



S A I M I

SOUTH AFRICAN INTERNATIONAL
MARITIME INSTITUTE



PARTNERS IN GROWING

THE BLUE ECONOMY



WHY THE OCEANS ECONOMY MATTERS

Globally, the oceans are viewed as the new frontier for economic growth, employment, human endeavour and innovation in the search for solutions to food security, climate change, social development, sustainable resources and energy, as well as health.

South Africa too is striving to harness the opportunities for growing the oceans economy presented by more than 3 000km of coastline and a maritime territory (Exclusive Economic Zone) greater than its land mass. It is estimated that the oceans economy has the potential to contribute up to R177-billion to South Africa's GDP and 1-million jobs by 2033.

Operation Phakisa was launched in 2014 to accelerate the development of the potential of the oceans economy through detailed planning and targets. By February 2019, through Operation Phakisa initiatives, government had unlocked investments of almost R30-billion and more than 7 000 new jobs in the oceans economy.

As a direct outcome of Operation Phakisa, SAIMI is driving the enhancement of South Africa's capacity for maritime skills development, education, research and innovation, which is needed to support the achievement of plans for oceans economic growth.

Some key facts pointing to the potential for economic growth and job creation in South Africa's maritime domain:

- More than 30 000 vessels pass South Africa's coastline annually, with 13 000 docking in our ports.
- 300-million tons of cargo and 1.2-million tons of liquid fuel are transported along the South African coast annually.
- About 80 oil rigs are estimated to be in range of the Western Cape.
- South Africa has potential offshore resources of approximately 9-billion barrels of oil and 60-trillion cubic feet of gas, equivalent to 40 and 375 years of consumption respectively.
- 20 new Marine Protected Areas (MPAs) were declared in 2018, advancing the protection of South Africa's rich coastal and ocean biodiversity to 50 000km² – an increase from 0.4% to 5% of our ocean territory, or approximately two and a half times the size of Kruger National Park. MPAs are important for biodiversity conservation and provision of ecosystem services, allowing fish stocks to replenish, and also for marine tourism.

02

ABOUT SAIMI

The South African International Maritime Institute (SAIMI) is at the heart of South Africa's efforts to develop the skills and knowledge to transform the country's vast maritime territory and resources into a sustainable oceans economy.

The national oceans economic development strategy and programme remain at the core of SAIMI's strategic agenda and has been adopted as the central theme for the institute over the next 20-years in alignment with government's ambitions. In this role, SAIMI provides strategic implementational support to the oceans development strategy and programme by supporting Operation Phakisa initiatives and implementing education, skills development and research initiatives.

SAIMI was established to help unlock the socio-economic potential of South Africa's maritime environment by aligning and accelerating all maritime education, training, research, industry, social and government stakeholders into a comprehensive force for change and to jointly implement high impact interventions.

To this end, SAIMI leads a partnership and collaborative stakeholder model geared towards the efficient and effective education, training and upskilling of South Africans, linking them to socio-economic opportunities and investing in new knowledge, technologies and innovations for a globally competitive South African maritime sector. SAIMI's core functions are advocacy and the promotion of South Africa's maritime sector, the coordination of education, skills, training, research and development, as well as to serve as the knowledge hub on maritime matters. SAIMI works with a strong network of partners, associates and alliances to maximise collaboration, resources and capacity to develop the maritime economy.

SAIMI is based in Nelson Mandela Bay – the only city in South Africa with two commercial ports – and is hosted at Nelson Mandela University, while working nationally and globally with role players across a range of disciplines and sectors that make up the maritime economy.

SAIMI is primarily funded by the Department of Higher Education and Training (DHET) through the National Skills Fund (NSF).

03

SAIMI - THE BEGINNINGS

SAIMI was established in late 2014, championed by the South African Maritime Safety Authority (SAMSA) and the Department of Higher Education and Training (DHET) with support of a broad base of stakeholders from public universities and colleges, SETAs, the maritime industry, government and representatives from the African maritime sector.

Leading up to the formation of SAIMI:

- **2011:** Maritime Skills Development Study commissioned by SAMSA, and later that year a Maritime Skills Summit convened by SAMSA with DHET, and the Department of Transport. Both resulted in a recommendation to establish a dedicated national institute focused on maritime skills development.
- **2013:** A feasibility study commissioned by SAMSA confirmed the clear need for a national institute focused on maritime education and training.
- **2014:** Launch of Operation Phakisa to enhance maritime education and training capacity in South Africa to support, develop and maximise the oceans economy potential.
- **2014:** Release of a report by the Maritime Skills Technical Task Team of the Human Resources Development Council of South Africa, an advisory body in the Presidency, recommending the formation of an over-arching body to ensure better coordination of maritime skills development initiatives.

A multi-stakeholder Advisory Board, including representatives of industry, government and education, steers SAIMI's strategic direction and policy, and supports the Institute in maximising its impact and influence.

The overarching objective of SAIMI is to develop the contribution of the maritime sector to the economy of South Africa and Africa by effectively coordinating quality education, training and research with partner institutions.



SAIMI - WHERE TO NOW

The national oceans economy development strategy and programme – expressed in Operation Phakisa and the National Development Plan 2030 – is at the core of SAIMI's strategic agenda.

04

OUR PURPOSE

The purpose of SAIMI is to be South Africa's catalyst and platform for collaboration towards the sustainable growth, development and transformation of the oceans sector. SAIMI was established to help unlock South Africa's maritime potential by aligning and accelerating all maritime education, training, research, industry, social and government stakeholders into a comprehensive force for change and to jointly implement high impact interventions. To this end, SAIMI has been positioned to lead a partnership and collaborative effort towards the efficient and effective education, training and upskilling of South Africans, linking them to socio-economic opportunities and investing in new knowledge, technologies and innovations for a globally competitive SA maritime sector.

OUR VISION

A highly skilled, knowledge-intensive and sustainable oceans sector:

- Highly skilled and competent workforce
- Knowledge intensive oceans sector
- Sustainable oceans sector and economy

OUR VALUES

Our core values are underpinned by our enduring desire to make a sustainable impact. They serve as a set of guiding principles for all our staff and partners. Our way of working is, therefore, grounded on the IMPACTS value system:

Integrity - Underpinning all our work, we think and act with integrity

Meaningful Work - We focus our resources and efforts on high impact work

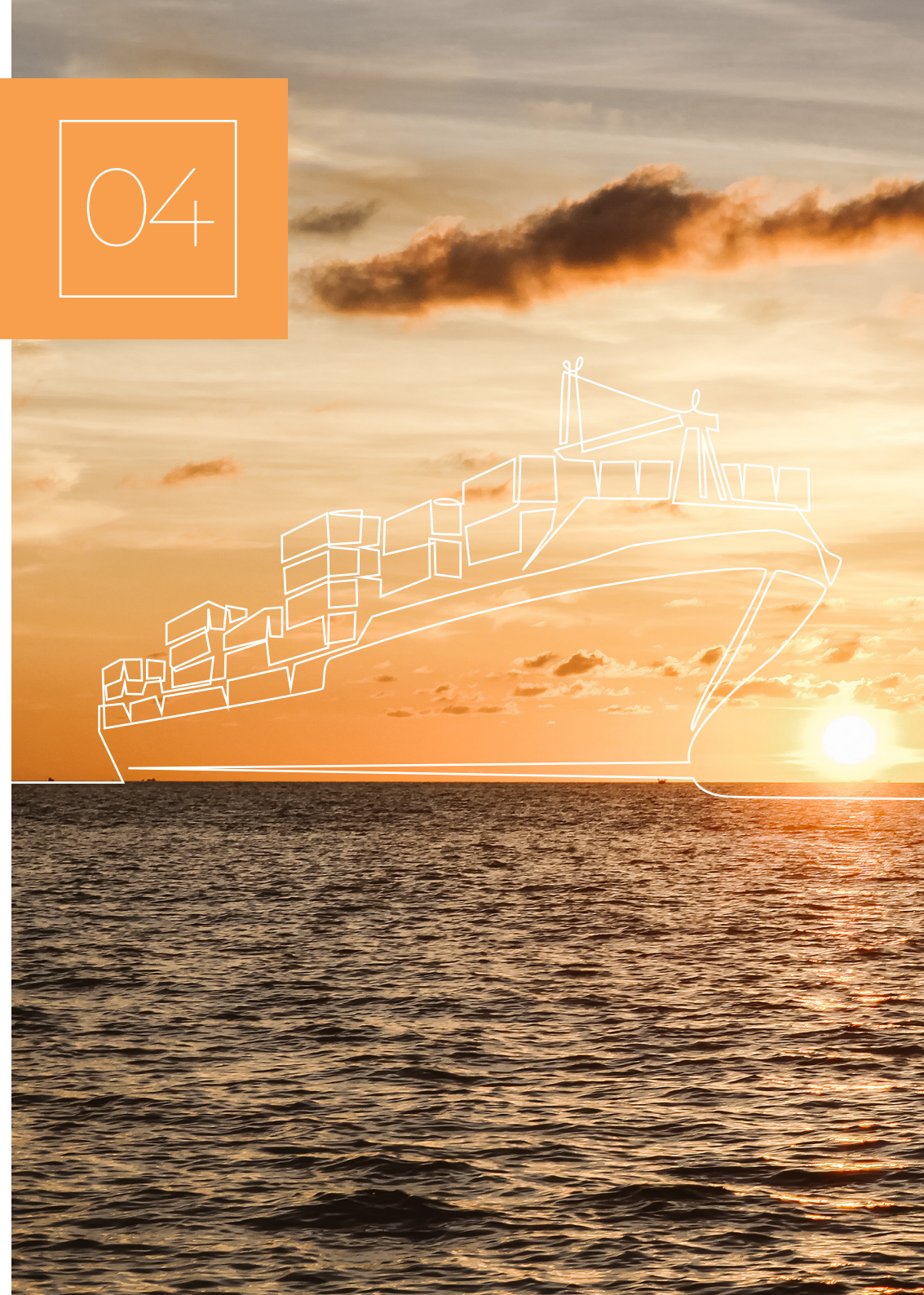
People - We embrace Ubuntu and are open, inclusive & connected

Accountability - We take responsibility for our own actions

Collaboration - Success is built on relationships and joint efforts

Transformation - We believe in the creation of shared value, growth and inclusivity

Sustainability - We meet the needs of the present without diminishing opportunities for the future





OUR MISSION

To help unlock South Africa's oceans and maritime socio-economic opportunities by catalysing education, skills development, training, research and innovation initiatives through broad-based collaborative partnerships and networks.

We will contribute to South Africa and Africa's socio-economic development in the oceans economy, through collaborative efforts across our network of partners:

- To help educate, train and develop a highly competent workforce for the oceans sector
- To undertake research into complex problems and design value creating solutions
- To conduct sector analysis, discover insights, foresights and leading perspectives on strategic issues affecting the oceans sector
- To support the introduction and application of new and innovative operations, products and services in the oceans sector
- To facilitate the systematic management of local and continental knowledge of our oceans sector.

OUR SCOPE

SAIMI's scope and area of focus can be defined as the oceans sector, which involves the key aspects of ocean governance, stewardship and the socio-economic value derived from ocean-based activities. These activities relate to fishing, recreation and leisure, commerce, trade and transportation, extraction of energy and minerals resources among many conventional and emerging new uses of the oceans. The oceans sector is comprised of the following broad areas of focus for SAIMI, which it will place a strategic emphasis on in supporting the development of South Africa's oceans economy, especially in the areas of advocating and supporting effective policy, education, skills development, training, research, innovation, knowledge management and collaborative models of development:

- Manufacturing
- Ports and Harbour infrastructure
- Transportation
- Energy and Mineral Resources
- Fishing and Aquaculture
- Commerce and Trade
- Research, Technology and Knowledge
- Policy, Governance and Stewardship
- Leisure, Tourism and Recreation

SAIMI is a multi-disciplinary, multi-stakeholder national institute that is supported by key public sector stakeholders such as the South African Maritime Safety Authority (SAMSA), Department of Higher Education and Training (DHET), National Skills Fund (NSF), Department of Trade, Industry and Competition (dtic), Department of Transport (DOT), Department of Science and Innovation (DSI), Department of Forestry, Fisheries and the Environment (DFFE), Transport Education Training Authority (TETA), South African Public Colleges Organisation (SACPO) as well as industry representation from amongst others, the South African Oil & Gas Alliance (SAOGA), FishSA, South African Boat Builders Export Council (SABBEX), Transnet, Shipowners, etc.



SAIMI'S ROLE

- **Advocacy & Co-ordination** - to promote the maritime sector and increase levels of training and placement of trainees and graduates.
- **Research & Innovation** – directly as well as through partner institutions and projects relating to policy formulation, sector economic growth and opportunities, curriculum development, technology and innovation.
- **Education, Training & Skills Development** – through partner institutions and training service providers.
- **Knowledge Generation & Information-sharing** – with seminars, conferences, discussion papers, thought leadership, media profiling, and professional development.

OPERATION PHAKISA SKILLS INITIATIVE

With a mandate from the Department of Higher Education and Training (DHET), SAIMI is coordinating the work of seven Operation Phakisa Skills Initiative Working Groups in the Oceans Economy Lab areas of:

- Aquaculture
- Marine Protection and Governance
- Maritime Transport
- Marine Manufacturing
- Offshore Oil & Gas Exploration
- Small Harbour Development
- Coastal and Marine Tourism.

The working groups are tasked with identifying challenges and solutions to delivering the skills targets of Operation Phakisa, in order to support SAIMI in developing a comprehensive national maritime skills development strategy and implementation plan for the DHET.

FOCUS AREAS OF THE SKILLS WORKING GROUPS

AQUACULTURE

Implementation of the outcomes of a Skills Audit commissioned by SAIMI and the working group is under way in partnership with the Department of Forestry, Fisheries and the Environment (DFFE). This includes incorporating existing AgriSETA and TETA initiatives for aquaculture skills development.

Other interventions towards skills development for aquaculture include career awareness, incorporating aquaculture into existing DFFE internship and work-based learning programmes, increasing the proportion of awards for aquaculture studies on the DFFE bursary scheme, providing short courses at the Aquaculture Training Centre in Gariep located in the Free State Province of South Africa for interns and existing and new farmers, and feasibility studies on the establishment of aquaculture demonstration centres in the Northern and Eastern Cape. The working group is also collaborating with industry and educational institutions on the development of an aquaculture qualifications framework and development of new qualifications to boost skills levels in the sector and train specialists in the critical areas of need. A Research Chair in Aquaculture as well as a Community of Practice (Aqua Health) is being planned in collaboration with the DFFE.

SAIMI is in the process of formulating a structured relationship with the Aquaculture and Fisheries Unit of the DFFE in respect of collaboration in research, awareness and industry co-operation/conferences. The compilation of a skills audit has been proposed for the Fisheries sector to create a baseline and understanding of the sector in respect of capacity and skills requirements in order to develop suitable interventions.

MARINE PROTECTION AND GOVERNANCE

Marine protection and ocean governance is a wide field – both geographically and academically – and a vast range of qualifications are relevant to the sector. The working group and SAIMI commissioned a Skills Audit in order to narrow these down to scarce and critical skills and identified priority areas for intervention.

Implementation of interventions identified via the Skills Audit is currently in progress, focused on improving skills levels in Compliance and Enforcement, Marine Spatial Planning, Fisheries Management, Fisheries Stock Assessment and Geographic Information System Data Management.

Recommendations made in the Skills Audit include consultation with universities on the inclusion or upscaling of ocean-related law modules, consultation with relevant stakeholders on the proposed approach for delivery of Marine Spatial Planning qualifications, the development of qualifications/ modules for identified areas within Marine Protection and Governance, identification of training providers for data management and data curation amongst others.

MARITIME TRANSPORT

This area focuses mainly on growing the pool of South African seafarers. SAIMI and the working group collaborate to address challenges of supply vs demand, strengthening links between the academic/theoretical component and practical sea-time requirements, lecturer development (including salary subventions to assist institutions in attracting and retaining professionally-qualified lecturers for maritime subjects), access to training berths, and employability. SAIMI also provided support to maritime high schools in the three coastal provinces, which included learning resources and capacity-building workshops. In addition, SAIMI partnered with the Gauteng Department of Education to launch a maritime high school in Sedibeng East in early 2019.

The National Seafarer Development Programme managed by SAIMI is a key intervention in seafarer development, providing South African maritime students with the practical training and sea-time experience that is required to achieve the STCW Officer of the Watch qualification that enables them to work as seafarers with international merchant shipping lines.

SAIMI has commissioned a study on the existing seafarer programme in order to develop a conceptual framework for the National Seafarer Development Programme in South Africa. This framework is meant to effectively map out a national seafarer development terrain for SAIMI with a clear consideration of the international requirements, starting at the level of basic education all the way through to absorption into the labour market.

A SAIMI Seafarer database is in development to collect data on seafarers already placed, looking for placement and employment.

MARINE MANUFACTURING

Key initiatives driven by SAIMI and the working group are focused on the development of qualifications for skills needed in marine manufacturing, particularly Naval Architecture; increasing the number of trained artisans; and working with industry to secure workplace-based learning placements for scarce and critical trades including apprenticeships, learnerships, competency-based modular training, and mentorship.

The SAIMI/Department of Trade, Industry and Competition (dtic) boatbuilding pilot project commenced in 2018, with the training of candidates on a boatbuilding learnership (3 years) and composite skills training programmes.

An agreement has been reached with the National Research Foundation (NRF) on the establishment of an NRF/SAIMI SARCHi Research Chair in Naval Architecture and Design.

A baseline Skills Audit and Needs Analysis has been commissioned to get a better understanding of the skills development requirements for the marine manufacturing sector; inform the interventions required to grow the skills base of the sector to meet current and future demands; and prioritise and guide the development of the qualifications required for the sector.

OFFSHORE OIL AND GAS EXPLORATION

SAIMI has partnered with the SA Oil and Gas Alliance (SAOGA) to implement the Skills Roadmap compiled for the sector through the working group. The focus areas are engineering, technician, artisan development and curriculum development.

SAIMI is partnering with the NRF to establish a Community of Practice (CoP) to develop high-level skills and conduct research to accelerate the discovery and production of oil and gas in South Africa. The CoP will seek to identify and fill knowledge and skills gaps in the oil and gas exploration, production and beneficiation value chain. Opportunities will be given to academic staff members to expand their proficiency in teaching and supervision of research in topics relevant to the discovery and production of oil and gas, and a range of projects will be initiated.

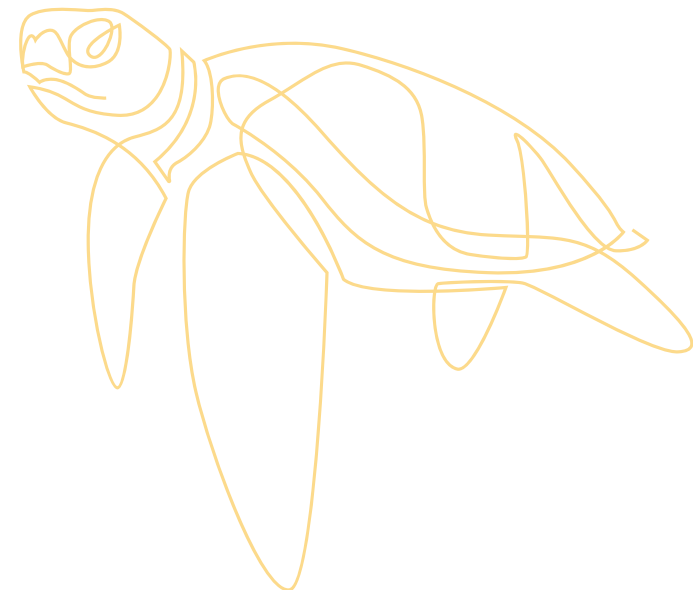
SMALL HARBOUR DEVELOPMENT

SAIMI, in collaboration with the Department of Public Works (DPW), commissioned a baseline Skills Audit and Value Chain Analysis for the Small Harbour Development sector in South Africa.

The aim of the study is to inform the interventions required to grow the skills base of the sector to meet current and future demands; prioritise and guide the development of the qualifications that are required for the sector; create a baseline to measure the impact of interventions; and identify critical and scarce skills required for the Small Harbour sector.

COASTAL AND MARINE TOURISM

A Skills Audit for the sector was conducted during 2019, to establish a baseline on the skills development status and needs, covering the broad scope of Coastal and Marine Tourism, including inland waterways, village and cultural experiences, and marine tourism guides. SAIMI and the National Department of Tourism (NDT) are in the process of implementing some of the recommendations that have been prioritised.



SPECIALISED PROJECTS & INTERVENTIONS

The SAIMI has identified that ensuring that the maritime culture is effected and promoted requires strategic specialised projects and interventions. The nature of such work includes activities that range from advocacy to applied research. Advocacy, works focuses on strategic stakeholder engagement and creating awareness. Whereas the applied research engages in practical solutions to current maritime issues and is provided through studies and in some cases policy related workshops and interventions.

OCEANS ECONOMY SKILLS AND EMPLOYMENT ASSESSMENT

The DHET has mandated SAIMI to collate the output of the skills working groups into a national maritime skills development strategy and implementation plan. SAIMI commissioned a study to profile the sector from a GDP and employment perspective, updating and refining work previously done on the South African oceans economy.

This Oceans Economy Employment and Skills Development Assessment, modelled on credible economic data and definitions, produced a realistic view of the oceans economy skills requirements over 20 years to 2035. The study identified the skills requirements (demand) in key oceans economy sub-sectors, and the current skills supply scenario from post-school institutions to meet these demands – leading to a clearer picture of the skills deficit in the oceans economy, and making recommendations on increasing capacity and, more importantly, matching skills supply to actual market needs.

The study is being used as a baseline for further, detailed research and will provide the basis for SAIMI engagement with industry and education providers on matching skills demand and supply – the first of which was the Forward Thinking for Maritime Education & Training Excellence Conference hosted by SAIMI in Durban in October 2019.

MARITIME AWARENESS AND YOUTH DEVELOPMENT

Fully realising the potential of South Africa's oceans economy requires building a national maritime culture and consciousness – encouraging South Africans to recognise their country as a maritime nation and take collective ownership and pride in a sustainable blue economy.

To this end, SAIMI is driving a national Maritime Awareness Programme (MAP), with the aim of raising greater awareness and involvement in the maritime environment by all sectors of society.

SAIMI is working with a multi-stakeholder task team of relevant government departments and agencies on a campaign to encourage South Africans to “buy into” the oceans economy as a key economic sector and raise awareness of the economic and career opportunities linked to the oceans.

MAP activities are focused on providing supportive learning materials to high schools introducing maritime subjects, and promoting awareness of maritime careers and study opportunities, leisure and sport, conservation and responsible citizenship amongst school learners, youth, unemployed and disadvantaged groups. The focus is on long-term, sustainable programmes and partnerships with maritime-related youth and community organisations.

In addition, the programme supports capacity-building of teachers, mentors and coaches to convey maritime information and awareness of opportunities, to impart knowledge and encourage participation in their areas of activity, such as classrooms, community outreach and youth development programmes. MAP was officially launched in September 2019 with the Dive In! Maritime Career Exploration Expo and a stakeholder engagement session. The launch was held in East London, as a pilot for a series of maritime career expo’s to be staged by SAIMI.

SPECIFIC YOUTH DEVELOPMENT ACTIVITIES

SAIMI supports several development initiatives for youth and maritime school learners, with the aim of strengthening existing programmes that raise awareness of maritime careers and the oceans environment as well as develop maritime and life skills. In particular, the intention is to strengthen the National Seafarer Development Programme by widening the pool of potential recruits and supporting better preparedness of learners for maritime studies.

- The South African Sea Cadets provide accredited practical maritime training courses along with leadership and life skills to Grade 6 to 12 learners at land-based training ships around the country, preparing young people for maritime studies and careers at sea.
- The General Botha Old Boys’ Association (GBOBA) Bursary Fund programme supports their bursary holders at Lawhill Maritime Centre with mentoring, extra mathematics and science tutorials, an annual maths and science five-day workshop for bursary holders and Sea Cadets, and the annual Sea Cadet Corps training camp to develop practical seamanship skills. The Bursary Fund also introduced a training programme with the National Sea Rescue Institute (NSRI) which exposes maritime learners to water safety and survival, emergency procedures and prevention of marine pollution.

- The Royal Cape Yacht Club (RCYC) Sailing Academy introduces disadvantaged youth to sailing and the maritime world. In partnership with SAIMI, the academy extended its programme to introduce Competent Crew and Day Skipper training along with STCW-required pre-sea courses. This allows the academy to take its programme beyond awareness to formal skills development, preparing participants for maritime studies and/or enabling them to obtain internationally recognised qualifications and employment opportunities as yachting crew and skippers.
- The Sail Africa Youth Foundation introduces disadvantaged youth to the sport of sailing and maritime culture and raises funds to provide formal training for sailing crew and instructors. SAIMI provides funding for Sail Africa to include Day Skipper and Instructor training, along with STCW-required pre-sea courses, in their youth development programme. In the past 10 years, disadvantaged youth introduced to sailing by Sail Africa have gone on to sail and skipper yachts in international races and to study and pursue various maritime careers.

OCEAN GOVERNANCE FOR AFRICA

This 4-week course by the International Ocean Institute African Region (IOI-SA) aims to strengthen multi-disciplinary ocean governance across the continent and build a network of “ocean ambassadors” equipped to contribute and promote responsible, knowledge-based ocean governance across the continent. SAIMI support since 2015 has contributed substantially to enabling delegates to attend and learn from the course.



FISHERIES TRAINING

SAIMI has supported various skills initiatives in the Fisheries Sector:

Alternative Livelihoods skills training programmes by Fisheries & Aquaculture Development Institute (FADI)

The training programmes focused on the reskilling of fishermen in entrepreneurship and construction. The project was targeted at providing training, skills development and mentoring to seasonal and under-/unemployed fishers in coastal communities to assist them in identifying and establishing new enterprise opportunities and alternative sources of income.

Abalobi ICT 4 Fisheries

The project focused on capacity building and technology deployment. SAIMI supported an initial pilot project to assist nascent fishing cooperatives to develop into viable small businesses through skills training and the use of the Abalobi ICT (information and communications technology) platform.

Small Business Development in the Fishing Industry

This initiative provided small business support to TETA-registered small companies on the maritime SIC codes.

GENDER-MAINSTREAMING FOR WOMEN IN THE MARITIME SECTOR

At the pinnacle of SAIMI's transformation agenda, is women development and active participation in the maritime sector. To ensure the participation gap is closed, SAIMI embarks on annual advocacy and awareness activities geared towards capacitation and awareness of opportunities in the maritime sector.

Capacity-building, specifically for women, will include those that target women and girls. Emphasis in this regard is on the need to empower women and girls through building their capacity to pursue the strategic objectives identified in the maritime industry and through increasing their life choices, their decision-making abilities, and their access to resources and services. This includes the provision of information on research opportunities and industry events, through various communication mediums (i.e structured monthly letters, interactive websites and other social media platforms)

education and training (through accredited short learning programmes, events and workshops), and equal access to infrastructure resources that are key for advancement within the maritime industry (i.e diving equipment and lessons, small boats for skipper licence requirements and advanced swimming and lifesaving operations).

The capacity of specialist institutions at the governmental and non-governmental levels (such as national machineries for the advancement of women, women's non-governmental organizations, gender advancement research institutions and programmes) and of mainstream institutions (such as committees, gender networks and task teams) are also very important for capacity building. Institutional programmes will look at the management dimension of capacity-building, including institutional change and knowledge management as it has been started by SAIMI, but will spillover and be tailored to the various key focus areas within the oceans economy.

Other interventions for the empowerment and capacitating women include:

- Awareness about entrepreneurial opportunities in the maritime sector.
- Supporting the establishment of women-owned businesses and cooperatives within the maritime sector, through the provision of enterprise development and skills development initiatives (for technical and soft skills), information, as well as facilitating access to capital.
- Supporting the participation of women in various forums aimed at advancing the empowerment and needs of women. These could include research and engagement platforms and networking initiatives to share experiences and offer guidance.
- Bursaries and mentorship opportunities.

The above have been delivered by SAIMI through strategic partnerships with women focused organisations such as Women's International Shipping & Trading Association – South Africa (WISTA-SA) and Women in Maritime Africa - South Africa (WIMA-SA).





**EXPLORING SOLUTIONS
TO SUPPORT SKILLS
DEVELOPMENT IN THE
BLUE ECONOMY.**



SAIMI

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