



International  
Science Council

FROM SHORES TO HORIZONS

# Empowering Science for the future of Large Ocean States

A DECLARATION BY THE ISC SIDS LIAISON COMMITTEE



**International  
Science Council**  
Regional Focal Point for  
Asia and the Pacific

Regional Focal Point  
for Latin America  
and the Caribbean



**International  
Science Council**

# About the International Science Council

The International Science Council (ISC) works at the global level to catalyze and convene scientific expertise, advice and influence on issues of major concern to both science and society. The ISC has a growing global membership that brings together over 250 organizations, including international scientific unions and associations from natural and social sciences, and the humanities, and national and regional scientific organizations such as academies and research councils.

## The ISC's commitment to SIDS

SIDS are recognized by the United Nations as a specific priority group of countries. Their small size, remoteness and limited resource bases mean they tend to share a number of unique challenges for sustainable development. SIDS are also particularly vulnerable to the impacts of climate change and to natural disasters, which are likely to become more frequent and more intense in the future.

Against this backdrop, the ISC, with support from the expertise of its SIDS Liaison Committee and its Regional Focal Points for Asia and the Pacific and Latin America and the Caribbean, sees its main role in providing evidence-based, politically independent, and actionable scientific guidance to decision-makers by drawing on the scientific community in Small Island Developing States.

## ISC SIDS Liaison Committee

The Small Island Developing States Liaison Committee is consulted on strategic matters and works to ensure that representation of the SIDS scientific community is strengthened across the Council's activities.

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# About Small Island Developing States

Small Island Developing States (SIDS), also known as Large Ocean States (LOS), face **unique challenges** due to their geographical, ecological, and socio-economic characteristics.

**Science and technology play a crucial role** to “chart the course towards resilient prosperity” in addressing these challenges by providing **evidence-informed solutions** and fostering innovation.

**SIDS are leading the way towards sustainable development**; they are at the forefront of adaptation, resilience building, and transformation given the **existential risks** they face.

The ISC SIDS Liaison Committee invites all experts, scientists, and institutions connected to SIDS to endorse the following declaration:



## 1 Priority science issues for SIDS

### SPECIFIC CHALLENGES DISPROPORTIONATELY AFFECTING SIDS



Climate change impacts, including sea-level rise, extreme weather events, and coastal erosion, with loss and damage disproportionately affecting and posing existential threats to SIDS.



Biodiversity conservation and ecosystem restoration to preserve unique terrestrial and marine habitats.



Food, nutrition, and water security and agricultural resilience in the face of climate variability and limited arable land.



Addressing marine degradation, including overfishing, pollution, and habitat destruction.



Sustainable energy solutions to reduce dependence on imported fossil fuels and promote renewable energy sources.



Devising and implementing targeted initiatives for debt relief to alleviate the economic burden of SIDS.

### FUNDING REALITIES AND SCIENTIFIC VISIBILITY OF SIDS

Challenges in securing funding for scientific research in SIDS, including limited access to international funding sources and competition with larger countries for limited resources.

Lack of visibility of SIDS scientists and research institutions on the global stage, linking to the brain drain phenomena, reduced human resource capacity, and fewer local scientists.

Limited publication of data and information collected in SIDS in peer-reviewed journals, resulting in reduced visibility in major assessment reports such as those by the IPCC.

Compliance with the "global rhetoric" for funding and visibility often takes precedence over addressing the unique existential challenges of SIDS, diverting resources away from critical local needs.

# 2 Key pillars for resilience, innovation, and prosperity

## CAPACITY-BUILDING IN SIDS

- ① Importance of science education initiatives
  - Establishing robust science education programmes – including natural and social sciences, and the humanities – from primary to tertiary levels to nurture scientific talent.
  - Creating pathways for students to pursue Science, Technology, Engineering, and Mathematics (STEM) fields.
  - Implementing programmes to retain local talent and address brain drain, such as scholarships, mentorship initiatives, and career development opportunities.

- ② Institutional capacities
  - Establishment of national science commissions or councils to coordinate and prioritize scientific research and development efforts.
  - Creation of regional or sub-regional academies of science to serve as a collective voice for SIDS and facilitate knowledge exchange.
  - Harnessing digital opportunities to overcome geographical barriers, improve access to information and expertise, and enhance research collaboration.

- ③ Integration of Indigenous Knowledge and Local Knowledge (IKLK) with modern science
  - Recognizing the value of IKLK systems in addressing environmental and societal challenges.
  - Leveraging traditional knowledge and indigenous practices for sustainable resource management.
  - Promoting collaboration between traditional knowledge holders and scientific communities to co-produce solutions that are culturally appropriate and scientifically sound.

### EXAMPLE

*The University of the West Indies, the University of the South Pacific, the Intra-Caribbean Mobility Programme, to only name a few, have mechanisms in place to offer scholarships, bursaries, and mentorship and career development programmes to train in STEM.*

### EXAMPLE

*The Caribbean Academy of Sciences, as well as the future Pacific academy of sciences, both of which are initiatives supported by the International Science Council, not only support regional collaboration but also bring science organizations together to strengthen participation and representation in the international scientific community.*

### EXAMPLE

*The nexus between the use of IKLK and modern science is gaining traction among many SIDS. Emerging indigenous research methodologies in the Pacific Islands and the Oceania region aim to introduce culturally grounded concepts and methods into mainstream research, thus counteracting historical colonization biases affecting scientific research efforts.*

*In the Caribbean, initiatives like the Caribbean Local and Traditional Knowledge Network facilitate the integration of IKLK into climate adaptation and community resilience projects, fostering culturally relevant solutions.*

## ECONOMIC DIVERSIFICATION AND RESILIENCE



### Importance of economic diversification for SIDS

- Reducing reliance on traditional industries such as tourism and agriculture by exploring new economic sectors, fostering economic diversification for resilience.
- Supporting the growth of startup ecosystems and small businesses through access to finance, mentorship, and networking opportunities, including South-South cooperation.
- Fostering collaboration between universities, research institutions, businesses, and government agencies to drive innovation and economic development.



### Leveraging natural endowments for scientific and technological development

- Identifying and capitalizing on SIDS' unique geographical features and appeal (way of life, beautiful spaces, island living), biodiversity, and cultural heritage as assets for innovation and talent retention.
- Investing in research infrastructure and technology transfer capacity to harness natural resources sustainably.
- Take advantage of opportunities for SIDS to be testing grounds for technological innovations that can be replicated and scaled up in larger markets.

### EXAMPLE

*Barbados, Jamaica, and Trinidad and Tobago, among others, have already had success in diversifying their economies, particularly in Information Communication and Technology (ICTs) and financial services sectors, demonstrating resilience through economic adaptation. In some SIDS, economic diversification within the tourism sector is evident, offering not only beach or nature tourism but also heritage tourism.*

### EXAMPLE

*Some SIDS have implemented 'digital nomad' programmes – people who travel freely while working remotely using technology and the internet – capitalizing on their natural attractivity and integrating skilled individuals in their workforces.*

## STRENGTHENING SCIENCE ADVICE



### Bridging the gap between science and policy in SIDS

- Establishing dedicated mechanisms for providing science advice to policy-makers, including scientific advisory panels and expert committees.
- Strengthening institutional capacity for science advice within government agencies and ministries.
- Facilitating interdisciplinary research and knowledge exchange platforms to address complex challenges facing SIDS.
- Enabling IKLK to contribute to scientific advice to decision-makers.

### EXAMPLE

*Organizations such as The Pacific Community and the Secretariat of the Pacific Regional Environment Programme, provide evidence-based advice to Pacific SIDS on a wide array of local and priority issues like water and sanitation, disaster preparedness and response, food security, and so on.*



# 3 The Call to Action from the SIDS scientific community

## FOR PROSPEROUS, SUSTAINABLE, INNOVATIVE SIDS ECONOMIES



Recognizing the urgent need for collective action and international cooperation to support SIDS' sustainable development.



Committing to prioritizing science and technology as key drivers of innovation, resilience, and inclusive growth in SIDS.



Calling upon the international community to increase support for scientific research, capacity-building initiatives, and technology transfer in SIDS.



Promoting partnerships and knowledge-sharing networks to build local scientific expertise and to facilitate collaboration among SIDS, high-income countries, and international organizations, enhancing SIDS' presence in global discussions and decision-making processes.

## FOR STRENGTHENED SIDS SCIENCE SYSTEMS



Resolving the mismatch between what donors are prepared to fund and what SIDS countries may see as their priorities, undermining capacity development in SIDS.



Providing capacity-building workshops and training programmes to SIDS researchers, facilitating networking opportunities between SIDS researchers and potential funders through conferences, seminars, and virtual platforms.



Enhancing the visibility of SIDS scientists and indigenous and local knowledge holders to international funders through the establishment of platforms or networks to showcase research expertise and achievements from SIDS.



Urging governments, multilateral agencies, and philanthropic organizations to allocate resources and funding towards supporting SIDS' scientific research priorities, while also establishing continuous mechanisms to ensure sustained support, moving beyond one-off events like SIDS4.



**SIGN THE DECLARATION**