - Prepare a detailed Capability Plan for Earth Observation Technology and integrate into Capability Roadmap under Initiative 6 (of Operation Phakisa)

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INDICATOR PROTOCOL SHEET	
Indicator title/Name	Prepare a detailed Capability Plan for Earth Observation Technology to be integrated into Capability Roadmap under Initiative 6 (of Operation Phakisa)
Short Definition	<u>Brief explanation of what the indicator is, with enough detail to give a general understanding</u> Assist with the technical skill on Long Range Identification and Tracking of Ships (LRIT) and Automatic Identification System (AIS), and prepare a detailed capability plan for earth observation technology to enhance marine pollution surveillance
Purpose / Importance	<u>What the indicator intends to show and why it is important</u> SAMSA's 2nd mandate is to prevent and combat pollution of the marine environment by ships. Sea and air patrols by the Department of Environmental Affairs (DEA) and the South African Air Force (SAAF) as well as DAFF have dropped significantly. Furthermore, aircraft that do air patrols are not equipped with infrared thermal imaging cameras, synthetic aperture radar (satellite-SAR), etc. resulting in inadequate capability to monitor vessel movement and pollution from ships in South African waters. Under Operation Phakisa (*Lab: Marine Protection & Governance; Initiative 6: Establishing an Ocean & Coastal Information Management System and Extending oceans and coasts earth observation capabilities*), a roadmap is to be developed of required earth observation capabilities and decision support tools and is to include, amongst others, oil slick identification and tracking. The opportunity should also be used to identify those vessels which are either not required to comply with the International Maritime Organization (IMO) or Flag State requirements, or are required to, but do not. These are the vessels that go undetected and which could be involved in illegal operations. There are satellite-based systems that enable these vessels to be detected, but possibly not identified. These systems are either satellite-SAR, or satellite imagery - images of vessels are detected, but not always their identity. In addition, SAR data can also be used to detect oil slick pollution from ships far offshore. The integration of all these systems' data, including satellite AIS (S-AIS, will indicate which vessels, without a name tag, require interrogation. In addition, satellite-based systems can also be used to detect oil slick pollution from ships way offshore, and the polluting vessel as well – and possibly the identification as well.
Source of Data Collection	<u>Where the information comes from and how it is collected, and frequency of collection.</u> Currently vessel identification comes from AIS (coastal data from TNPA about 30 miles offshore and satellite data the entire EEZ and beyond from SAMSA) and LRIT (up to 1000 miles offshore from SAMSA) systems. The AIS data from TNPA is basically dynamic and the satellite refresh rate may be a few hours. The LRIT data can be received randomly at 6-hour intervals (default) with the possibility to track a vessel more frequently (up to 30 minutes apart – there are cost implications. There are a number of formats for transferring the data. The plan will be to access satellite synthetic aperture radar (SAR) data as well as imagery data to detect and possibly identify vessels at sea in our EEZ. The DST, SANSA and CSIR are leading the field in this regard with respect to earth observation data.
Method of Calculation	<u>How the indicator is calculated (Simple count or specific calculation formula)</u> SAMSA is willing to share AIS and LRIT data it receives for the use in the Integrated Maritime System – the format of the data needs to be agreed. SAMSA would like to receive satellite SAR and imagery data for its operations.

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	In addition, fishing vessels' positional data from DAFF's VMS system would enhance SAMSA's maritime domain awareness capability.
Data Limitation	<u>Factors (beyond the entity's control) that limit indicator data</u> • Lack of information or vessel data • Lack of funds • Contractual issues (overseas-based suppliers)
Type of Indicator	<u>What the indicator intends to measure (Input, activity, output, outcome / impact, efficiency, effectiveness, equity or economy)</u> Activity
Calculation Type	<u>Whether the reported performance is cumulative, or non-cumulative</u> Non-accumulative
Reporting Cycle	<u>Whether the indicator is reported quarterly, annually or at longer time intervals</u> Quarterly
New Indicator	<u>New indicator, significantly changed indicator or old indicator without change from previous year. (Yes/No)</u> Yes
Desired Performance	<u>The desired target performance for the reporting period. Whether actual performance that is higher or lower than targeted performance is desirable.</u> By Q4; assist with the technical skill on LRIT & AIS and integrate into capability roadmap
Indicator Accountability	<u>The individual/role accountable for the indicator</u> Executive Head: CSWR
Indicator Responsibility	<u>Role/ Individual who is responsible for managing or reporting on the indicator</u> Executive Head: CSWR
Other Information	<u>Other relevant information not captured in the above headings i.e. alignment with the SMART principles</u> N/A

Duly Signed by:

Key Performance Indicator Owner

Capt. Karl Otto: ……………………………..
Executive Head: Centre for Sea Watch and Response
South Africa Maritime Safety Authority (SAMSA)

Date:..……………...… 2016/03/14

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