

Annual report 2018: South Africa – Norway Research Co-operation on Blue Economy, Climate Change, the Environment and Sustainable Energy (SANOCEAN).

Summary

SANOCEAN is a programme that started in 2018 with significant potential to contribute to expanded research opportunities and improve research cooperation between South African and Norwegian researchers within the selected thematic areas. Its focus is to strengthen, in a sustainable way, quality research and capacity building in the partner countries, both at institutional and individual levels. Special emphasis is put on ensuring the participation of Historically Disadvantaged Institutions (HDI) as well as researchers from historically disadvantaged backgrounds.

SANOCEAN focuses on academic excellence through direct research collaboration and exchange between South African and Norwegian researchers, as well as post-graduate students attached to the research projects.

The programme provides funding to research projects within the identified thematic areas to stimulate increased research collaborations, and exchanges between the two countries.

Multi- and/or inter-disciplinary research, including social sciences, is encouraged within all the thematic areas, as well as scientific complementarities between the Norwegian and South African research teams. Established research institutions in South Africa are expected to include HDIs in their research teams. The primary modality of the cooperation at project level is joint research. Each project is led by two principal investigators, one in South Africa and one in Norway.

The programme started in 2018 with the signing of a Framework Document and subsequent call for proposals. The final decision on which projects to support was not made until November 2018 when 10 joint projects were awarded grants. No project had started any activities by the end of the year.

Objective and purpose of the programme

The goal of the programme is enhanced knowledge – based policies and decisions for sustainable development in the areas of oceans and ocean space (blue economy), environment (with emphasis on oceans and pollution), climate change and sustainable energy in South Africa and Norway. Particular attention is paid on aspects leading to income generation and provide selling arguments to producers, service providers as well as young entrepreneurs. The research needs to be relevant to South African and Norwegian priorities. On a wider scale, the programme aims to contribute to achieving the Sustainable Development Goals (SDGs).

The overall programme period is six years. The first year (2018) is earmarked for completing the grant agreement(s) with the implementing agencies, prepare and launch the one and only call for grants, assess incoming proposals and allocate grants. The next two to four years (2019 -2022) will be the grant implementing period and the final year (2023) is reserved for reporting and finalising the programme.

The programme is implemented and administered jointly by the Research Council of Norway (RCN) and the National Research Foundation (NRF). The two implementing agencies form the Secretariat.

Description and assessment of activities, performance and future plans

Results, impacts and societal outcomes

The Framework Document governing the new programme was signed on 9 February 2018 at the Norwegian Embassy in Pretoria. The Department of Science and Technology's (DST) Acting Deputy Director General, Dr Neville Arendse and Minister Counsellor Paal Bjørnstad signed on behalf of their respective governments. SANOCEAN is the fourth of a series of joint bilateral research cooperation programmes that have enjoyed joint financing from both South African and Norwegian authorities. The first one started in 2002 and covered a wide set of thematic areas, as did the second one. The third one, SANCOOP, which concluded at the end of 2017, covered the areas climate change, the environment and renewable energy.

Immediately following the signing of the Framework Document, a call for proposal with deadline 25 April 2019. 24 applications were received, out of which two were subsequently withdrawn. The number of applications was somewhat less than expected, probably due to the short period between the announcement of the call and the application deadline. However, all the project that eventually received grants were all high quality and largely covered all the prioritised thematic areas and sub-themes identified in the Framework document, as listed further below.

The selection process followed the same rigorous procedures as in SANCOOP. The proposals were submitted jointly through the RCN electronic application system, but to satisfy South African formal requirements as well, the applicants were required to submit a signed "Partner Form" with information about not only the formal qualifications of the South African researchers and students involve in the project, but also their racial background as the participation of representatives of previously disadvantage groups is an important aspect of SANOCEAN's objectives ("redress").

All projects were first subject by parallel evaluations by panels in South Africa and Norway, respectively. The reports from the panel were then discussed jointly by an especially appointed International Committee (IC) with four academic experts from each country and a representative from the management of each of the two administering research councils, NRF and RCN. The IC thus consisted of ten members, assisted by the joint secretariat of SANOCEAN. It met in Pretoria 13 and 14 November and used the Norwegian scale (1-7) in their final assessment and ranking of all the proposals received. In order to satisfy the redress requirements, the Secretariat then went through the ranking list to identify those projects that demonstrated greatest potential for involvement of researchers and students from the historically disadvantaged groups.

Two days later, on 16 November, the ranking list and the comments of the IC were discussed by SANOCEAN's Joint committee consisting of the two financing bodies of the Programme, DST and MFA resented by the Norwegian Embassy in Pretoria. It is the highest decision-making body of SANOCEAN. The decision of the JC was that the following projects should be supported:

Project title	NO Institution	SA Institution
Factors influencing the formation, fate and transport of microplastic in marine coastal ecosystems	SINTEF OCEAN AS	Stellenbosch University
Water/Energy conservation and fairness in collective burden sharing	Samfunns- og næringslivsforskning AS	University of Cape Town
Southern Ocean phytoplankton community characteristics, primary production, CO2 flux and the effects of climate change	Norwegian Polar Institute	The Council for Scientific and Industrial Research (CSIR)
Emerging species for sea cucumber aquaculture	MØREFORSKING ÅLESUND AS	University of KwaZulu-Natal
Probing the electronic properties of nickel oxide (NiO) as electrocatalyst for renewable and sustainable electrolytic hydrogen production	NTNU	North-West University
Marine Sewage Outfalls - Environmental Impact Evaluation	University of Stavanger	University of the Western Cape
Microplastics in wastewater as a carrier and dispersal route of antibiotic resistance in oceans	GENØK - SENTER FOR BIOSIKKERHET	North West University
Impact of land-based activities on the coastal environment (Coast-LaB): Seawater desalination and wastewater discharge	NIVA	Durban University of Technology
Blue growth opportunities in changing kelp forests.	Institute of Marine Research	University of Western Cape
Benchmarking knowledge-based adaptive management of estuarine fisheries in South Africa for a sustainable development	NINA	South African Institute for Aquatic Biodiversity

Research is in its nature a long-term undertaking where actual outcomes may differ from the original expectations. Results from research undertakings take time to fully analyse, high quality research publications must undergo time-consuming peer reviews before they are ready to be printed in a journal and the actual impacts of the results may not be visible until long after the research project itself has come to a formal conclusion. Therefore, a 'theory of change' approach is used in SANOCAN. The term describes how a research process contributes to impact, taking account the context, actors involved and the sequence of change or the chain of logically linked cause-effect relations. Explanations of these relationships had to be included in the proposals by the researchers' grant applications, following a research impact pathway or results framework.

As specified in the Framework Document, a results chain has been developed for the programme accompanied by a set of measurable and verifiable qualitative and indicative indicators, including measurable targets where relevant. These include more knowledge-based innovations leading to new job opportunities, as also specified in the Framework Document.

Thematic and scientific priority areas, sectoral and industry-related responsibilities

SANOCEAN will, as the name implies, focus more on oceans and ocean-related research. Ocean space and the blue economy is a strategic priority for both South Africa and Norway as reflected by the launching of Operation Phakisa, which aims to fast-track solutions on critical development issues in South Africa, and the recent White Paper on the place of the oceans in Norway's foreign and development policy. Norway and South Africa also recognise the threat of dangerous climate change and work towards achieving the decisions taken during the 2015 Paris agreement, calling for continued knowledge production on climate change, the environment and renewable energies. Research in all these fields should provide a renewed basis for cooperation, innovation, and the pursuit of profitable business opportunities for both countries.

Multi- and interdisciplinary research is encouraged in SANOCEAN, as well as scientific complementarity between the South African and Norwegian Research teams. Proposals in the following broadly defined thematic areas under the broader oceans' framework have been considered:

- Ocean space and the Blue Economy
- Environment
- Climate Systems Impacts on Society
- Sustainable energy

The programme also calls for the following cross-cutting issues:

- A gender and youth with special attention to gender mainstreaming;
- Research with an emphasis on environmental and climate-friendly solutions in all sectors;
- Emphasis on aspects beneficial to local communities and job creation.
- A risk management approach to indicate where there are risks of not achieving the objectives and fall-back positions;
- An integrative approach and a trans-disciplinary partnership are considered essential to achieving the expected impacts and may require insight from the natural and social sciences as well as the humanities.

Impact on research capacity

Expected outputs of the projects supported by the programme include working papers and presentations in international journals, articles in refereed-based journals, other journals, textbooks and anthologies as well as more popularised scientific articles, models, fact sheets and media exposure. An important aspect will be the production of post-graduate student degrees, with emphasis on the participation on gender equality and students from historically disadvantaged groups and institutions.

The Framework Document also calls for a balanced gender-based approach in the research projects. The projects are expected to integrate a gender approach in their research and to pay special attention to gender mainstreaming. This entails recognising the different roles of women and men and acknowledging the complementarity of both, to obtain full gender equality. In addition, SANOCEAN aims towards more female researchers within the selected thematic areas, more young

researchers from HDIs in South Africa through targeted scholarships, and to produce educated Masters or PhD candidates with relevant and high-quality competence;

Quality of research/Level of innovation

The focus of SANOCCEAN is to strengthen, in a sustainable way, quality research and capacity building in the partner countries, both at institutional and individual levels. Its principal criteria in the selection of which projects to support has been scientific quality in relation to the research standards currently applicable within the field or discipline. Another of several important selection criteria has been relevance and feasibility in relation to the objectives and prioritized areas of the programme.

The supported projects are researcher projects, it is emphasized that research in all the fields covered by the programme should provide a renewed basis for cooperation, innovation, and the pursuit of profitable business opportunities for both countries.

The expected impact of the programme is knowledge-based policy changes in the thematic areas covered by the programme, innovative ideas for entrepreneurs and industry for job creation and economic development, particularly for the sustainable utilisation of marine and other aquatic environments.

International cooperation

As a bilateral research programme based on equal partnership on all levels and funded by both countries, SANOCCEAN is obviously totally reliant on international cooperation. The primary modality of the cooperation at project level is joint research, which include one or more of the following elements:

- Joint laboratory and field work;
- Exchange of project staff and post graduate students;
- Alignment with existing scholarship/bursary programmes;
- Exchange of scientific and technological information and documentation;
- Provision of equipment grants (only for disbursement to South African institutions);
- Knowledge sharing and research uptake approach; and
- Planning of joint participation in international research programmes.

This last point is particularly aimed at participation of the present Horizon 2020 and the future Horizon Europe. The European Union and South Africa have long been committed to strategic cooperation in science and technology, dating back to their 1996 Cooperation Agreement, which facilitated cooperation under the Framework programmes. Both the implementing agencies of SANOCCEAN, NRF and RCN are among the ten partners of ESASTAP 2020, a H2020 project that aims is to support the deepening of scientific and technological cooperation between Europe and South Africa with a special focus on innovation. This is achieved firstly by supporting South Africa's participation in Horizon 2020, and by promoting reciprocal European participation in South African programmes. It also enables bilateral policy dialogue, notably to identify priority areas for mutually beneficial cooperation.

Enhancement of the research- and innovation system

The projects that were awarded grants have had to identify expected outputs and justify how they will lead to outcomes that in the long term will contribute to the expected goals of the programme. Moreover, the targeted outcomes had to be justified with the knowledge gaps within the identified thematic areas and the relevance of the research for economic and social development, including job creation. The researchers are expected to actively contribute to the transition from research outputs to societal benefits in accordance to a results chain model.

Expected impact of the programme is knowledge-based policy changes in the thematic areas covered by the programme, innovative ideas for entrepreneurs and industry for job creation and economic development, particularly for the sustainable utilisation of marine and other aquatic environments, as well as adaptation strategies to reduce climate and environmental change.

Communication and advisory activities

The programme reports primarily to the Joint Committee (JC). The JC is the highest decision-making body in the programme. It is composed of representatives of the DST and the MFA. It meets at least once a year in the Annual Meeting. Besides discussing and approving progress reports, the Annual Meeting will share information on the interaction between research officials and policy makers in both countries and discuss new developments within national development agendas in general with specific relevance to the thematic areas.

A launching conference will be held as soon as the projects have started with the participation of all the new projects to present their plans and create opportunities for collaborations between projects funded under the programme. In December 2018 it was decided that this conference be held 25-27 March 2019 in Port Elizabeth.

A close-out conference will be organised at the end of the co-operation period, to review the challenges and opportunities during the implementation of the programme.

A principal communication channel for the programme is the Facebook group South Africa - Norway Research cooperation <https://www.facebook.com/groups/181583639090451/> which is open for anyone interested and which SANOCEAN researchers are encouraged to engage in. The programme has also its own programme home-page on RCN's web-site www.rcn.no.

Available funding and resources

SANOCEAN is funded by the Norwegian Ministry of Foreign Affairs (MFA) through the Embassy in Pretoria and the Department of Science and Technology (DST) in South Africa. The Norwegian grant will be disbursed from MFA directly to NRF and RCN in instalments in accordance with the grant agreements to be entered into force between MFA and the respective implementing agency. The grant will not exceed NOK 30 million for the planned period 2018-2023. DST will disburse an amount of R15 million to the NRF for the planned period 2018 – 2032.

Research grants are available for a maximum of four years. The total amount applied for cannot exceed NOK 4.0 million per project for the whole period. The total amount of each joint project applied for cannot exceed NOK 1,000,000 per annum (the exchange rate at the time of the call will determine the NOK-ZAR rate). More than 50 % of the project funding must be allocated to the South African partner in each project. The portion of the grant allocated to the Norwegian partner have been distributed as illustrated in the following table:

	Inntekter	Forpliktelser	Utlysingsplan	Resultat	ProsjektInfo	Regnskapsført	Kopiere arbeids	
Resultat Endre aktivitet								
				2019	2020	2021	2022	2023
Disp. bud.				5 750	5 476	5 896	6 154	3 341
▶ Inntekt				4 250	4 250	4 250	4 250	1 500
▶ Utgifter				4 524	3 830	3 992	4 313	0
Avsetning				1 226	1 646	1 904	1 841	3 341
Avsetning mot disp.bud				21%	30%	32%	30%	100%

Key figures

Årsrapport 2018



Nøkkeltall for SANOCEAN

Antall utlysninger

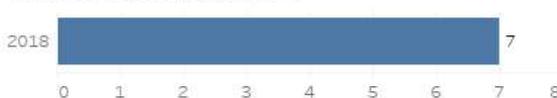


Antall søknader 2018: 22

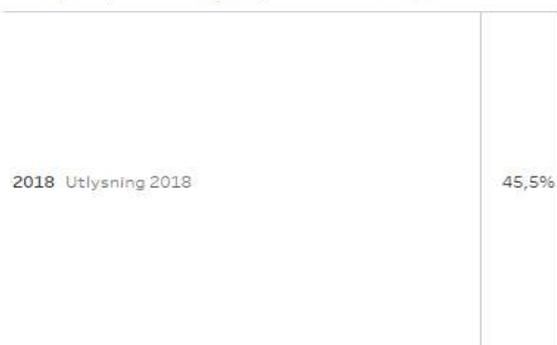
Andel kvinnelige prosjektledere i søknader



Antall søknader med karakter 6 og 7



Innvilgelsesprosent - utlysninger med søknadsfrist

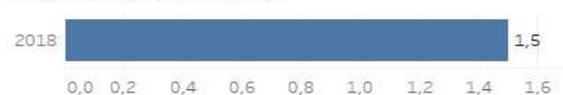


Antall resultatindikatorer

FoU-inntekter

2018	
Utenriksdepartementet	-1,5
Totalt	-1,5

Disponibelt budsjett i mill kroner



Forbruk og overføringer, mill kroner

2018	
Overføringer	-1,5
Regnskapsført beløp (mill kr)	0,0

Antall nye prosjekter 2018: 2

Andel kvinnelige prosjektledere i nye prosjekter

