

SANCOR

**AN ANCHOR IN THE MARINE
AND COASTAL ENVIRONMENT**



**SOUTH AFRICAN NETWORK FOR
COASTAL AND OCEANIC RESEARCH**

What is SANCOR?

- ▣ **To co-ordinate, facilitate, stimulate and review marine and coastal environment research in South Africa, to promote wise and informed management of the use of the marine and coastal environments.**



agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA



RISA
Research and Innovation
Support and Advancement

SANCOR Community
(marine and coastal scientists, engineers,
technologists, institutions, policy-makers
and administrators)

Network of over
1800 individuals
and many
organisations

**SANCOR
Forum**

**SANCOR
Steering
Committee**

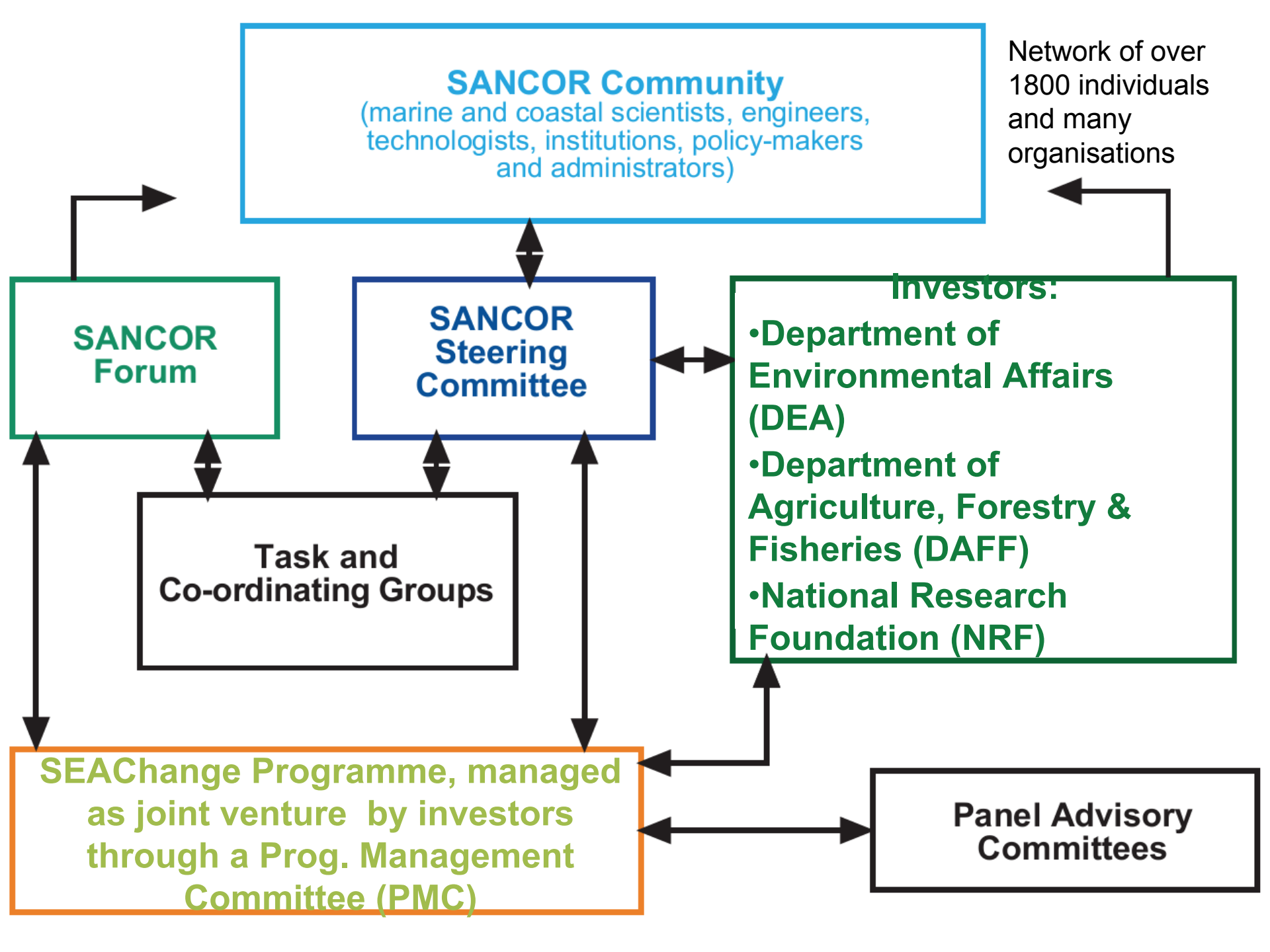
Investors:

- Department of Environmental Affairs (DEA)
- Department of Agriculture, Forestry & Fisheries (DAFF)
- National Research Foundation (NRF)

**Task and
Co-ordinating
Groups**

**SEACChange Programme, managed
as joint venture by investors
through a Prog. Management
Committee (PMC)**

**Panel Advisory
Committees**



Our long term goals

- ★ Promoting internationally competitive research as the basis for a knowledge economy;
- ★ Developing an active network of coastal and marine scientists in South Africa;
- ★ Growing a representative science and technology workforce in South Africa;
- ★ Contributing to a vibrant national innovation system

What does SANCOR do?

- ▣ Provides a forum for interaction, collaboration and communication.
- ▣ Co-ordinates and integrates activities by stimulating interdisciplinary and inter-institutional collaboration.
- ▣ Contributes pro-actively to policy development.
- ▣ Assists in the development of capacity.
- ▣ Promotes the benefits of research findings.
- ▣ Acts as a broker between national and international funding agencies and researchers.

OUR FOCUS

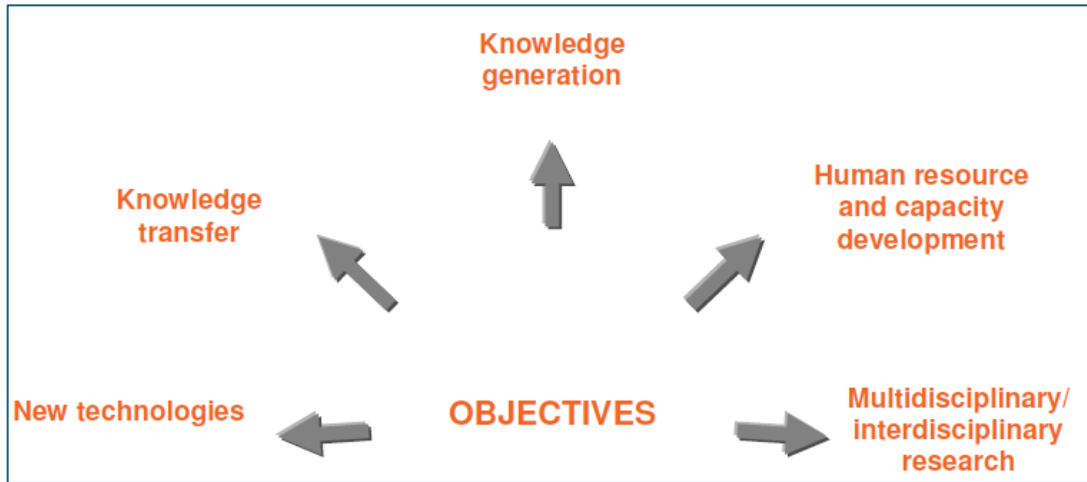
science in the marine and coastal environment

How does **SANCOR** achieve its goals?

- ★ **Steering Committee**
- ★ **Task Teams**
- ★ **MCEN Co-ordinating Group**
- ★ **Triennial Southern African Marine Science Symposium (1980)**
- ★ **Workshops**
- ★ **Seminar series (UCT - 1978)**
- ★ **Awards – Gilchrist, Derek Krige, Communicator, Emerging Scientist (2014), Travel Grant,**
- ★ **Postdoctoral Fellowship (2015)**

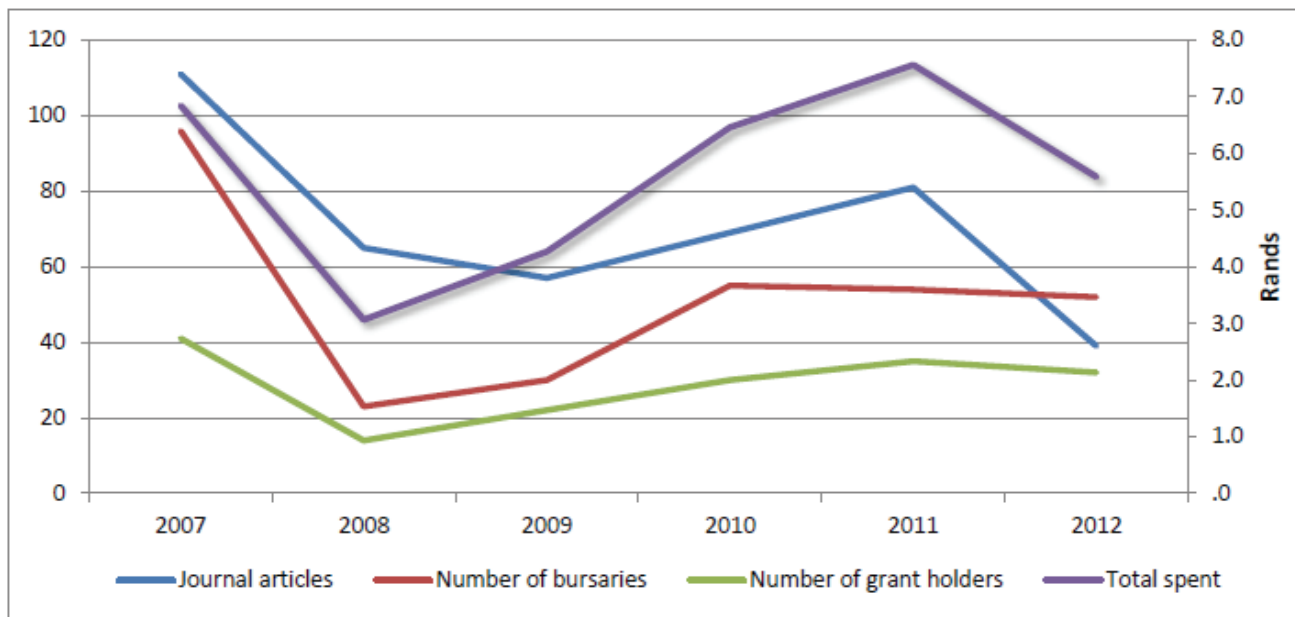
SEACChange Programme (2007-2014)

3rd phase of Sea and Coast Programme



- ★ R38,2 million
- ★ 458 peer-reviewed articles
- ★ 371 technical reports
- ★ 348 bursaries

- **Ecosystems and Change** is concerned with changes in marine ecosystems over space and time, including long-range forecasting, and the physical and biological explanations for changes such as extreme marine events, harmful algal blooms, low-oxygen events and Benguela Niños.
- **Ecosystems and Society** emphasizes the interactions between natural ecosystems (and parts thereof) and human societies.
- **Ecosystem Functioning** concentrates on explaining the fundamental structure and functioning of ecosystems and the factors that influence the dynamics of these systems.
- **Marine Biotechnology** supports research towards the development of new products and processes involving marine organisms.



The investment into and research output of SEACChange Programme (since its inception in 2007 to 2012)

Table 6: Graduations on the SEACChange Programme (2007-2012)

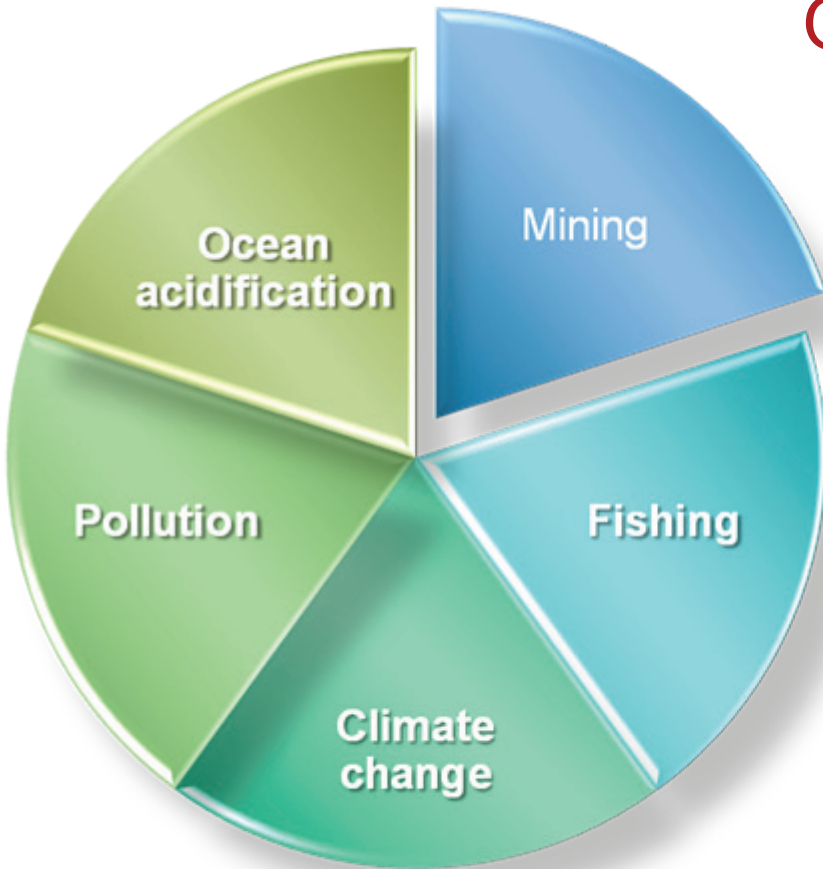
	Undergraduate	Honours/Btech	Masters	Doctoral
BF	1	5	3	0
WF	1	3	12	1
BM	2	2	4	0
WM	1	1	6	2
Total	5	11	25	3

ECOSYSTEM FUNCTIONING Ecosystem structure and functioning, and factors influencing ecosystem dynamics, including biodiversity, conservation, ecology, etc.		
Definition and delimitation	Ecosystem processes	
<p>a. Definition and delimitation of the physical environment</p> <ul style="list-style-type: none"> • Recruitment patterns and process • Defining bioregions, ocean provinces, regional and geographic definition • Seabed mapping • Near-shore oceanography (physical and biological oceanography) • Chemical oceanography • Mapping biotopes (eg. reefs, seamounts, etc.) <p>b. Composition of the biota</p> <ul style="list-style-type: none"> • Biodiversity • Taxonomy & systematics • Species delimitation and genetic boundaries • Assemblage structure • Ecological interactions • Offshore and deep-sea biota (from 30m depth) • Taxonomic gaps (particularly small, deep-sea, microbial) • Taxonomy of larval stages • Fish taxonomy (in light of fish taxonomists retiring and leaving the system) • Microbial ecology <p>c. Organization of the ecosystem</p> <ul style="list-style-type: none"> • Trophic composition 	<p>a. Physical</p> <ul style="list-style-type: none"> • Waves • Wind • Tides • Currents • Rivers • Temperature • Turbidity • Upwelling • Near-shore oceanography (physical and biological oceanography) • Land-sea interactions, e.g. freshwater requirements of marine environments, etc. <p>b. Geological</p> <ul style="list-style-type: none"> • Sedimentary composition • Sediment transport • Rock type • Geological history <p>c. Chemical</p> <ul style="list-style-type: none"> • Accumulations in sediments • Nutrients and nutrient fluxes • Iron limitation • Salinity <p>d. Biological</p> <ul style="list-style-type: none"> • Dispersal and recruitment • Migration and movement patterns • Seasonal cycles 	

In 2013, the African Journal of Marine Science published a number of papers that summarised the results of SEACChange funded projects.

Reviewing evidence of marine ecosystem change off South Africa

- CL Moloney, ST Fennessy, MJ Gibbons, A Roychoudhury, FA Shillington, BP von der Heyden & K Watermeyer (2013) African Journal of Marine Science, 35:3, 427-448



Observed/documentated changes

- Physical environment
 - Temperature
- Ocean chemistry
 - Oxygen
- Distribution and abundance
 - Observed at different trophic levels
- Timing of ecological processes
- Community composition
- Ecosystem dynamics and foodweb pathways

Outcomes and (future) requirements

Moloney et al. (2013)

- Information available for 1 out of 5 anthropogenic pressures – Fishing
- Mining, pollution and ocean acidification have not been given adequate attention
- Baseline data and continuous monitoring is required
- Standardised monitoring protocols

SANCOR and Students

- ★ Elected student representative on Steering Committee
- ★ Student platform in newsletter and seminars
- ★ Overseas travel grant for a student each year
- ★ Student workshops
- ★ Advertise vacancies and funding opportunities
- ★ General information



OCEAN CREW... Postgraduate students from the four Eastern Cape universities came together recently to learn from one another and showcase the work they do in marine science in the province. Photo: Carmen Visser

EC marine science students unite

SANCOR Forum

The SANCOR Forum is a broadly-based consultative, communication and advisory body.

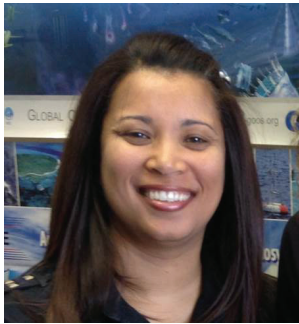
- Serves as a platform for the exchange of ideas and for discussion
- Receives/comment on reports of Co-coordinating & Task Groups
- Consult, communicate & advise investors on SMCE
- Promote the implementation of SMCE research findings in the management of South Africa's marine resources
- Receive report-back from and comment on the activities and initiatives of the Steering Committee
- Make inputs to future SMCE strategy
- Input to the development of scientific programmes within SANCOR.

The Forum elects seven members to the Steering Committee, one of whom will be the Chairperson of the Forum.

The role & functions of the Steering Committee

- ★ Ensure that the objectives of SANCOR are met,
- ★ Consult with the forum as appropriate
- ★ Provide continuity, direction & leadership
- ★ Assess and review programmes & products
- ★ Make inputs to SMCE strategy
- ★ Promote the use of SMCE findings in the management & conservation of South Africa's marine resources
- ★ Provide advice on overall priorities, gaps & funding in SMCE
- ★ Consult, inform & lobby members of the public & decision-makers as appropriate.

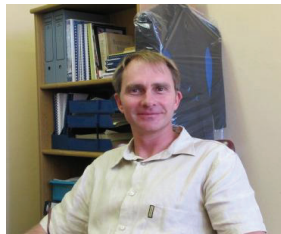
Steering Committee Members	Portfolio
Dr Anusha Rajkaran	Steering Committee Chair Eastern Cape Representative
Dr Louis Celliers	National Forum Representative and Vice Chairperson
Dr Serge Raemakers	National Forum Representative - Social Scientist
Miss Rita Steyn	Student Representative
Dr Ursula Scharler	KwaZulu-Natal Representative
Prof Ticky Forbes	SANCOR Forum Chair
To be determined	Western/Northern Cape Regional Representative
Ms Zini Manana	NRF Representative
Dr Kim Prochazka	DAFF Representative
Dr Andy Cockcroft	DAFF Representative
Dr Jimmy Khanyile	DEA Representative
Dr Lara Atkinson	National Forum Representative



Ms Carmen Visser –
SANCOR secretariat



Dr Serge Raemakers



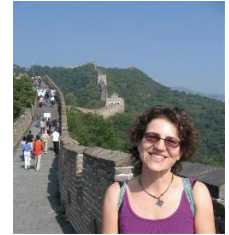
Dr Louis Celliers



Prof Ticky Forbes



Dr Lara Atkinson



Dr Ursula Scharler



Ms Rita Steyn



Dr Anusha Rajkaran



Mr Jimmy Khanyile



Dr Kim Prochazka



Ms Zini Manana

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