Colombo Security Conclave:Need for Transition towards Sustainable Energy Security

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Abstract

In the 21st century, with increasing global interconnectedness and globalisation, security threats are no longer confined to specific states. A prime example of this is the global impact of Covid-19, which transcended national boundaries. Consequently, non-traditional security challenges have become significant in this era, going beyond traditional military threats. These challenges encompass a wide range of issues that require international cooperation and attention to find effective solutions. Therefore, the significance of multilateral organisations for states' cooperation has increased to tackle non-traditional and human security challenges. Colombo Security Conclave (CSC) is one such mini-lateral organisation. It is a regional security framework initiated in 2011 by India, Maldives, and Sri Lanka. After a brief suspension, it was rebranded in 2020 and expanded to include Mauritius as a member and Banaladesh and Seychelles as observers. CSC primarily focuses on addressing non-traditional maritime security challenges in the Indian Ocean Region (IOR) to enhance stability through cooperation. This article will discuss the development of CSC, its limitations, and potential solutions. It will then explore the importance of including relevant offshore renewable energy for CSC and finally the way forward to make the mini-lateral, a more robust organisation for ensuring human security through the maritime domain.

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Introduction

olombo Security Conclave (CSC) is a regional security Cooperation framework that originated from meetings between the National Security Advisors (NSAs) and Deputy NSAs of India, Maldives, and Sri Lankain in 2011. However, due to tensions between India and Maldives, the meetings were suspended for a short time after the third NSA-level CSC meeting from 2014 to 2020. In 2020, it was revived, rebranded and renamed as 'Colombo Security Conclave' from its previous name 'NSA-level Trilateral Meeting'. A secretariat based in Colombo for the group was established in Colombo in 2021.¹ During the fifth NSA-level meeting in 2022, CSC incorporated Mauritius as a fourth member and invited Bangladesh and Seychelles to join CSC as observer states.² The CSC aims to address security concerns in the IOR, focusing on Maritime Security, Marine Pollution Response and Search and Rescue (SAR).³ Therefore, with a focus on addressing collective maritime security challenges, CSC aims to enhance stability through collaboration in the IOR.

According to Indian Fusion Centre, some of the non-traditional security challenges in IOR are Piracy and Armed Robbery, Contraband Smuggling (mainly drugs, wildlife resources and arms smuggling), Illegal Unregulated and Unreported fishing (IUU fishing), Irregular Human Migration (IHM), maritime incidents, marine pollution, cyber security, climate change and security. In 2022, South Asia accounted for 21 per cent of the world's IUU fishing with a reported total of 125 incidents.⁴ Regarding incidents involving IHM, South Asia recorded 69 incidents in 2022. In contrast, the Mediterranean Region reported 1401 incidents, while Southeast Asia reported 119 incidents.⁵ Similarly, 13 piracy and armed robbery incidents were reported in South Asia in 2022, compared to 86 cases in Southeast Asia and 34 cases in the Gulf of Guinea.⁶ Due to differences in strategic ambitions and priorities, all 36 countries of the IOR may not be facing common maritime security challenges. Even when security threats are common, priorities in addressing threats are different. Therefore, CSC becomes relevant as it is a small grouping, enabling India to address its security concerns in South Asia while also providing an opportunity for the island and littoral nations to tackle their maritime challenges. Likewise, reaching agreements becomes easier in a mini-lateral organisation.

Key Areas of Cooperation

Over the years, the level of cooperation in CSC has grown significantly, strengthening its ability to address maritime security challenges in the region. In the second meeting held in 2013, the members collectively developed and agreed upon a roadmap outlining the key focus areas. Sri Lanka and Maldives were granted access to the Indian Long-Range Identification and Tracking (LRIT) Data Centre for monitoring and tracking their flagged merchant vessels. The Merchant Ship Information System (MSIS) was employed for exchanging unclassified information on white shipping. Automatic Identification System (AIS) data was shared in a trilateral format over the MSIS platform. Maritime Domain Awareness (MDA) training was conducted in India to enhance participants' understanding and capabilities. Cooperation in SAR was strengthened through suchoperations, assistance in setting up Maritime Rescue Coordination Centres (MRCCs), and coordination of distress alerts and safety messages. Mechanisms for Exclusive Economic Zone (EEZ) surveillance were strengthened. In addition, communication channels were established to address illegal maritime activities. The trilateral exercise 'DOSTI' was strengthened with tabletop exercises and seminars on maritime issues held every alternate year. Simultaneous tsunami warnings were passed to agreed Points of Contact in addition to the designated National Tsunami Warning Centres. A trilateral sub-group focusing on legal and policy issues related to piracy was established.⁷

In the third meeting in 2014, newer areas of cooperation were added to this trilateral group, such as joint hydrography, training on board-sail training ships, exchanges between think tanks and joint participation in adventure activities.⁸ In 2020, during the fourth CSC meeting, the area of cooperation further expanded, introducing intelligence sharing against terrorism and radicalisation, extremism, illegal drugs, weapons, and human trafficking. Additionally, collaboration to confront non-traditional security challenges, such as the effects of climate change on the maritime environment and oil spills, was added. Efforts were made to explore underwater heritage and safeguard the Indian Ocean's maritime ecosystem.⁹ In the 5th NSA level CSC meeting, member states identified and further developed key areas of cooperation to enhance and strengthen regional security in the following five pillars:

- Maritime safety and security.
- Countering terrorism and radicalisation.

Colombo Security Conclave:Need for Transition towards Sustainable Energy Security

- Combating trafficking and transnational organised crime.
- Cyber security, protection of critical infrastructure and technology.
- Humanitarian assistance and disaster relief.¹⁰

Apart from expanding areas of cooperation at the policymaking level in recent summits, CSC has also expanded its cooperation at the operational level. It conducted various tabletop exercises, virtual workshops, seminars/conferences, and training programs. In Jan 2022, CSC started the first virtual workshop on developing regional cyber security capabilities on defensive operations, deep/dark web handling, and digital forensics to address key areas of the deep web and dark net investigation and challenges, digital forensics, cyber threat intelligence and defensive operations in the cyber domain. The discussions focused on technological advancements, research challenges and approaches in these areas. Participants also shared their experiences and solutions in dealing with cyber security threats.¹¹ Similarly, in 2022, CSC started with virtual conferences and a training programme on investigating terrorism-related cases.¹² The participants discussed the difficulties of investigating terrorism cases and they shared their experiences and effective ways to handle prosecution of terrorism cases. Member states also discussed laws dealing with terror financing in their countries, like fake money, online radicalisation, and social media.

Additionally, they discussed organised crime, economic intelligence, cyber and mobile forensics, and the role of INTERPOL.¹³ Apart from that, tabletop exercises are also organised regularly under CSC to work together on maritime challenges in IOR. The latest tabletop exercise was the 4th such exercise organised by the Indian Coast Guard in Kolkata from 14 to 16 Mar 2023.14 These exercises are vital in keeping the IOR safe and secure for commercial shipping, international trade, and legitimate maritime activities.¹⁵ It also keeps synergy and coordination between the militaries of member states during joint operations. It can be said that CSC delivers cooperation both at the operational and policy-making levels as it involves various government agencies that help enhance maritime security in the region. For example, Rashtriya Raksha University, Gujarat, organised two maritime law workshops under the CSC till 2023. Its objective aimed at capacity building in the domain of maritime law and

governance through teaching, research, training and extension programmes and activities.¹⁶

Relevant Offshore-Renewable Energyin CSC

Offshore energy refers to generating renewable energy from natural resources found in offshore environments. It comprises:

- Offshore wind energy.
- Offshore wave energy.
- Tidal energy.

In comparison, marine energy is a wider term that covers all types of renewable energy derived from the ocean, seas, and other water bodies, such as Ocean Thermal Energy Conversion (OTEC), Salinity Gradient Power Energy, as well as Offshore Wave and Tidal energy. It excludes offshore wind energy. Marine energy is a more inclusive category that covers various methods of harnessing energy from the marine environment.

While CSC started focusing on the effects of climate change on the maritime environment in 2020, as mentioned above, it can also work together to find ways in which maritime domain can help minimise the impact of climate change. By this, CSC can tackle non-traditional security issues by utilising the maritime space as climate change directly impacts the population of a region. One of the best ways in which the maritime domain can help minimise the impact of climate change is when CSC member states collaborate in producing green/renewable energy from marine environments, such as offshore renewable andmarine energy. It would help reduce the dependency on fossil fuels, which are one of the main causes of climate change. There are various types of offshore renewable energy that have great potential to replace fossil fuel-based energy as they are in abundance in the South Asian Region. These are as follows:

• **Offshore Wind Energy.** Offshore wind energy is the generation of electricity by wind farms in bodies of water, most commonly at sea. According to the *International Energy Agency* (IEA), wind speeds are higher offshore than on land, therefore, offshore farms generate more electricity per capacity installed.¹⁷ The Ministry of New and Renewable Energy (MNRE) writes that offshore windmills are beneficial as land accusation is not a concern in setting up windmills, and land

Colombo Security Conclave:Need for Transition towards Sustainable Energy Security

resources remain protected.¹⁸ According to International Trade Administration, India has the potential to generate 140 gigawatts (GW) of electricity from offshore winds due to its long coastline, especially in the regions near the Southern coasts and off the Western coast of India.¹⁹ Whereas, according to World Forum Offshore Wind, global offshore wind energy production in 2022 was 57.6 GW of electricity.²⁰ CSC member states are also located close to the Southern coast of India, which means they share a geographical proximity to these areas abundant in wind energy potential. India has a roadmap and set the target to achieve 30 GW of electricity from offshore winds by 2030.21 While MNRE is working on installing offshore windmills in India and came up with the National Offshore Wind Energy Policy in 2015.22 MNRE can also work under the CSC framework and support members in establishing and reaching their renewable energy goals. For example, collaboration under the CSC can help Sri Lanka achieve its target of generating 70 per cent of energy requirements from renewable sources by 2030.23 Moreover, Sri Lanka is still finalising its offshore wind energy roadmap.²⁴ They can achieve this through joint research and operations with renewable energy agencies of member states under the CSC framework.

• Wave and Tidal energy.

■ Wave and tidal energy are two forms of ocean renewable energy that use waves to generate electricity. However, their energy capture techniques differ. Tidal energy is generated by the moon and the sun's gravitational pulls, which cause tides to rise and fall. Tidal energy devices capture the energy of water movement during tidal cycles. Whereas in offshore wave energy, the kinetic energy of ocean waves is used to generate electricity. It involves catching the energy from the motion of waves as they move across the ocean's surface.

■ A joint study conducted by the Indian Institute of Technology (IIT), Madras, in collaboration with Credit Rating Information Services of India Limited Risk and Infrastructure Solutions Limited in December 2014, revealed that the tidal power potential in India is approximately 12.455 GW. The study identified areas with low to medium tidal wave strength where this potential could be harnessed. These areas include

U.S.I. JOURNAL

the Gulf of Khambat, the Gulf of Kutch in Gujarat, and the Southern regions of Gujarat. The Palk Bay-Mannar Channel in Tamil Nadu and the Hooghly River. South Haldia, and Sunderbans in West Bengal were also identified as promising locations for tidal power generation.²⁵ The study found that India has a significant capacity to produce clean electricity from tidal energy. Tides are predictable and flow in a regular and consistent pattern, unlike wind, making them a constant source of energy. As water is denser than air, tidal currents are denser than wind currents, which means tidal energy systems can generate more power compared to wind turbines of similar capacity.²⁶

Indian Parliament in 2021 asked MNRE to set up a tidal power project as there is no such project in India currently.²⁷ The problem lies in the high cost of production that led to the cancellation of earlier projects. However, efforts were made that have decreased the cost; but it needs to be further decreased through Research and Development (R&D).²⁸ CSC members can collaborate in R&D to further reduce the cost of tidal energy production. Government organisations on renewable energy of CSC member countries like Bangladesh Solar and Renewable Energy Association, MNRE India, Sri Lanka Sustainable Energy Authority, Renewable Energy Maldives, Mauritius Renewable Energy Agency, Ministry of Agriculture, Climate Change and Environment of Seychelles can collaborate under CSC for R&D and in finding tidal energy potential in all member countries as also to set up tidal power projects. Similarly, wave energy has the potential of 40GW in India, especially along the Western coast of India, as ocean water flow is stable. However, India has failed to tap wave energy due to high costs and insufficient technology.29 Nonetheless, researchers from the IIT Madras, have built and conducted successful trials of six wave devices offshore Thoothukudi, Tamil Nadu, in 2022.30 Joint collaboration in training programs can be set up that can include IIT Madras and various research institutions from CSC member countries in joint R&D. Additionally, financial incentives can be provided in promoting research on wave energy to decrease the cost of energy production.

Colombo Security Conclave:Need for Transition towards Sustainable Energy Security

• Ocean Thermal Energy Conversion (OTEC)Energy.

It is another renewable marine energy produced by utilising the temperature difference between warm surface water and deep ocean cold water. Both warm and cold water have their different uses. Warm surface water is used to vaporise any working fluid that has a low boiling point, such as ammonia. Whereas cold deep ocean water is used to condense the vapour back into a liquid state, releasing heat in the process. The temperature difference causes the working fluid to expand and contract, driving a turbine that generates electricity. The National Institute of Ocean Technology, an institute under the Union Ministry of Earth Sciences (MoES), established an OTEC plant with a capacity of 65 kilowatts (kW) in Kavaratti, India, to power the desalination plant.³¹ Dan Grech, the Founder and Managing Director of Global OTEC Resources, stated that the Indian Ocean has enormous potential for OTEC plants to supply continuous power in the coming years as the temperature difference on average is 20 degree Celsius.32

The research paper titled 'Assessment of Extreme and Met Ocean Conditions in the Maldives for OTEC applications' in the International Journal of Energy Research shows that OTEC could work well in the Maldives. Considering the current power generation methods here, it would also be economically beneficial as well.³³ MoES can cooperate with CSC members to construct OTEC energy projects in member countries. India can start by building small-scale OTEC plants in island member nations, and electricity can be utilised for desalination. It would ensure a constant supply of energy to desalination plants. India is the only CSC member nation that has successfully installed an OTEC energy plant. Other CSC member nations are negotiating with European countries for installation of such plants. India's proactive steps can aid CSC members in installing OTEC power plants, reducing their energy insecurity and making the CSC multilateral framework robust.

Conclusion

CSC has become a crucial platform for addressing non-traditional security challenges in the IOR. CSC has strengthened regional stability by focusing on maritime security and cooperation among

U.S.I. JOURNAL

member states. To tackle the pressing issues of climate change and promote human security, CSC should incorporate offshore renewable energy and marine energy because CSC focuses on the maritime domain and; therefore, harnessing benefits from the maritime domain to tackle climate change should be its priority. Collaborative efforts in research, training, and project implementation can harness the region's vast renewable energy potential, reducing dependence on fossil fuels and mitigating climate change impacts. By embracing offshore renewable and marine energy, CSC can address security challenges of 21st century and ensure a sustainable and secure future for the IOR.

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