ACSDRI | AUSTRALIAN CENTRE FOR SUSTAINABLE DEVELOPMENT RESEARCH & INNOVATION

Free Pre-Conference International Webinar

2023 International Conference On Sustainability India

https://acsdri.com/2023-acsdri-international-conference-on-sustainability/

Topic:

Economic, Social and Environmental Prespective of THE BLUE ECONOMY in South Asia & Australia

Date: 16th Feb 2023 Thursday Time: 5:30 PM Indian Time Zone

A Dialogue with:

Dr. S Kumaralingam,
Marine Scientist at Centre for Ocean Research,
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India

Co-presenter & Interviewer;
Dr Kuntal Goswami, ACSDRI

Co-Presenters & Interviewer

Dr. S Kumaralingam

Marine Scientist

Centre for Ocean Research

Sathyabama Institute of Science and Technology, India

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited with Grade "A" by NAAC | 12B Status by UGC | Approved by AICTE

ACSDRI

DR KUNTAL GOSWAMI

FOUNDER & CHIEF RESEARCH OFFICER

IPA – Public Accountant, TAX Accountant, BAS, ASIC Agent
Academic @ Central Queensland University & Charles Darwin University
Registered CLIMATE ACTIVE Consultant

A Joint PhD –(Australian National University-Charles Darwin University, Aus) in Sustainable Development based Public Policy & Sustainability Reporting), M. Business (Accountancy) (UniSA, Aus), MBA(Specialisation: Finance, Marketing, & Int. Business) (IFIM, India), B.COM (Hons-1st Class Distinction)(UniSA, Aus)in Sustainability Accounting & Reporting , BA in Hospitality Management (RGU, UK)

Member of: Institute of Public Accountants (IPA), the Accounting & Finance Association of Australia and New Zealand (AFAANZ); the Centre for Social and Environmental Research (CSEAR, UK), the Institute of Managers & Leaders, and the Environment Institute of Australia and New Zealand (EIANZ).

Certified Climate Reality Leader and a member of the Climate Reality Leadership Corps Team

Contact Info: +61401646872
kuntal@acsdri.com

ACSDRI

AUSTRALIAN
CENTRE FOR SUSTAINABLE DEVELOPMENT
RESEARCH & INNOVATION

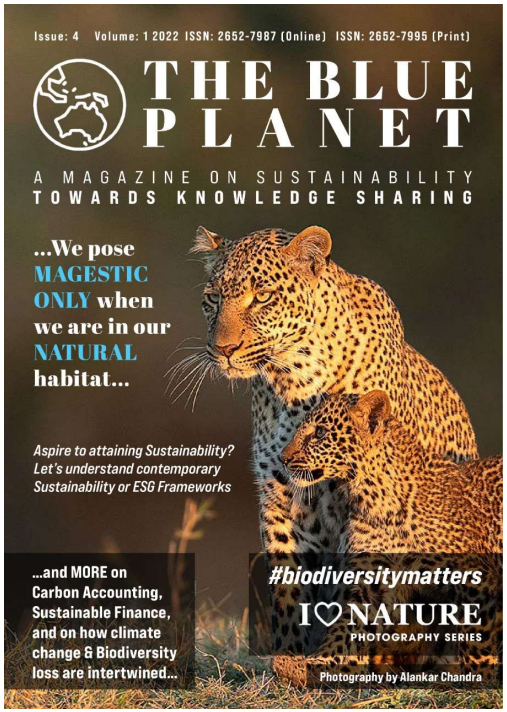
Australian Centre for Sustainable Development Research 8 Innovation (ACSDRI) established in 2018 with a primary objective to promote sustainable development principles through research and innovation. We have adopted the UN's 17 Sustainable Development Goals as ours guiding framework to accomplish our objectives.

ACSDRI is a Not-For-Profit Research Foundation.

Our Mission - To advocate for how to live within the ecological limit of this **BLUE PLANET - Our Only Home.**

ACSDRI | AUSTRALIAN CENTRE FOR SUSTAINABLE DEVELOPMENT RESEARCH & INNOVATION

Our Magazine on Sustainability



Visit: https://acsdri.com/resources/

To DOWNLOAD FREE

ACSDRI | AUSTRALIAN CENTRE FOR SUSTAINABLE DEVELOPMENT RESEARCH & INNOVATION

Our Upcoming Conference in 2023

ACSDRI | AUSTRALIAN CENTRE FOR SUSTAINABLE DEVELOPMENT RESEARCH & INNOVATION

ACSDRI

International Conference On

Sustainability Focused Education, Business and Professional Development Opportunities in Australia and India

- Sustainability Development
- Education
- Business

REGISTER

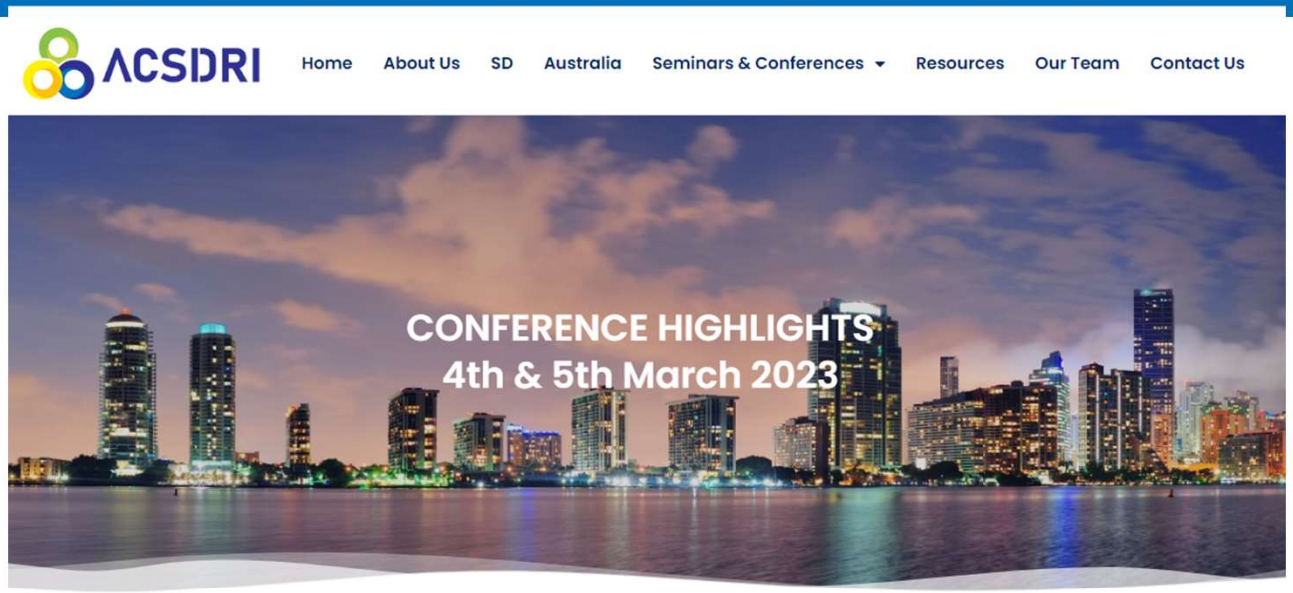
https://acsdri.com/2023-acsdri-international-conference-on-sustainability/

ACSDRI

SDGs
Education
Business

At Mumbai on 4th & 5th March 2023 at Maharashtra Nature Park Society

ACSDRI | AUSTRALIAN CENTRE FOR SUSTAINABLE DEVELOPMENT RESEARCH & INNOVATION



ACSDRI

2023
International Conference
On Sustainability | India

ACSDRI | SDGs Education Business

ACSDRI | AUSTRALIAN CENTRE FOR SUSTAINABLE DEVELOPMENT RESEARCH & INNOVATION

Topic: Economic, Social and Environmental Perspective of THE BLUE ECONOMY in South Asia & Australia.

The BLUE PLANET is our ONLY Home.

About TWO-THIRD our Earth's surface is covered with water.

Without OCEANS, life on earth would **NOT EXIST.**

" BLUE IS THE NEW GREEN"

ACSDRI | AUSTRALIAN CENTRE FOR SUSTAINABLE DEVELOPMENT RESEARCH & INNOVATION

The Program is organised in association with

Enpro Envirotech

www.enproenvirotech.com

ENVIROTECH EDUCATION

www.envirotech.edu.au

VIBGYOR

www.infovibgyor.com

Australia India Chamber of Commerce

We are HOMO SAPIENS (Human) we **LIVE** on **Land**
Why Ocean is **IMPORTANT** to our life?

BLUE IS THE NEW GREEN

- 97% of Earth's water is in the OCEAN.
- 50 to 80% of Oxygen is produced in OCEAN.
- Human produces CO2 and 30 to 70% of CO2 captures in OCEAN
- 90% of Excess Heat is Absorbs in OCEAN.
- 3 billion people depend on marine and coastal biodiversity for their livelihoods.
- 80% of international trade in Goods carried by Sea.
- $24tn is the valuation of BLUE ASSET.
- UN dedicated **Sustainable Development Goals -14** (Life Below Water) for Ocean and Marine Life.

SELECTED SDG-14 TARGETS

14.1

By 2025, **prevent and significantly reduce marine pollution** of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

14.2

By 2020, **sustainably manage and protect marine and coastal ecosystems** to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

14.3

Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.

14.4

By 2020, **effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices** and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

SELECTED SDG-14 TARGETS

14.7

By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.

14.a

Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries

14.b

Provide **access for small-scale artisanal fishers to marine resources and markets**

14.c

Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of "The future we want"

WHAT IS BLUE ECONOMY ?

- The **'Ocean Economy'** is often used interchangeably with the **'Blue Economy'.**
  Blue Economy is a subset of any country's National Economy.

- However, Ocean Economy and Blue Economy are **NOT Same.**

- **Blue Economy is "Sustainable" or "Green" use of Oceanic Resources.**

- **The 'green economy'** is "*one that results in improved* ***human well-being and social equity,*** *while significantly reducing environmental risks and ecological scarcities."*
  -UN Environment Programme.

- **The Blue Economy** is the *"sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem."*
  -The World Bank

WHAT IS BLUE ECONOMY ?

- The idea of **'Blue Economy'** was first articulated by Prof. Gunter Pauli in 2010 and later discussed at the **United Nations Conference on Sustainable Development, Rio + 20 in 2012**

- The **Center for the Blue Economy** says *"it is now a widely used term around the world* ***with three related but distinct meanings-***
  - *the overall* ***contribution of the oceans to economies****,*
  - *the need to* ***address the environmental and ecological sustainability of the oceans****, and*
  - *the ocean economy* ***as a growth opportunity for both developed and developing countries****"*

- A **United Nations** representative recently defined **the Blue Economy** as an economy that *"comprises a range of economic sectors and related policies that together determine whether the use of ocean resources is sustainable".*

- *The UN notes that* ***the Blue Economy will aid in achieving the UN Sustainable Development Goals, of which one goal, 14, is "Life Below Water".***

POLICY INTERVENSION ON BLUE ECONOMY GLOBALLY

- *The world-over different national and global initiatives are being undertaken to harness the Blue Economy. Countries like Australia, Brazil, U.K., U.S., Russia, and Norway have developed dedicated national ocean policies with measurable outcomes and budgetary provisions.*

- *Countries like Canada and Australia have enacted legislation and established hierarchal institutions at federal and state levels to ensure progress and monitoring of Blue Economy targets.*

- ***India was among the first in the world to create a Department of Ocean Development in 1981, now the Ministry of Earth Sciences (MoES).*** *Based on the experience of more than three decades, India has come a long way with the launch of new programmes such as* ***"Deep Ocean Mission," "Oceanography from space"*** *and* ***"Launching of the data buoys"*** *along the Indian coastline.*

- *These initiatives have enabled satellites to transmit data on various oceanographic features including weather for scientific analysis. MoES has joined the United Nations on the "****Clean Seas Programme"*** *to develop strategies for estimating and reducing Marine Litter/Plastic in the oceans, which is also a part of* ***SDG-14***

COMPONENTS
&
ECONOMIC ACTIVITIES OF BLUE ECONOMY

- ***Costal Communities*** *(Ports, Shipbuilding, Marine & Coastal Tourism).*

- ***Ecosystem Services*** *(Geological and Biological Carbon Sequestration, Ecosystem Protection, Waste Disposal and Biodiversity)*

- ***Extraction***
  - *(**Living**: Bio-technology, Aquaculture, Fishing)*
  - *(**Non-living**: Deepsea mining, Offshore Hydrogen, Dredging, desalination and Oil & Gas)*

- ***Exploitation*** *(Offshore Renewable Energy, Shipping/ Transport, Defense, Telecommunication)*

COMPONENTS
&
ECONOMIC ACTIVITIES OF BLUE ECONOMY

Components of the Blue Economy			
Type of Activity	**Ocean Service**	**Industry**	**Drivers of Growth**
Harvest of living resources	Seafood	Fisheries	Food Security
		Aquaculture	Demand for Protein
	Marine biotechnology	Pharmaceuticals, chemicals	R&D for healthcare and industry
Extraction of non-living resources, generation of new resources	Minerals	Seabed mining	Demand for minerals
	Energy	Oil and gas	Demand for alternative energy sources
		Renewables	
	Fresh water	Desalination	Demand for fresh water
Commerce and trade in and around the oceans	Transport and trade	Shipping	Growth in seaborne trade; International regulations
		Port infrastructure and services	
	Tourism and recreation	Tourism	Growth of global tourism
		Coastal Development	Coastal urbanization
			Domestic regulations
Response to ocean health challenges	Ocean monitoring and surveillance	Technology and R&D	R&D in ocean technologies
	Carbon Sequestration	Blue Carbon	Growth in coastal and ocean protection and conservation activities
	Coastal Protection	Habitat protection and restoration	
	Waste Disposal	Assimilation of nutrients and wastes	

Ecological Contribution of the Ocean

- **Temperature regulation**: Oceans balance the global climate and regulate temperatures on land. The ocean has prevented even more rapid changes in climate as it has absorbed most of the excess heat from GHGs – the world could have warmed by 36°C if this heat had gone into the lower 10km of the atmosphere instead.

- **Ecosystem services**: the ocean provides environmental services critical to the achievement of the SDGs, including:

  - **Food:** with spawning grounds for aquaculture.

  - **Water:** desalination of seawater can help secure adequate supplies of clean water in the face of decreased water availability. This may have potentially profound implications for public health and economic development, particularly for coastal and island developing nations. The oceans also support the filtering of contaminants to contribute to healthy marine water quality.

  - **Communities:** protection from more severe weather events including storms, floods and erosion.

Ecological Contribution of the Ocean

- **Carbon sequestration:** Carbon forms two of the most important GHGs – carbon dioxide and methane. The global carbon cycle includes exchanges within and between four major reservoirs – the atmosphere, the oceans, land and fossil fuels.

- **Oceans capture up to 70 percent of anthropogenic CO2 circulating in the global carbon cycle.** **'Blue' carbon** is captured through intertidal and shallow water environments and by oceanic organisms. It is stored in biomass and sediments from mangroves, salt marshes, sea grasses and algae.

- These **coastal and oceanic ecosystems are more efficient than their terrestrial counterparts – around 200 times more productive than land plants** with respect to their mass, and capable of sequestering up to five times the amount of carbon absorbed by tropical forests.

- **As a conservative estimate, the UK's seabed captures at least 10.5 million tonnes of CO2 equivalent a year, with a value of £57.5bn – compared to £55bn captured by the UK's woodlands.**

Ecological Contribution of the Ocean

- **The biological sequestration process of the oceans is complex.**

  For example, a great whale can accumulate 33 tonnes of carbon on average in their bodies over the course of their life – the equivalent of eight 100 year-old trees. But their contribution to the nutrient and nitrogen cycle is such that even a 1% increase in phytoplankton resulting from greater whale activity is estimated to capture additional carbon to the equivalent of 2 billion mature trees.

- **The ocean crust also offers significant potential for geological carbon storage**. Though not all areas of the seabed could be used, scientists estimate that just the 200-mile economic zone of the US coastline is capable of storing thousands of years of current US CO2 emissions

THREAT to the Ecological Productivity of Ocean

- Much like land, the capacity of the oceans to take on anthropogenic CO2 is not limitless; it would take several hundred to several thousand years to absorb its full potential of 95% of CO2 emissions to the atmosphere. The rise in surface temperature is also threatening productivity due to increased stratification, with less exchange of nutrients from the ocean depth.

HUMAN IMPACT On Ocean

- **Environmental changes:** ocean acidification, warming, changes to major currents, and eutrophication.

- **Biodiversity loss:** these changes affect marine species and ecosystems (like coral bleaching), which then lead to a loss of breeding grounds for fish and mammals, threatening food security.

- **Direct human impacts:** increased prevalence of zoonotic diseases, rising sea-levels, more extreme weather events, and loss of protection for coastal communities.

HUMAN IMPACT On Ocean

OCEAN ACIDIFICATION HAS INCREASED FROM 10 % IN 2015 TO 30% IN 2019.

Modern industrial fishing techniques, including damaged fishing nets left out in the marine habitat, are some of the biggest threats to marine life.

- Every year more than 300,000 small whales, dolphins, and porpoises die from entanglement in fishing nets.
- More destruction of marine life happens every day due to Bycatch.
- Bycatches are unintentional or incidental capture of non-targeted species.
- *"Dolphins, marine turtles, seals, seabirds, sharks, juvenile fish, fish with little commercial value, corals ... billions of unwanted animals are caught every year by fishing boats then discarded dead or dying back into the ocean."*
- Bycatch is a waste. Many millions of tonnes of marine life get wasted every year as Bycatch.

Why BLUE ECONOMY

It is time for all businesses to help unlock the power of the oceans to achieve the green agenda.

If we haven't convinced you yet, time to conclude with some simple, powerful facts:

Seagrass only occupies 0.1% of the ocean's surface but stores up to 18% of the carbon sequestered by the ocean - twice the amount of carbon per hectare as terrestrial soils[63].

If macro-algal forests covered 9% of the world's ocean surface, it would have the theoretical potential to **absorb up to 53bn tonnes of CO_2 annually** - more than what we are currently releasing each year.

It would also produce enough biomethane to **cover all of today's needs in fossil fuel energy**[64].

The technology required for seaweed farming already exists at a small scale.

Challenge to BLUE ECONOMY

- Overfishing.
- Habitat Degradation.
- Climate Change.
- Unfair Trade Practice.
- Ad hoc Development.

How to overcome Challenge to BLUE ECONOMY

- **A more systematic approach, based on a better understanding of nationally defined priorities, social context and resource base, can guide sustainable and inclusive blue growth.**

  (need more knowledge about the biophysical characteristics, carrying capacity, synergies or trade-offs between sectors to ensure an efficient and sustainable management of different activities)

- **Integrated coastal zone management can enhance the protection of coastal and near shore resources while increasing the efficiency of their uses.**

  (Coastal zones are among the most productive areas in the world, offering a wide variety of valuable habitats and ecosystems services that have always attracted humans and human activities. Coastal zones are also among the areas most vulnerable to climate change and natural hazards. Risks include flooding, erosion, sea level rise as well as extreme weather events)

How to overcome Challenge to BLUE ECONOMY

- **Growing the blue economy requires assessing the value of marine resources**

  (Not only are marine living resources poorly measured and understood, but they are also rarely valued properly.

  In Mauritania, for instance, a study showed that the value of fisheries and other renewable marine resources was much greater than that of the minerals upon which the Government had previously based most of its marine resource management decisions.

  Understanding that in comparison with mineral resources, marine living resources are:
  a) of much higher total value, and
  b) renewable, the Government adopted an alternative approach to development based on realizing the long term potential for blue growth).

- **New data can also sway decision-makers.**

  (Well managed, the goods and services produced from aquatic ecosystems could make a much greater contribution to reducing poverty, building resilient communities, fostering strong economies and feeding over 9 billion people by 2050)

WWF's Principles for a SUSTAINABLE BLUE ECONOMY

A) Definition : A SUSTAINABLE BLUE ECONOMY is a marine-based economy that

- *Provides social and economic benefits for current and future generations*
- *Restores, protects and maintains the diversity, productivity, resilience, core functions, and intrinsic value of marine ecosystems.*

B) Governance Principles :

- *Inclusive.*
- *Well-informed, precautionary and adaptive*
- *Accountable and transparent.*
- *Holistic, cross-sectoral and long term.*
- *Innovative and proactive*

WWF's Principles for a SUSTAINABLE BLUE ECONOMY

C) Measurable actions & targets

- *Set clear, measurable, and internally consistent goals and targets for a Sustainable Blue Economy*
- *Assess and communicate their performance on these goals and targets create a level economic and legislative playing field that provides the Blue Economy with adequate incentives and rules.*
- *Create a level economic and legislative playing field that provides the Blue Economy with adequate incentives and rules.*
- Plan, manage and effectively govern the use of marine space and resources, applying inclusive methods and the ecosystem approach
- *Develop and apply standards, guidelines and best practices that support a Sustainable Blue Economy.*
- *Recognize that the maritime and land-based economies are interlinked and that many of the threats facing marine environments originate on land.*
- *Actively cooperate, sharing information, knowledge, best practices, lessons learned, perspectives, and ideas, to realize a sustainable and prosperous future for all.*

Blue Economy in India Ocean

- **The Indian Ocean Rim Association's (IORA)** is the leading regional governance.

- Nearly half the world's population projected to be residing in the Indian Ocean Rim (IOR) countries by 2050, the region is making a geopolitical shift from its identity as the **'Ocean of the South'** to the **'Ocean of the Centre',** and further to the **'Ocean of the Future' as its core position** in terms of global trade, industry, labour, environment and security is likely to shape the 21 -century world

Blue Economy in India Ocean (SAARC Region)

- Most of the IORA member states have designed their respective national policies and laws that separately address the issues pertaining to sustainable management of species relied upon for food, environment conservation (including land and marine), and climate change.
- However, in the South Asian or SAARC region , no data have been released on monetary and social estimations of ocean-based businesses and no evaluation has been provided yet that can be calculated in accordance with the concept of the blue economy.
- A rough computation indicates that the blue economy is contributing between 3–5% to global GDP

Blue Economy in India Ocean (SAARC Region)

- India shares a coastal border with six countries, thus providing ample opportunities to harness marine water resources for economic growth through ocean development, export–import trading and the use of natural minerals and energy resources to satisfy domestic needs.

- **Fish and fisheries** contribute hugely to the livelihoods of individuals in coastal areas. The fisheries in the South Asia region augment livelihoods by 5–8%.

- In South Asia, the Bay of Bengal is an important resource: India receives approximately half of the fish it produces (1.2 million tons annually) and Myanmar receives approximately 1.1 million tons annually.

Blue Economy in India Ocean (SAARC Region)

- In contrast to India and Myanmar, Bangladesh, Sri Lanka and the Maldives receive annually 0.6 million tons, 0.12 million tons and 0.16 million tons, respectively. Pakistan employs about 500,000 fishermen directly. Almost 20,000 fish-catching boats are operating in offshore areas of Pakistan

- **Maritime transport** manages 80% of the worldwide product exchange volume and shipped 10 billion tons in 2015.

- The coastlines of five South Asian countries (India, Bangladesh, Sri Lanka, Pakistan and the Maldives) represent less than 2% of the world's total coastline. Coastal areas are responsible for 40% of business in these countries' respective locales and represent the greater part of their basic financial foundation.

- South Asia's waterfront districts are exceptionally wealthy. The coastal travel industry in the area has grown by 8% annually.

Blue Economy in India Ocean (SAARC Region)

- **Coastal and marine tourism** is the strength of maritime South Asian states because they have several beautiful places that could be tourist attractions. The current condition of the tourism sector of India, Maldives, Bangladesh, and Sri Lanka is much better than those of Pakistan.

- The **ship breaking industry** has moved towards the developing countries due to low cost and affordable labor. Alang, Chittagong, and Gadani are the major shipbreaking centers in India, Bangladesh, and Pakistan.

- More than 90 percent of the developed world vessels are dismantled in these developing countries of South Asia. So, it's the strength of these maritime South Asian states.

Blue Economy in India Ocean (SAARC Region)

- The **shipbuilding industry** is the strength of the South Asian maritime nations and they should improve their shipbuilding industry by introducing the latest technologies, constructing vessels with no environmental harm, and employing a skilled workforce.

- **India's blue economy growth in many sectors is comparatively better than its regional countries.** India is investing a lot in the coastal tourism and shipping sector.

- They started different projects and schemes to become a strong blue nation like Sagarmalla Project, Swadesh Darshan Scheme, and Deep Ocean Mission Project.

Blue Economy in India Ocean (SAARC Region)

- **After India, Bangladesh brings advancement in its blue economy sectors with the aim of sustainable development.**

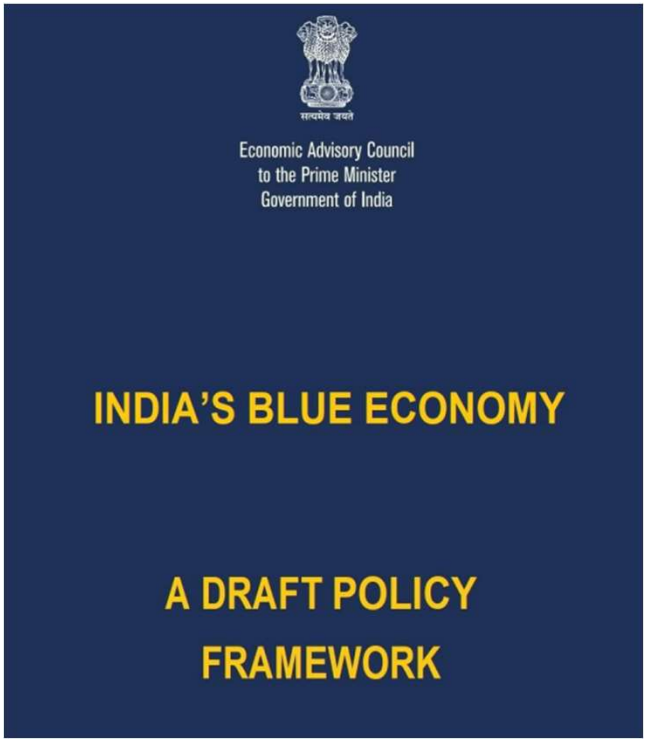
- They introduced Five-Year Plan Strategy Paper (2016-2020), and the **Sustainable Fisheries Development Plan (2016-2025)** for the blue economy in coastal tourism and marine fishery sectors.

- **Bangladesh is also working to control marine and environmental pollution,** which is a big challenge in the current time frame.

- Despite having a small population and area **Maldives' blue economy stands 3rd in comparison with these five maritime nations of South Asia.**

Blue Economy in India Ocean (SAARC Region)

- All these South Asian states are blessed with oceans and seas as well as they have the water scarcity issue, so they can use seas and oceans water to wipe out the water crisis. So Desalination of Ocean is a solution.



The seven priority areas identified were:

Priority Area 1: National Accounting Framework for Blue Economy and Ocean Governance

Priority Area 2: Coastal Marine Spatial Planning and Tourism

Priority Area 3: Marine Fisheries, Aquaculture and Fish Processing.

Priority Area 4: Manufacturing, Emerging Industries, Trade, Technology, Services and Skill Development

Priority Area 5: Logistics, Infrastructure and Shipping (including transshipments)

Priority Area 6: Coastal and Deep-Sea Mining and Offshore Energy

Priority Area 7: Security, Strategic Dimensions and International Engagement

Blue Economy in India Ocean (SAARC Region–India)

- The Government of India's Vision of New India by 2030 enunciated in February 2019 highlighted the Blue Economy as one of the ten core dimensions of growth.
- The Blue Economy was mentioned as the sixth dimension of this vision stressing the need for a coherent policy integrating different sectors so as to improve the lives of the coastal communities and accelerate development and employment.

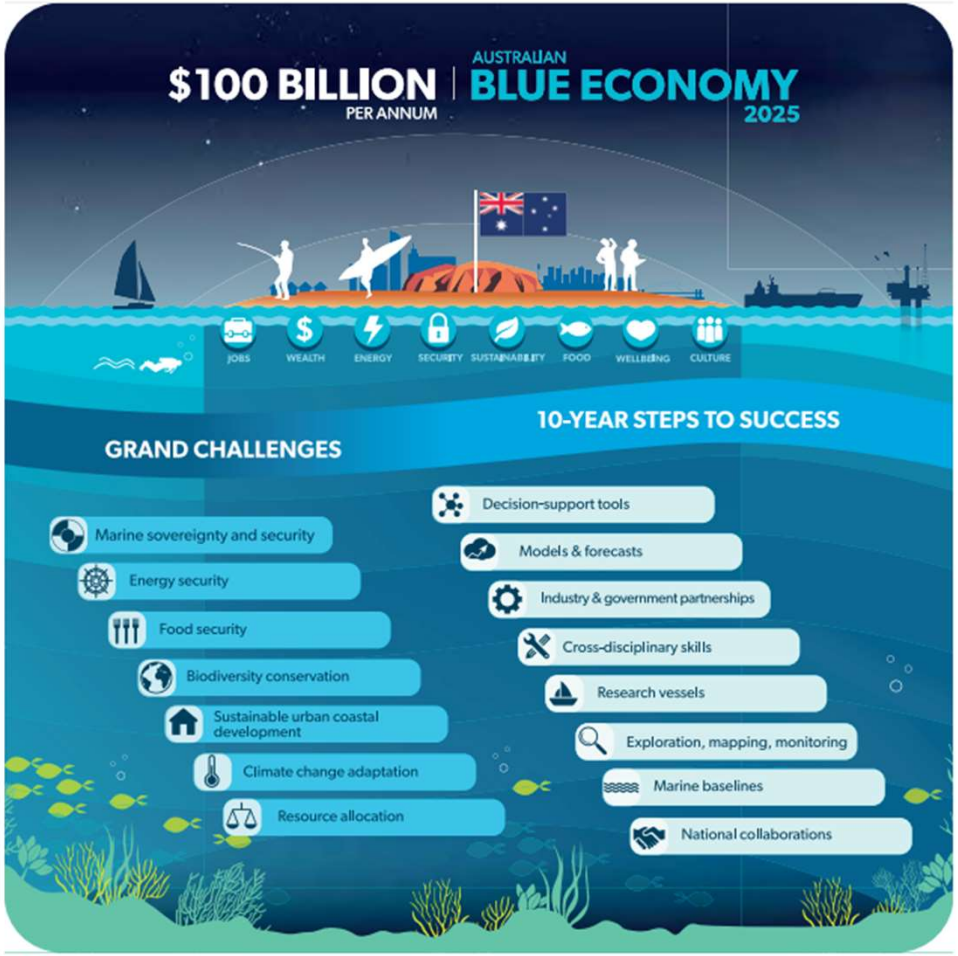
- India has a unique maritime position. Its 7517 km long coastline is home to nine coastal states and 1382 islands. The country has 12 major ports and 187 non-major ports, handling about 1400 million tons of cargo every year, as 95% of India's trade by volume transits by sea.

Blue Economy in India Ocean (SAARC Region–India)

- India's Exclusive Economic Zone of over two million square kilometers is rich in living and non-living resources and holds significant recoverable resources of crude oil and of recoverable natural gas.
- The coastal economy also sustains over 4 million fishermen and other coastal communities. With these vast maritime interests, the Blue Economy in India has a vital relationship with the nation's economic growth

Blue Economy in India Ocean (Australia)

Blue Economy in India Ocean (Australia)

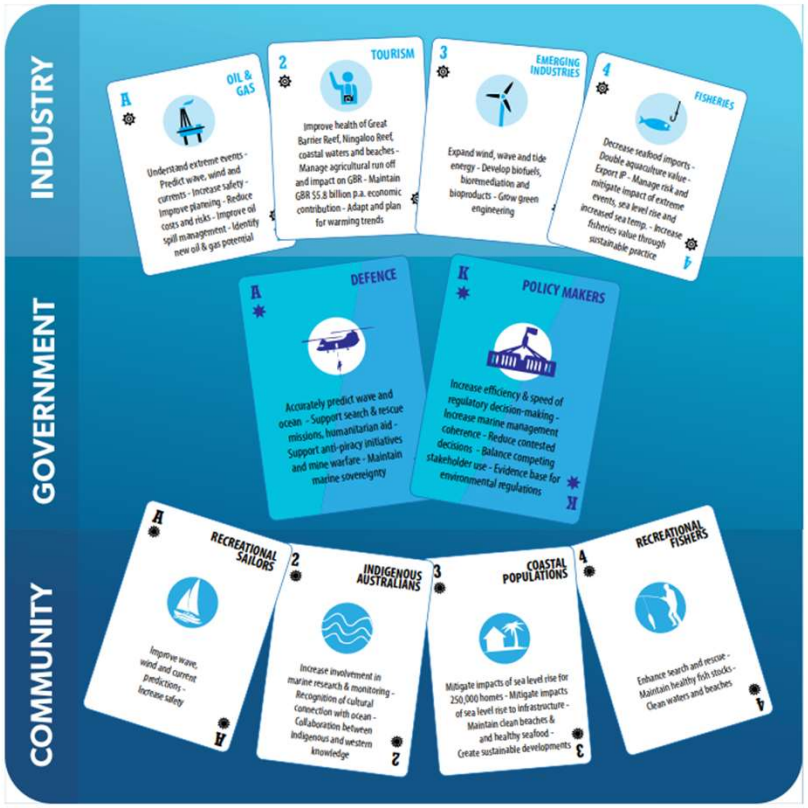


The big picture | **a vision in blue**

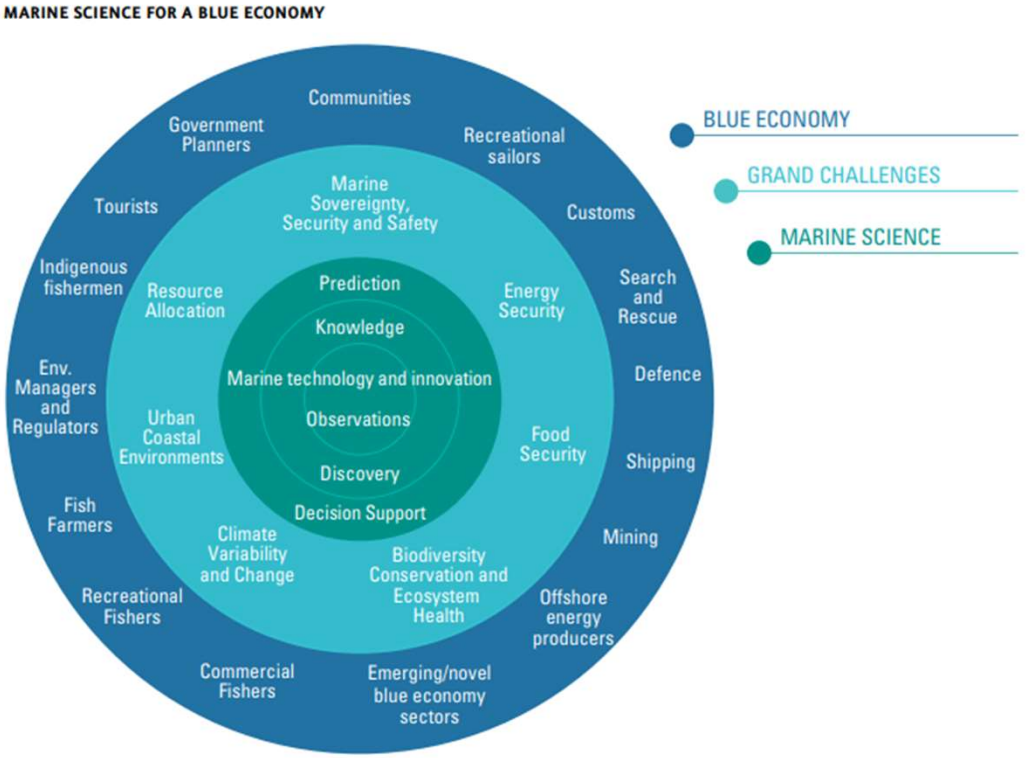
This Plan will help Australia realise the triple-bottom-line benefits of our marine estate while protecting the values and natural assets we all hold so dearly.

So what will 2025 look like when the National Marine Science Plan *is delivered?*

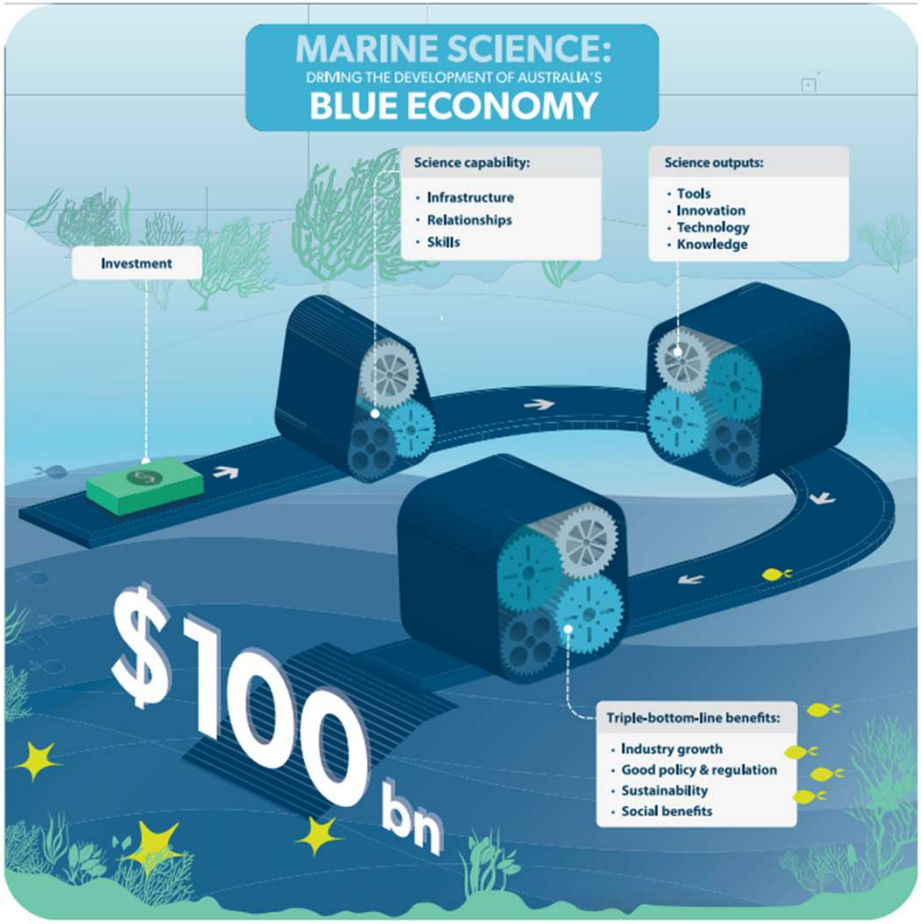
Blue Economy in India Ocean (Australia)



IF WE PLAY OUR CARDS RIGHT - BENEFITS AND BENEFICIARIES OF AUSTRALIA'S BLUE ECONOMY



Blue Economy in India Ocean (Australia)



Dialogue with **Dr. S Kumaralingam (Marine Scientist)**

1) Unique Ecological identity of ***Indian Ocean compared to other Oceans of the world.***

2) Ecological distinction and similarity between ***Bay of Bengal, Arabian Sea and Indian Ocean.***

3) *Socio-ecological risk & opportunities and Conservation priorities of* ***Bay of Bengal, Arabian Sea and Indian Ocean.***

Dialogue with **Dr. S Kumaralingam (Marine Scientist)**

4) Unique Ecological identity of ***Indian Ocean in the Australian Region.***

5) *Socio-ecological risk & opportunities and Conservation priorities of* ***Indian Ocean in the Australian Region.***

6) Examples of **comprehensive Blue Economy policy** in the World.

7) Investment Need, Training & Skill Gaps & Policy Initiative distinction in the Blue Economy focused policy agenda on the SAARC region (India for example) compared to Australia

8) Dr. Kumaralingam your opinion on **Future of Blue Economy**.

Thanks for Attending

https://www.acsdri.com/