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Transboundary maritime cooperation: the case of the Eastern Caribbean Region

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Transboundary cooperation is a priority for the Organisation of Eastern Caribbean States (OECS). For over thirty years since its formation, it has pursued policies of integration and cooperation among its members with the aim of promoting development and reducing social and economic inequalities across the region. Within the last decade, the islands have embarked on ambitious plans for a sustainable Blue Economy, centred on developing the potential of their vast maritime zones. Achieving this requires cooperation across maritime borders for the management of shared natural resources and transnational human activities, as well as for addressing transboundary challenges facing the region such as climate change, marine pollution and Sargassum influxes. Through a literature review and documentary analysis this article provides a first stocktaking of transboundary maritime cooperation in the region through a mapping of regional level policy promoting cooperation and projects among OECS members over the last decade. The analysis reveals great diversity among participating countries, thematic priorities and actors operating across multiple governance levels. The article concludes with a discussion on the drivers for cooperation among OECS members, highlighting transboundary maritime cooperation as a natural and logical approach for capitalising on opportunities and addressing challenges in a capacity constrained region.

KEYWORDS

transboundary, cooperation, ocean governance, Eastern Caribbean, Organisation of Eastern Caribbean States

1 Introduction

The governance of shared maritime waters is complex and involves multiple actors, working in a variety of ways across national jurisdictions, cultural settings and administrative contexts. The Eastern Caribbean is a part of the Wider Caribbean Region (WCR), one of the most biophysically and geopolitically complex marine regions in the world (Fanning et al., 2009; Mahon and Fanning, 2021). Within this context is the Organisation of the Eastern Caribbean States (OECS), a regional intergovernmental organisation established in 1981 with a mandate to promote cooperation among its 11 members, which comprise the full members Antigua and Barbuda, the Commonwealth of

Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and the associated members, Anguilla, Martinique, Guadeloupe and the British Virgin Islands (UN, 1981a; Organisation of Eastern Caribbean States (OECS), 2020a). The OECS members present a defined geographical unit, with similar natural and social attributes. These characteristics along with the dynamic and continuously deepening relationships among members developed through common institutions over several decades, makes the OECS an interesting case for the study of transboundary maritime cooperation (TMC). As islands, they have exceptionally large Exclusive Economic Zones (EEZs) relative to their land area (Mahadeo, 2022). Endowed with vast maritime areas, the islands have always been heavily dependent on the sea and its resources and there is great potential to be derived from current maritime and coastal uses and those yet to be developed. The possibilities for growth through a sustainable Blue Economy is immense and the countries have embarked on a development agenda focussed on capitalising on the potential of their coastal and marine resources (Organisation of Eastern Caribbean States (OECS), 2020a). However, while now increasingly described as "large ocean states" (Mahadeo, 2022) most are classified as small island developing states (SIDS), a political grouping, characterised by small, specialised economies, highly vulnerable to external shocks and with limited resources and capacity for driving development and dealing with the mounting challenges facing the region´s seas. Additionally, the OECS comprises independent sovereign nations and overseas territories of the French Republic and the United Kingdom (UK), giving rise to capacity, administrative, policy, language and some cultural differences among members. The growing regional Blue Economy agenda will require the islands to engage in more and deeper cooperation to achieve development objectives and a better understanding of TMC is a necessary first step towards further enhancing this across the region.

Despite the strong connections of the islands to the sea and a long history of cooperation among OECS members (OECS, 2020b; Organisation of Eastern Caribbean States (OECS), 2020a), the drivers, enablers and constraints of TMC among its members have not been widely studied. The contributions of this work are therefore (i) to give an overview of the OECS as it pertains to transboundary cooperation in the marine realm (ii) to observe TMC through different lenses, i.e. the different dimensions of the concept, and (iii) to identify patterns of TMC among OECS members. The article begins with an overview of the case study area, including the priorities for maritime cooperation among OECS members as well as relevant regional-level OECS policy. This is followed by a brief 'state of the art' of the concept of *transboundary maritime cooperation*. The findings of the literature review reveal the differences in how the concept has been presented by scholars and highlights critical dimensions of cooperation across borders in the maritime zone. This overview of the scientific literature will help provide the context for the analysis of the projects on TMC among OECS members. The article then goes on with a mapping of TMC projects among OECS members, with two main aims. Firstly, the study gives a useful overview of the variety of transboundary cooperation experiences across the OECS over the last decade. This research aims to fill a gap in the scientific literature on maritime issues for the Eastern Caribbean Region as no previous study has focussed specifically on cooperation across the marine sphere among OECS members. Secondly, the analysis aims to give insights to the diversity of thematic priorities and the multi-level character of actors involved as well as the drivers of cooperation. The review is guided by the following research questions:

- What is the geographic distribution of projects among the OECS members?
- Which thematic priorities can be identified among the projects?
- Who are the actors involved and at what level do they operate?
- What are the drivers for transboundary maritime cooperation?

2 Materials and methods

The methodology undertaken involves a three-step process. The first step involved a review of the OECS regional level policies and mechanisms which have promoted TMC in the OECS. The method of historical evolution was applied and the analysis of academic literature, legal and policy documents focused on several themes. These include sectoral activities of high priority for the region such as maritime security, fisheries, tourism, transport and shipping, as well as themes relating to the environment such as sustainable use and conservation of marine biodiversity and area-based management.

In the second step, a literature review was undertaken to better understand the term *transboundary maritime cooperation*. A desktop search was performed to gather the existing literature on TMC, focusing on peer-reviewed articles. The keyword search in the SCOPUS database included the following: 'transboundary maritime cooperation', 'transboundary marine cooperation', 'transboundary maritime collaboration', and 'transboundary marine collaboration'. A total of 249 articles were obtained. The list was sorted to remove duplicates and to include applicable content based on the titles and screening of the abstracts. A final listing of 186 articles, dating from 1995 to 2022, was obtained. The articles were read and a qualitative content analysis was performed using predefined codes. The aim was to give a broad overview of TMC by scrutinising key components of TMC including spatial scale, thematic focus and the actors involved. An understanding of the concept of TMC helps focus subsequent parts of the research which looks at TMC among OECS members.

Following this, the third step consisted of a desk-based review to identify TMC projects and initiatives among OECS members. The search involved a broad scoping of available databases, reports, articles and websites based on the identified prioritised activities of the OECS. The OECS mentions two projects in relation to ocean governance on its website, the Building Resilience in the Eastern Caribbean through Reduction of Marine Litter project (ReMLit) and the Caribbean Regional Oceanscape Project (CROP) (OECS, 2020c).

Further projects (54) have been identified through the Caribbean and North Brazil Shelf Large Marine Ecosystems Project (CLME+) database (Caribbean and North Brazil Shelf Large Marine Ecosystems Project (CLME+Hub) 2021a) through applied search criteria for participating OECS members, as well as from the International Waters Learning Exchange and Resource Network, which lists 20 projects in the Caribbean on its website (International Waters Learning Exchange and Resource Network (IW:LEARN) 2023).

Drawing from this, an initial longlist of TMC projects and initiatives (Appendix 1) with participation of OECS members in the Eastern Caribbean as well as in the Wider Caribbean region was compiled. The list was reviewed and projects and initiatives were further selected based on the following criteria:

- Date: A start date in or after 2012, and has ended or is ongoing.
- Maritime focus: A maritime component, including projects and initiatives with both a marine and terrestrial focus
- Transboundary: Involves at least two, but not necessarily adjacent OECS members.
- Spatial Scale: This analysis has a regional focus, looking at projects and initiatives involving OECS members. However, the selected projects and initiatives may also include countries outside of the OECS.
- Time-bound: Only projects and initiatives with a clear start and end date were included in the analysis.

This list was sorted based on the above mentioned criteria and a total of 24 projects were obtained for further analysis. The final list excludes coordinating mechanisms, policies, working groups and networks, as the aim was to focus the analysis on projects with a clearly defined start and end date and which have a clear outcome and/or purpose. The material includes project reports and documents from project descriptions and evaluations.

The analysis based on the final list of TMC projects was undertaken along three aspects in order to identify drivers, opportunities and challenges, as well as gaps, from the reviewed literature, policies and mechanisms, and the projects themselves, underlining the importance of the case study and the need for further research on TMC in the OECS region. The following three aspects were applied for the analysis of the projects:

1. The intensity of TMC among OECS members since 2012. This was examined through a quantitative approach, looking at the number of projects and the OECS members involved in the projects.
2. The priority themes for TMC among OECS members since 2012. The aim was to identify the priority issues driving cooperation, the clustering of themes within and across projects as well as whether there has been a change among priority themes over the decade.
3. The actors at different governance levels, involved in TMC projects and initiatives among OECS members since 2012.

3 Case study: transboundary maritime cooperation across the Organisation of Eastern Caribbean States

3.1 Overview of the case study area

The OECS, an associated institution of the Caribbean Community (CARICOM), is a regional integration organisation with legal personality that promotes cooperation among its members and coordination of their policies at the regional and international level (UN, 1981a; Organisation of Eastern Caribbean States (OECS), 2020a). Its eleven members comprise the full members Antigua and Barbuda, the Commonwealth of Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines and the associated members, Anguilla, Martinique, Guadeloupe and the British Virgin Islands (Figure 1: Map 1 refers) (ibid.). Areas of integration encompass economic relations, including the 2010 established Economic Union, external transportation, maritime affairs, tourism, central banking and scientific, technical and cultural cooperation, among others (Organisation of Eastern Caribbean States (OECS) Commission, 2010; Organisation of Eastern Caribbean States (OECS), 2020a). The full members are independent sovereign nations and Small Island Developing States (SIDS) (with the exception of Montserrat which is a self-governing Overseas Territory of the UK) and share characteristics such as smallness in terms of land areas, populations and economies as well as vulnerabilities to economic shocks and threats, including natural disasters and the impacts of climate change (World Bank, 2018). Among the associate members, Anguilla and the British Virgin Islands are Overseas Territories of the UK while Martinique and Guadeloupe are French Overseas Departments. As self-governing overseas territories of the UK, Anguilla, Montserrat and the British Virgin Islands have responsibility for issues devolved to their Governments and Governors, including immigration, environmental and social policy (education and health care); internal security (police); and financial services, although the UK can offer some support in these areas. The UK has responsibility for defence and manages most of their foreign relations, including extending to them international treaties it has ratified. Further, the UK Parliament has retained power to legislate for the territories and the UK Privy Council is the final court of appeal (Loft, 2023). The French Overseas Departments, a sub-level of governance as are the French Municipalities and Regions, are not bestowed with legislative powers. However, after legislative reform in 2015 (Official Journal of the French Republic (JORF), 2015), they have extended competencies in some areas including economic and business development and tourism, and exercise their functions through the execution of their budget.

3.2 Transboundary maritime cooperation in the OECS: sectoral priorities and key policy measures and initiatives

TMC has been a feature in the Eastern Caribbean since before the formation of the OECS. Post the colonial era, the then mostly

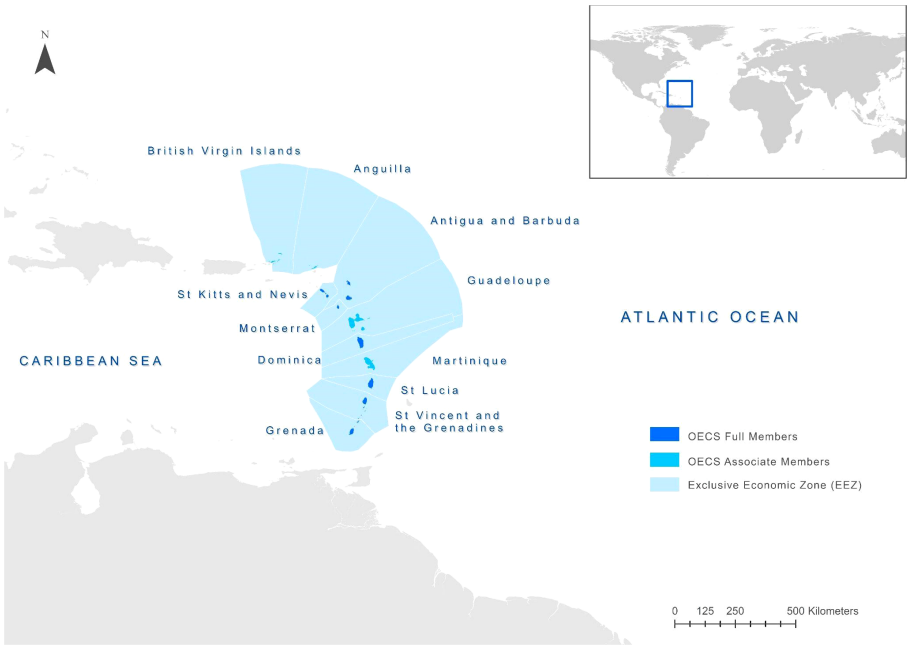

FIGURE 1
Map 1: The members of the Organisation of Eastern Caribbean States.

non-independent islands needed to cooperate more closely to develop their economies. The Eastern Caribbean Common Market (ECCM) was established in 1968 by Dominica, Grenada, Montserrat, and St. Lucia and by 1981 also included St. Vincent and the Grenadines (1979), St. Kitts and Nevis (1980) and Antigua and Barbuda (1981) (UN, 1981b; OECS, 2020b). The ECCM aimed to promote regional economic integration by reducing trade barriers and improving infrastructure such as ports (OECS, 2020b). The OECS, the successor of the ECCM, was established in 1981 through the Treaty of Basseterre which sought to continue the arrangement in which the islands could cooperate after independence, given their limited human and financial resources (UN, 1981a). The union continued to grow after 1981, with the addition of four (4) associate members. The British Virgin Islands (BVI) was the first to join in 1984, followed by Anguilla more than a decade later in 1995. The French Overseas Departments of Martinique and Guadeloupe are more recent additions, joining in 2016 and 2019, respectively. The Treaty of Basseterre gives the highest importance to cooperation among members for international relations and foreign policy, including commitments to international law and the requirements of CARICOM and the United Nations (UN) (UN, 1981a). The OECS members have agreed to coordinate, harmonise and pursue joint policies on a number of matters including those relating to marine resources, as well as mutual defence and security. The Treaty of Basseterre was revised in 2010 (United Nations (UN), 2010) to establish an Economic Union, where goods, people and finances move freely and there is a degree of harmonisation of policies relating to revenue and taxes. The seven (7) full members are part of the OECS Economic Union while the four (4) associate members are not and remain without the additional benefits of full membership.

3.2.1 Maritime surveillance

Since the establishment of the OECS, TMC has focused on several key sectors of the region, such as maritime transportation, maritime surveillance, fisheries, tourism and environmental concerns including those related to biodiversity and conservation, climate change, marine debris, and more recently, Sargassum (OECS, 2013a). As the custodians of exceptionally large maritime areas relative to land area, the members of the OECS face rising challenges for surveillance of their waters. Through the Regional Security System (RSS) established in 1982, participating OECS members effect maritime surveillance through cooperation for protection against illegal drug trade, smuggling and human trafficking, search and rescue, IUU fishing, pollution control, immigration and customs exercises and protection of offshore installations (OECS, 2007a). Since 1989, there has been an ongoing programme of coordinated maritime patrols involving Coast Guard vessels of RSS members (Regional Security System (RSS), 2022).

3.2.2 Maritime transportation

Maritime transport is a critical sector for the region and has a long history in the Eastern Caribbean dating back to the colonial era when mainly agricultural products were transported between the islands and then onward to Europe (Titchener, 1990). With the establishment of the ECCM and later the OECS, the countries began to cooperate more closely on maritime transport and further developed links with each other through an inter-island ferry service to facilitate inter-island trade and the movement of people (Pinnock and Ajagunna (2012). The Revised Treaty of Basseterre, establishing the OECS Economic Union in 2011, transferred

legislative competence from the states to the OECS Authority for maritime transportation (OECS, 2013b). As a result the OECS has become central in promoting and facilitating cooperation among its members through the allocation of resources for the development of the sector. The OECS Maritime Shipping Cluster Competitiveness Improvement Plan led by the OECS Secretariat, was launched in 2013, with the aim of coordinating and streamlining both the formal and informal shipping sectors (OECS, 2013b). More recently in 2022, a maritime single window is being planned, consolidating existing systems for passenger and cargo information and other structures into a single portal, accessible to all the responsible agencies in the participating OECS members (CDB, 2020).

3.2.3 Fisheries

Fisheries is a historically important area for cooperation across national jurisdictions in the Eastern Caribbean with shared fish stocks being a resource of economic and cultural importance to the region (Caribbean Regional Fisheries Mechanism (CRFM), 2021). The fisheries sector is shaped by small to medium-scale fisheries and managed by different organisations with a varying set of mandates and responsibilities (Fanning and Mahon, 2011). Early TMC efforts on fisheries management include development of the OECS harmonised fisheries legislation of 1983 (Chakalall, 1995). Common Fisheries Surveillance Zones (CFSZs) were developed in 1991 to facilitate regional collaboration for surveillance and enforcement (Chakalall, 1995) and a Fisheries Management and Development Strategy was later developed in 1999 with the aim of growing a more diversified regional fisheries sector for the OECS (OECS, 1999). Although the OECS does not possess a Regional Fisheries Body, members are part of CARICOMs Caribbean Regional Fisheries Mechanism (CRFM) (Fanning & Mahon, 2011). In 2014, its members adopted CARICOMs Common Fisheries Policy (CCFP), which has allowed for regional activities, such as the development of policies on fisheries co-management, fisher engagement and participation, and a protocol on securing sustainable small-scale fisheries (CLME+, 2021).

3.2.4 Tourism

Tourism is the main employer and revenue generator for the islands (ILO, 2020) and development of the sector is a priority of the OECS. Since the 1980s the organisation has been seeking to develop a coordinated approach to developing the sector as it is recognised that promoting synergy and collaboration among members allows greater achievement than individual countries working on their own. Strategies to achieve this include developing a framework for long-term development and harmonising standards and practices across member states (OECS, 2020d). After five years of planning, the OECS Tourism Development Programme was launched in 1992 with a focus on product development and European markets (OECS, 1992). The first OECS Common Tourism Policy was introduced in 2011 with the aim of improving the competitiveness of the sector through balanced development and progressive harmonisation of policies across the region (OECS, 2011). To further support deepening integration and functional cooperation for the sector across the islands, the Eastern Caribbean Institute of Tourism was set up in 2016 as part of the OECS Network of Excellence for Tourism and Hospitality Training and Education (NETHTE) (OECS, 2020e). The institute is an inter-governmental tourism and hospitality virtual training and education centre comprising nine partner institutions from across the region specialising in tourism and hospitality education and training (OECS, 2020e).

3.2.5 Environmental policy and management

The natural environment is the basis of the economy and society in the Eastern Caribbean region. Marine and coastal ecosystem services are particularly valuable, contributing to food security, providing protection from climate impacts, as well supporting culture, livelihoods and the economically important tourism sector. The OECS has delivered regional policies designed to holistically manage both the terrestrial and marine environment across the region. The St. George's Declaration of Principles for Environmental Sustainability in the OECS (adopted in 2001 and revised in 2006) is the overarching regional environmental policy, providing a framework for policy harmonisation of members on both land use and water resources (OECS, 2007b).

TMC on environmental issues increased with the implementation of area-based management tools for marine protection and conservation in the late 1990s and early 2000s. In 2013, a common regional ocean governance policy was introduced, as focus intensified on the maritime zone in recognition of its potential for growth and development of the islands. The Eastern Caribbean Regional Ocean Policy (ECROP) (OECS, 2013a) was developed in response to a growing regional Blue Economy development agenda, with the goal of guiding the future use of the region´s marine space, providing the foundation for coordinated management of marine resource use (OECS, 2013a). Among its policy actions is the implementation of marine spatial planning (MSP) across the region, including the development of a framework for transboundary MSP in recognition that the region's seas are interconnected and development of its vast potential will require cooperation among its members. In December 2021 with the conclusion of the OECS Commission-led Caribbean Regional Oceanscape Project (CROP), marine spatial plans were delivered for the marine areas of five OECS full member states (Dominica, Grenada, St Kitts and Nevis, St Lucia and St Vincent and the Grenadines), as well as a Regional MSP framework, to be used as a guide to promote transboundary MSP across members states (Mahadeo, 2022).

3.2.6 Climate change

Among the cross-cutting environmental issues for the region, climate change is one of the most serious challenges, as the islands are among the world's most vulnerable to the impacts (UNEP, 2014). The OECS Commission leads the OECS Climate Change Programme which aims to enhance the resilience of member states through a series of interventions including disaster response and risk reduction; coastal zone management; education and capacity development; biodiversity management; and climate adaptation (Organization of Eastern Caribbean States (OECS) Commission,

2020; OECS, 2020g). Initiatives to advance the regional response include the Eastern Caribbean Regional Climate Change Implementation Plan in March 2018 (OECS, 2018) and later in 2021, the OCES Climate Change Adaptation Strategy and Action Plan (CCASAP) 2021-2026 (D'Auvergne, 2022), both led by the OECS Commission.

3.2.7 Marine pollution

Reducing marine pollution is a priority for the OECS as outlined in the ECROP (OECS, 2013a), as it poses a major threat to the Blue Economy development agenda in the region (OECS, 2020c). Pollutants including plastics, sewage, oil and chemicals in coastal and marine waters adversely impact valuable ecosystems and the pristine environment upon which the tourism sector depends (Diez et al., 2019). Within the last decade, the region has had to deal with the additional threat of vast beach strandings of the normally oceanic Sargassum seaweed. This is a serious challenge for the islands as it disrupts maritime transport, tourism activities and poses a health hazard to coastal communities. The 1st International Conference on Sargassum was held in Guadeloupe in 2019, at which a declaration was signed by all partners, including the OECS Commission, for a commitment to cooperation in the region on the matter. Article 1 of the declaration calls for the establishment of a Caribbean Programme for Sargassum, bringing together all partners with the aim of strengthening cooperation between states; capacity development and awareness; research; and innovation and investment for responses and solutions (OECS, 2019b).

4 Results

4.1 Literature review on transboundary maritime cooperation

4.1.1 The challenge of a definition for transboundary maritime cooperation

TMC does not present an emerging or new concept. Cooperation across the seas has a long history, as the movement of goods, people and marine resources traversing the ocean space have required cooperation among countries. While well established in practice, the concept of TMC has not been well explained or defined. There are several reasons for this gap in scholarly literature. Firstly, in scientific research, maritime cooperation is widely studied across multiple disciplines including law (Okafor, 2006; Chang et al, 2022), international relations (McLaughlin, 2008a), energy studies (Pagano, 2013), economics (Rus, 2012), marine spatial planning (Kull et al., 2019; Li and Jay, 2020; Morf et al., 2022), fisheries management (Chakalall et al., 2007), biology and conservation (Chircop, 2010; Roberson et al., 2021), among others. While studied for a variety of themes across geographies around the world, TMC has not been the subject of research as a discrete topic as has *cross-border cooperation* been in the terrestrial context (Beck, 2019), hence the widely dispersed body of literature covering a variety of disciplines. Secondly, TMC is diverse across geographies and so it is difficult to construct a definition which applies widely. Additionally, the meaning of TMC and indeed individual components of the concept such as *cooperation* and *transboundary* have been less scrutinised for the maritime zone than on land. While acknowledging that there is great diversity among academic disciplines and regions of the world, this section aims to give a broad understanding of *transboundary maritime cooperation* by examining several key dimensions of the concept as gained from a review of academic literature on the subject.

4.1.2 Dimensions of transboundary maritime cooperation

4.1.2.1 Spatial scale

What falls under *transboundary maritime cooperation* is focussed on a range of themes, involving a great diversity of actors over multiple scales in the marine space. TMC is understood to have a territorial dimension. National territories or jurisdictions are determined by boundaries, which have been formalised within the last century, when states legally defined the maritime zone through the 1958 Geneva Conventions on the Law of the Sea and the 1982 United Nations Convention on the Law of the Sea (UNCLOS) (Østhagen, 2020). Beyond the 12 nautical miles (nm) territorial sea, UNCLOS provides the legal rationale for a 200 nm EEZ and further extension along the continental shelf of up to 350 nm from the baseline, or not exceeding 100 nm beyond where the seabed is at a depth of 2500 m (Busch, 2018). Since then, there have been multiple claims and dispute settlements of maritime boundaries among coastal states. The term *transboundary* is widely used in the academic literature, in the broadest sense, meaning crossing national or jurisdictional boundaries (Ukwe and Ibe, 2010; Queffelec and Maes, 2015; Song et al., 2017). The number of members involved in the cooperative arrangement can be two (bilateral) or more (multilateral), which may or may not all share a maritime border.

Drawing from the literature review, the regional scale in particular appears as a common domain for TMC and what is *regional* encompasses a variety of areas. These include geographically/biogeographically defined spaces such as the bay, strait, gulf, sea-basin, semi-enclosed sea, eco-region, and large marine ecosystem (LME). They also include spatially-bound units which are the subjects of public governance and are permanently established, for example, the jurisdictions of countries within regional trading blocs, regional seas commissions, regional fisheries mechanisms and regional sectoral associations and networks; or those which are temporary and time-bound, such as consortia for regional working groups, projects and initiatives.

TMC can also have a global focus, occurring across multiple countries around the world, which cooperate on phenomena with far-reaching spatial impacts such as pollution and climate change. Additionally, the geographic scale across which TMC occurs often involves taking into account multiple differences in scale, for example, considering the scale at which ecosystem processes and the existing governance framework operates, which then may be

larger than the jurisdiction of the countries involved (Gómez-Ballesteros et al, 2021).

4.1.2.2 Thematic focus

The literature on TMC, though spread across a wide range of disciplines, is dominated by the themes related to environmental management. Among the issues covered are policy and associated actions for environmental protection, biodiversity conservation and sustainable use of coastal and marine resources. These are spread among several sectors including fisheries management and combating illegal unreported and unregulated fishing (Miller et al., 2014; Longo et al, 2021); hydrocarbon exploitation (Bankes, 2014); shipping and maritime transport (Argüello, 2021); piracy and safety at sea (Mo, 2002); and tourism (Berzi and Ariza, 2018). Cross cutting environmental themes include marine pollution and climate change. TMC for marine pollution focuses on managing different types of pollution including from ships (Kim et al., 2022), nuclear waste (Wang and Li, 2022), oil spills (Hung et al., 2019) and marine debris, including plastic pollution (Graham, 2022; Hatzonikolakis et al., 2022). The literature on TMC for climate change focuses on regional approaches for studying the impacts on biodiversity and regional strategies for managing these (Keessen, 2018; Maltby et al., 2022). Law is a cross cutting area of research well documented among the various disciplines addressing issues such as maritime boundary delimitation and disputes (Keyuan, 2005; Fodchenko, 2018); pollution control (George, 2001); fisheries management (Henriksen and Hoel, 2011); marine spatial planning (Hassan et al., 2015); hydrocarbon exploitation (McLaughlin, 2008b); biodiversity conservation and management (Jefferies et al., 2021); and environmental diplomacy (Kakakhel, 2016).

Area-based management tools such as marine protected areas (MPAs) have been a particular area of cooperation for countries, both bilaterally between neighbouring countries (Lock, 1997), and regionally across multiple countries seeking to develop networks of MPAs (Guerreiro et al., 2010). Over the last decade, there has been a sharp increase in the literature focussing on marine spatial planning (MSP) and transboundary marine spatial planning (TMSP). These studies are mainly from the European Union (EU) context (Baltic, North and Mediterranean Seas and the North East Atlantic Ocean) which coincides with the EU MSP Directive (2014/89/EU) obligating member states to produce marine spatial plans and through the process, pursue transboundary cooperation with member and third states, to achieve coherence among plans (European Union (EU), 2014). While the literature addresses a range of themes, sectors including tourism, underwater infrastructure (cables and pipelines), renewable energy, aquaculture, and culture and heritage were found to be less documented. Additionally, most notable is the absence of studies on TMC where social issues such as gender and poverty are the subject of focus.

4.1.2.3 Actors

Cooperation in the maritime zone can be understood across two dimensions; the horizontal dimension includes actors and instruments which facilitate and guide cooperative arrangements; and the vertical dimension includes the different levels at which these actors and instruments operate. TMC is undertaken through a vast network of public and private actors operating across the global, regional, national and local levels. Cooperation among these actors can take several forms, including formally through treaties (Argüello, 2021), agreements and protocols (Pallero Flores et al., 2017) as well as informally through partnerships and networks (Stacey et al., 2015).

Public actors, and in particular, the various international and UN organisations, as well as funds, programmes, and specialised agencies under the UN system, play a significant role in facilitating TMC at both the international and regional levels. The role of the International Maritime Organisation (IMO) as an UN specialised agency and facilitator of cooperation among countries is well established. The 1948 Convention on the IMO notes in Article 1 (a) that the purposes of the IMO are "to provide machinery for cooperation among Governments in the field of governmental regulation and practices relating to technical matters of all kinds affecting shipping engaged in international trade" (UN, 1948). Likewise, the specialised agencies of the UN, such as the UNESCO-IOC, the Fisheries and Agricultural Organisation (FAO), and UN programmes, such as the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP), dealing with the sea, all support coordination among countries for ocean-related activities under their mandate. Other public bodies which have a role in promoting and facilitating TMC include international and regional non-governmental organisations (NGOs) and environmental NGOs (ENGOs); international and regional development banks; regional sectoral management mechanisms such as regional fishing bodies; regional trading blocs and intergovernmental organisations; universities and research institutions; as well as governments of developed countries which support cooperation across the developing context through funding and technical assistance.

A range of public and private actors with diverse mandates and agendas also operate at the national and local levels. At the national level, TMC arrangements are dominated by public actors. The political level plays an instrumental role through displaying leadership and political commitment (Adibe et al, 2019), and is particularly important in driving cooperation in geopolitically complex contexts (Druzhinin, 2020). State ministries and agencies which have a mandate for sectoral activities related to the sea, such as fisheries, energy, the environment and more recently spatial planning, other than their executive power, also have a major role as financier and/or coordinator among national and local level actors. Among private actors, the role of international and national energy companies for exploitation of hydrocarbon resources as well as disaster management in the event of an oil spill is well documented in the literature. At the local level, public authorities with a governing function such as municipalities have leadership and coordinating roles (Ma et al., 2022) while other local public and private actors are mostly involved as stakeholders within processes or where projects are to be implemented (Stacey et al., 2015). While most arrangements tend to be formal, public actors such as academia, NGOs and civil society play an important role in facilitating transboundary cooperation more informally (Cruz and McLaughlin, 2008).

4.2 Project analysis

Given the diversity and increasing priorities for the sea as outlined in the literature review (1.1.2), a number of projects have been initiated within the last decade with participation of OECS members. These focus on several thematic issues and involve multiple public and private actors operating at different governance levels. The following section gives insight to the thematic distribution of projects among OECS members, cooperation arrangements, as well as the role of the OECS, and the drivers and the constraints in relation to TMC.

4.2.1 Transboundary maritime cooperation projects across the OECS since 2012

Following the initial scoping of projects and initiatives in the region and based on the selection criteria (section 2.1), 24 projects have been identified and selected for further analysis (Table 1 refers). The majority of the projects ran for a period of three to five years and have been completed at the time of this research. Approximately 60 percent of the projects have been initiated in the latter part of the decade, after 2016, suggesting a small increase in transboundary cooperation on maritime issues across the study period.

A spatial disparity is observed among the TMC projects within the OECS, with projects concentrated among OECS full members. 15 out of the 24 projects (60 percent), involve only (but not all) full members. Associate members are participants in eight of the 24 projects (33 percent), with seven of these projects involving at least one full member state. One project, the Caribbean network for coastal risks related with climate change (Carib Coast;P17), involves two associate members, Martinique and Guadeloupe, both Overseas French Departments sharing a jurisdictional limit, albeit one within France. One project, the Global Ocean Wildlife Analysis Network (GOWAN) (P9) involves only the three Overseas Territories of the UK, Anguilla, the BVI and Montserrat, which do not share maritime boundaries. Five out of the 24 projects have the least number of participating members, including two bilateral cooperation arrangements, and in two (2) projects (P4 and P17) where the members share a maritime boundary. In contrast, the Caribbean Programme for Sargassum (SARGi COOP) (P23) involves nine OECS members, and as such, most of the members, but of which St Vincent and the Grenadines and Dominica are not involved. This regional project focussed on multilateral cooperation for Sargassum management.

Among all OECS members, St Lucia has participated in the majority of TMC projects (18 in total), followed by Grenada with a total of 17 projects and St Vincent and the Grenadines, which has participated in 16 projects. Anguilla is a partner to three projects and Montserrat, the BVI as well as Guadeloupe (French Overseas Department) have participated in four and as such in the least number of TMC projects.

4.2.2 Thematic priorities of transboundary maritime cooperation projects across the OECS

The most common thematic focus among all the projects relates to conservation and preservation of marine biodiversity (Table 2 refers). Out of the 16 projects, six focussed on marine protected area (MPA) development and management over the decade, highlighting the continuous efforts towards achieving marine protection targets across the region. The fisheries sector, a priority sector for the region, is addressed in 12 of the 24 projects (50 percent), the most for any maritime sector in the study. Of these 12, nine also focussed on conservation. Tourism, another priority area for the islands, is addressed in eight out of the 24 projects (33 percent), and seven of these are also the subject of conservation and preservation. Within the last few years, there has been a move towards a more sustainable tourism product in the region with a focus on culture and ecotourism (OECS, 2020d). The INTERREG Odyssea Antilles Sustainable Nautical and Cultural Blue Routes Project (OASNCBR) (P20) for example, involving Martinique, Guadeloupe and St Lucia, aimed to promote growth and blue tourism with a focus on enhancing the natural and cultural heritage across these neighbouring countries (OECS, 2020d).

Other than environmental considerations, notable common features of several TMC projects are education and awareness raising, as it relates to capacity building among participants, beneficiaries, and the general public; as well as research and innovation to promote and increase data collection in the region. Nine (40 percent) and 14 (58 percent) out of the 24 projects have prioritised research and innovation and education and awareness respectively. In some projects, education and awareness appears as an overall objective. For example, in the course of the Caribbean Regional Oceanscape Project (CROP) (P13), public officers received training on MSP and a series of webinars and e-books were developed to explain key concepts such as ocean governance and blue economy to a wider stakeholder audience (OECS, 2020i). Education and awareness as well as research and innovation are also key objectives of SARG'COOP (P23), which aims to provide pragmatic solutions to Sargassum strandings as well as develop a novel approach for air quality measurement across the region (OECS, 2019a). The Plastic Waste Free Islands (PWFI) project (P18) provided visual products, such as national education campaigns and video productions to promote behavioural change and raise awareness on plastic pollution (International Union for Conservation of Nature (IUCN), 2020).

In line with regional-level policy trends (Section 3.2.2), several projects initiated in the latter part of the decade have focussed on the more recent thematic priorities for the region. Post the ECROP in 2013, the need for an integrated, ecosystem-based approach to marine management had made implementation of large-scale MSP a priority, which was realised through the CROP (P13) in 2017. Additionally, climate change, Sargassum and pollution are recognised to be serious threats to the Blue Economy development agenda of the countries and the OECS has identified the reduction of marine pollution as one of its priorities (OECS, 2020h). Several projects prioritising Sargassum and pollution in particular, have been initiated since 2016. The Building Resilience in the Eastern Caribbean through Reduction in Marine Litter in the Eastern Caribbean (ReMLit) project (P22), for example, led by the OECS Commission, aims to enhance policy and legislation for waste management and raise awareness on the impacts of marine litter in the region (OECS, 2020h). Similarly, the PWFI project

TABLE 1 Transboundary maritime cooperation projects across the OECS since 2012.

Project (P) *		Start	End	Full Members							Associate Members				Total
				ATG	DMA	GRD	MSR	KNA	LCA	VNA	MTQ	GLP	AIA	VGB	
1	CRMCMB	2012	2018		X	X		X	X	X					5
2	ECMMAN	2013	2017	X	X	X		X	X	X					6
3	CCI Phase 2	2013	2018			X		X	X	X				X	5
4	CBMP	2014	2019			X				X					2
5	CBP	2015	2018			X					X				2
6	CPCCA	2015	2019			X			X	X					3
7	CLME+	2015	2025	X	X	X		X	X	X					6
8	TCBR	2016	2019	X				X							2
9	GOWAN	2016	2021				X						X	X	3
10	IWEco	2016	2023	X		X		X	X	X					5
11	Darwin CCA	2017	2020				X						X		2
12	PISCES	2017	2020	X	X	X		X	X	X					6
13	CROP	2017	2021		X	X		X	X	X					5
14	RTCP	2017	2023			X			X	X					3
15	CLME+ FFish	2018	2020		X	X			X	X	X				5
16	CARI'MAM	2018	2021	X	X				X	X	X	X		X	7
17	CARIB-COAST	2018	2022								X	X			2
18	PWFI	2018	2023	X		X			X						3
19	MGEF	2019	2020		X	X			X	X					4
20	OASNCBR	2019	2021						X		X	X			3
21	StewardFish	2019	2021	X					X	X					3
22	ReMLit	2019	2022	X	X	X	X		X	X					6
23	SARG'COOP	2019	2022	X		X	X	X	X		X	X	X	X	9
24	SargAdapt	2020	2023		X	X			X	X					4
Total				10	10	17	4	9	18	16	6	4	3	4	

*Full project names: Management of Coastal Resources and Conservation of Marine Biodiversity in the Caribbean (CRMCMB), Eastern Caribbean Marine Managed Area Network (ECMMAN), Caribbean Challenge Initiative (CCI). Caribbean Marine Biodiversity Program (CBMP), Caribbean Billfish Project (CBP), Coastal Protection for Climate Change Adaptation in the Small Island States in the Caribbean (CPCCA), Catalysing Implementation of the Strategic Action Programme for the Sustainable Management of shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+), Towards a Caribbean Blue Revolution (TCBR), Global Ocean Wildlife Analysis Network (GOWAN), Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (IWEco), Climate change adaptation in the fisheries of Anguilla and Montserrat (Darwin CCA), Powering Innovations in Civil Society and Enterprises for Sustainability in the Caribbean (PISCES), Caribbean Regional Oceanscape Project (CROP), Regional Tourism Competitiveness Project (RTCP), CLME+ Sub-project #3 - EAF for the Eastern Caribbean Flyingfish (CLME+FFish), Caribbean Marine Mammals Preservation Network (CARI'MAM), Caribbean network for coastal risks related with climate change (CARIB-COAST), Plastic Waste Free Islands (PWFI), Mainstreaming Gender Equality in Fisheries in the Caribbean Project (MGEF), INTERREG Odyssea Antilles Sustainable Nautical and Cultural Blue Routes Project (OASNCBR), Developing Organisational Capacity for Ecosystem Stewardship and Livelihoods in Caribbean Small-Scale Fisheries (StewardFish), Building Resilience in the Eastern Caribbean through Reduction in Marine Litter in the Eastern Caribbean (ReMLit), Caribbean Programme for Sargassum (SARG'COOP), Adapting to a new reality: Managing responses to influxes of sargassum seaweed in the Eastern Caribbean as ecosystem hazards and opportunities (SargAdapt).
Full names of OECS members: Antigua and Barbuda (ATG), Commonwealth of Dominica (DMA), Grenada (GRD), Montserrat (MSR), St Kitts and Nevis (KNA), St Lucia (LCA), St Vincent and the Grenadine (VNA), Martinique (MTQ), Guadeloupe (GLP), Anguilla (AIA), British Virgin Islands (VGB).

(P18), aiming to apply a circular economy approach to reduce plastic waste generation and leakage from the islands, includes a maritime component focusing on sea-based sources of plastic pollution, such as ghost fishing gear (IUCN, 2018). Aquaculture, an emerging Blue Economy sector for the region, is reflected in two TMC projects. For example, the participating members of the Towards a Caribbean Blue Revolution (TCBR) project (P8) have identified the development of the sector as a high priority for their countries and through the project aim to sustainably develop aquaculture and selected associated value chains (Food and Agriculture Organsation (FAO), 2020).

The various thematic priorities of the projects are also increasingly more connected and complementary. For example, the ReMLit (P22) and PWFI (P18) projects mentioned above, benefit other priority areas for the region, such as the tourism and fisheries sectors (International Union for Conservation of

TABLE 2 Priorities of transboundary maritime cooperation projects across the OECS.

Priorities	Projects (P)																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total
Marine Biodiversity and Conser- vation	X	X	X	X	X	X	X		X	X	X	X	X			X		X		X			X		16
Climate Change	X					X				X	X						X								5
Sargassum										X													X	X	3
Aquaculture								X											X						2
Marine Pollution										X								X				X			3
Fisheries Manage- ment		X		X	X		X		X		X	X	X		X			X	X		X				12
Maritime/Public Transport and Shipping							X						X	X											3
Tourism				X			X			X			X	X		X		X		X					8
Underwater Infra- structure (Cables/Pipelines)																									0
Offshore Renewable Energy																									0
Heritage and Culture														X						X					2
Research and/or Innovation		X							X	X		X	X			X		X					X	X	9
Education and Awareness	X	X				X			X	X		X	X		X	X	X	X	X				X	X	14
Indigenous or/and Local Knowledge		X								X			X					X							4
Gender Equality	X														X				X						3
MPAs	X	X	X				X					X				X									6
MSP		X											X												2
Blue Economy													X									X			2
Total	5	7	2	3	2	3	5	1	4	8	3	5	9	3	3	5	2	7	4	3	1	2	4	3	

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Nature (IUCN), 2020). Additionally, the Developing Organisational Capacity for Ecosystem Stewardship and Livelihoods in Caribbean Small-Scale Fisheries (StewardFish) project (P21) contributed to implementation of several objectives of the CLME+ and its Strategic Action Plan (P7) including applying an increased participatory ecosystem-based approach to fisheries management and strengthening capacities across the region for management, planning, finance and leadership (Caribbean Natural Resources Institute (CANARI), 2003). Furthermore, the CLME+ sub-projects contribute to the objectives of the CLME+SAP (P7), such as the CLME+Flyingfish (CLME+FFish; P15), which focuses on the transition to an ecosystem approach for the Eastern Caribbean flying fish fisheries (CLME+Hub, 2021c). Similarly, the Caribbean Marine Mammals Preservation Network (CARI'MAM) (P16) (CLME+ Hub, 2021b) and the ECMMAN (P2) projects, support the goals of the Caribbean Challenge Initiative (CCI) (P3) (United Nations Environment Programme (UNEP), 2021). The CCI was launched in 2008 with the aim to protect 20 percent of marine and coastal ecosystems by 2020. Following Phase 2 of the project, which ended in 2018, the target has been extended to 30 percent by 2030 in line with Aichi targets (Caribbean Challenge Initiative (CCI), 2022). The OECS SIDS were among the first countries of the region to sign up to the CCI which presents a strong regional coordinating mechanism for jointly advancing efforts for conservation and management of the coastal and marine environment. Additionally, in parallel to Phase 2 of the CCI, from 2014-2017, the ECMMAN Project, sought to develop a regional network of marine managed areas (MMAs), deepening TMC for marine management among the independent full members of the OECS (TNC, 2022).

The analysis revealed multiple priority thematic areas among the various projects. However, it can be observed that few projects prioritised social themes such as heritage and culture, gender equality and indigenous and local knowledge. Among all projects, two projects (P14 and P20) focused on heritage and culture and three on gender (P1, P15 and P19) as priority themes. The Mainstreaming Gender Equality in Fisheries in the Caribbean Project (MGEF; P19) initiated in 2019, aimed to include gender and decent work considerations into the fisheries and aquaculture sectors of participating OECS members (CLME+ Hub, 2020). The CLME+ FFish subproject emphasises participation of women and youth in the national consultation processes (CRFM, 2020). Four projects included indigenous and/or local knowledge as a priority theme (P2, P10, P13, P18) and among these the CROP (P13) stands out, having actively engaged the Kalinago People of Dominica in the development of the country's coastal and marine spatial plan (OECS, 2020i). Notable gaps observed are the absence of projects on underwater infrastructure (cables and pipelines) and offshore renewable energy (ORE). ORE, like aquaculture, is an emerging Blue Economy sector (OECS, 2020f) and is in the very early stage of development in the region.

4.2.3 Actors within transboundary maritime cooperation projects across the OECS

The OECS, a regional actor, is part of a multilevel network involving international, wider Caribbean, regional, national and local level actors (Table 3 refers). The vast majority of projects, 18, comprise a mix of public and private actors among the different levels, while the remaining six projects involve only public actors. This network of actors, particularly at the international and wider Caribbean levels, facilitates coordination and provides significant technical and financial resources to complement available resources among OECS members.

With the environment being a priority area for the region, the International Union for Conservation of Nature (IUCN), a unique entity which comprises both government and civil society organisations, has a presence in the region, coordinating and lending technical expertise, being involved most recently in the PWFI project (P18) (IUCN, 2018). IUCN member organisations among OECS members include the SOS Faune Savage in Guadeloupe and the Saint Lucia National Trust. The organisation also has a close working relationship with the OECS Commission having undertaken technical and scientific cooperation activities within the framework of a Memorandum of Understanding (MoU) signed in 2020, and renewed this year for continued engagement over the period 2023-2028 (IUCN, 2023). Among international NGOs, the work of The Nature Conservancy (TNC) stands out. Through their regional office based on the island of Grenada, they have coordinated and provided technical expertise for several transboundary projects including the ECMMAN project (P2) (TNC, 2022) and the Mapping Ocean Wealth component of the CROP (P13) (OECS, 2020i). Public funding agencies such as the World Bank, Inter American Development Bank (IDB) and the Global Environmental Facility (GEF) are heavily invested in the region providing development aid funding for several TMC projects and initiatives over the years. A notable recent example is the joint World Bank-GEF funding of the CROP (P13) at a cost of USD 6.3 million (OECS, 2020i). Foreign governments also have a strong presence in the region, channelling funding for projects through their various funding mechanisms. The Government of Norway for example, through Norad, has financed recent initiatives with a focus on plastic pollution, including the PWFI (P18) and the ReMLit (P22) projects. Additionally, through EU funding of the INTERREG Caribbean Programme, several projects are facilitating cooperation between not only the French Overseas Departments of Martinique and Guadeloupe, but also with neighbouring countries. St. Lucia, which shares a maritime border with Martinique has benefitted from this through the tourism-focused OASNCBR (P20) project (OECS, 2020d).

CARICOM, as a supra-regional intergovernmental organisation for integration through a single market and economy (Caribbean Community (CARICOM), 1973; CARICOM, 2001), supports TMC in the Eastern Caribbean through its various institutions including the public actors such as the Caribbean Development Bank (CDB), Caribbean Regional Fisheries Mechanism (CRFM), the University of the West Indies (UWI) and the Caribbean Tourism Organisation (CTO), among others. CARICOM and its institutions engage with OECS members through projects such as the Management of Coastal Resources and Conservation of Marine Biodiversity in the Caribbean (CRMCMB) (P1) and Coastal Protection for Climate Change Adaptation in the Small Island States in the Caribbean (CPCCA) (P6). TMC among the OECS members has also benefited

TABLE 3 Actor governance levels in transboundary maritime cooperation (TMC) projects across the OECS.

Project	Actors Governance Level						Actors		
	International	Supra-Regional (Wider CaribbeanRegion)	Regional (Eastern CaribbeanRegion)	OECS (lead or operating partner)	National	Local	Private only	Public only	Both Private and Public
CRMCMB		X	X		X				X
ECMMAN	X		X	X	X	X		X	
CCI Phase 2		X							X
CBMP			X		X	X			X
CBP		X							X
CPCCA		X			X	X			X
CLME+	X	X	X	X	X			X	
TCBR	X				X	X			X
GOWAN	X	X			X	X			X
IWEco			X	X	X	X		X	
Darwin CCA			X		X			X	
PISCES			X		X	X			X
CROP			X	X	X				X
RTCP			X	X					X
CLME+ FFish			X		X	X			X
CARI'MAM	X	X	X		X	X			X
CARIB-COAST	X	X						X	
PWFI		X	X	X	X	X			X
MGEF		X			X	X			X
OASNCBR			X	X	X	X		X	
StewardFish		X	X		X	X			X
ReMLit			X	X	X			X	
SARG'COOP	X	X	X	X	X	X			X
SargAdapt			X		X	X			X
Total	6	12	17	9	20	15	0	7	17

from the work of agencies under the UN system operating in the wider Caribbean region. The United Nations Environment Programme Caribbean environment programme (UNEP-CEP), has an important role in education and capacity development, biodiversity conservation, establishment of marine protected areas (MPAs), and reduction and management of marine pollution from terrestrial and marine sources (UNEP-CEP (2012). Over the years, it has been instrumental in developing the region´s capacity for implementation of the Cartagena Convention and its associated protocols (Specially Protected Areas and Wildlife (SPAW) and Land Based Sources of Marine Pollution (LBS) (UN, 1983; UNEP-CEP, 2012). The UNEP CEP collaborates with OECS members, offering financial and technical assistance and support through implementing projects and establishing partnerships for responding to marine issues across the region. The IOC UNESCO IOCARIBE regional office and the United Nations Development Programme (UNDP), under which the Wider Caribbean Region transboundary Caribbean Large Marine Ecosystem (CLME) and CLME+ projects are managed, play an important role as coordinating bodies for countries across the Eastern and Wider Caribbean Region (UNESCO IOC, 2022).

While the region has benefited from the many international and wider Caribbean level actors, the analysis of TMC across the OECS members reveals that the majority of the projects comprises actors at the national level; followed by the Eastern Caribbean regional level (including, but not exclusively the OECS Commission);

followed by local level actors such as NGOs (e.g. SusGren, P4), community groups and private sector partners (Table 3 refers). Among the various TMC projects, cooperation among actors from the national and regional levels is often reflected in the establishment of regional networks for sharing of information and experiences as well as jointly developing solutions to shared challenges. For example, the International Conference on Sargassum was instrumental in launching SARG'COOP which gathered partners from across the Eastern and Wider Caribbean Region, as well as strategic partners from French ministries and agencies to strengthen preparedness of the countries, as well as develop a network of professionals across the region for addressing the challenge (OECS, 2019a). National level actors which include primarily state agencies have a role in coordinating efforts at the national and local levels. Projects such as ReMLit (P22) and Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (IWEco, 2019;P10), focusing on national and local level outcomes rely on coordination and technical advice provided by national and other higher level partners. Local level actors, when involved, are mainly a mix of private actors including individuals such as women and youth, as well as groups such as local fishers, tour operators, boat owners and hoteliers; and public actors such as community groups, NGOs, and decision makers in planning or implementation processes. Local communities are on the frontline, directly confronted by the challenges facing the marine and coastal environment, as well as being aware of potential opportunities. This wealth of knowledge, including of local ecological conditions, is important to be included in creating strategies for managing threats and planning for future development. The engagement of local knowledge can empower these communities, encouraging them to take ownership for conservation initiatives and further to promote the socio-economic development of the area through TMC with neighbouring islands.

Within the network of actors, the OECS Commission has a prominent role for obtaining funding, facilitating partnerships and as a project leader. The analysis shows that nine of the projects include the OECS Commission as either one of the operating partners or as the lead organisation for project implementation. Both the CROP (P13) and ReMLit (P22) projects, for example, have been initiated by the OECS Commission, with them also serving as project manager for coordinating among the various actors including countries policy-makers, the private sector, civil society and local communities. A closer look at the projects across time reveals an increasingly greater inclusion of a broader range of actors. More recent projects have sought to include vulnerable groups such as Indigenous Peoples as the Kalinago in the CROP (P13), and women as in the MGEF project (P19). Additionally, with complex challenges such as marine (plastic) pollution, a more holistic and participatory approach is being taken, through including not only policy makers and scientific experts but also civil society actors and the private sector, as expressed in the PWFI (P18) project (IUCN, 2021), as well as the CLME+ FFish sub-project (P15) through interactive governance (CRFM, 2020). At the same time, a perceptible gap is the still limited participation of private actors particularly at the international, Wider Caribbean and regional levels.

5 Discussion

5.1 Drivers for transboundary maritime cooperation in the OECS

5.1.1 History, geography and culture

Proximity, a shared colonial past, a history without major conflict and the integration efforts through the ECCM and later the OECS, have forged close ties among the OECS members. Despite the challenges of small land areas and associated characteristics as SIDS, the OECS full member countries have maintained a strong record of regional cooperation which mitigates some of these (World Bank, 2018). The full members are all former colonies of the UK and the original members of the ECCM and share language, culture and legal and administrative systems, which facilitate understanding and ease of working across borders (Morf et al, 2022). Cooperation among these islands built over more than half a century, has also developed a degree of trust among members, a key enabler of transboundary cooperation (Adewumi et al, 2022; Moodie and Sielker, 2022). The differences in language as well as legal and administrative systems as for Martinique and Guadeloupe can be barriers to effective cooperation (Morf et al., 2022). Additionally, they are also the most recent additions to the OECS and have had a considerably shorter, less formally arranged cooperative relationship with other members. However, despite these, the spatial, historical and cultural connections (particularly with St Lucia and Dominica their closest neighbours and where French Creole Patois is still spoken), are enablers to cooperation across borders.

The island states of the OECS have large EEZ´s and a contiguous configuration presents them as a highly interconnected unit within marine space. All members share a maritime border with at least one other and this close spatial arrangement and the influence of geographical proximity in promoting cooperation across the territory has been mainly positive for the region. Spatial closeness, which can be negative due to competition for territory and resources, has not, thus far, been a major challenge. Conversely, adjacent members in particular, for example St Vincent and the Grenadines and Grenada, have developed networks and working relationships over the years and through projects such as the Caribbean Marine Biodiversity Program (CBMP; P4), cooperate for managing the transboundary Grenadines Bank area (The Nature Conservancy (TNC), 2020). Similarly, adjacent Overseas French Departments Martinique and Guadeloupe work closely on issues of mutual interest, for example, climate change, where they have collaborated through the Carib Coast project (P17) for developing monitoring, coastal risk prevention and adaptation measures (Interreg Carib Coast (ICC), 2023).

5.1.2 Opportunities and challenges

The OECS members are highly dependent on the sea and its resources and are increasingly faced with opportunities and challenges related to expansion of traditional maritime sectors and development of new ones. Challenges in the marine domain

such as conflicts amongst uses; the impacts of a changing climate; adequately addressing cumulative environmental impacts; the growing threat posed by pollution and Sargassum; as well as those related to realising the OECSs integration ambitions, necessitates cooperation across borders. Maritime borders from a political perspective is the point at which administrative units meet out at sea. Although the OECS members have maritime borders (some based on claims, as not all have been formally resolved through agreements) and emphasise their sovereignty, OECS-level policy and regional agreements have effectively sought to dismantle the barriers of the borders at sea, fostering closer cooperation on issues of mutual interest such as fisheries management, environmental protection and national security.

A regional approach to tackling challenges and developing the potential of the islands' seas has always been recognised in the integration ambitions of the OECS (OECS, 2013a). The Blue Economy is high on the policy agenda of both the OECS and national governments and capitalising on opportunities and responding to challenges through regional cooperation is recognised as the way for the islands to collectively make progress (Mahadeo, 2022). Faced with emerging threats such as climate change, pollution and Sargassum; vulnerability to economic shocks; as well as limited technical, human and financial resources, transboundary cooperation among members has several advantages. It facilitates sharing of experiences and enables developing joint approaches and solutions to transboundary challenges (Geoghegan, 2015). Additionally, pooling resources and capitalising on economies of scale reduces the need for resource-constrained countries to individually tackle marine challenges or conduct similar processes. Marine spatial plans have been delivered for five OECS full-member countries through cooperation on the CROP (P13), as members did not have the financial resources and technical capacity to individually undertake a large-scale MSP process (Mahadeo, 2022).

In relation to marine conservation, projects aimed at creating or making use of MPA networks, provide opportunities for cooperation at cross-regional level to fill existing capacity and management gaps occurring at the national and local levels. This also includes the collection and sharing of data, a major constraint for effectively meeting requirements of conservation targets, national legislation, regional strategies and protocols, among others. One option is to make use of the established cross-regional mechanisms and platforms for knowledge sharing. For example, the Caribbean Marine Protected Area Network and Forum (CaMPAM), established at the wider Caribbean level, has set up a regional database, collecting information from 1069 Caribbean marine and coastal MPAs covering 44 countries (status 2019; Caribbean Environment Program, 2019).

Despite the inherent benefits of the diversity of islands to regional cooperation, the uneven access to resources among OECS members must be acknowledged. Variability in engagement between full and associate members of the OECS appears to be a result of their differences in status. As Overseas Departments of France and Territories of the UK, associate members can be assumed to be less reliant on external aid for financing projects and have greater access to resources and technical assistance. However, their status as overseas departments and territories excludes them from benefiting from some types of financial aid which are accessible to members which are independent states. They do have some access to support, technical assistance and funding provided by the EU, UK and France and there are projects which include only the associate members, and are not open to the wider OECS membership. GOWAN (P9) is one such project providing technical support for data collection on marine biodiversity to support policy on marine environmental protection UK Government (2016), and which includes only UK Overseas Territories. Other projects such as the EU funded OASNCBR (P20) involving the French Overseas Departments and their neighbour St Lucia, is one example of where an independent country benefits from the access to resources and expertise by an overseas territory.

Addressing the significant transboundary challenges of the region will involve advancing development of robust institutional arrangements for ocean governance. While the OECS Commission has made tremendous strides in developing regional ocean policy, effective coordinating mechanisms are required. At the Wider Caribbean Region level, the UNEP CLME+ initiative, of which OECS members are a part of, sought to operationalize the Large Marine Ecosystem (LME) Governance Framework and Strategic Action Plan (SAP). However, it has faced challenges including resistance from countries to the establishment of another regional institution that may require funding and the presence of overseas territories and departments not supported by their metropolitan countries to participate (Fanning and Mahon, 2023). These are lessons for the OECS in its efforts to fully operationalise its regional Ocean Governance Team, which comprises focal points for ocean governance from members, with a mandate to support the implementation of the cross-sectoral Ocean Governance and Fisheries Programme which aims to maintain and improve ecosystem integrity; support research and capacity development; promote socio-economic development and maintain maritime safety and security, among others (OECS, 2020j). Additionally, OECS members must be supported to establish and operationalise their National Ocean Governance Committees, which have been set up to coordinate the delivery of objectives set out in the national ocean policies (among members that have a national ocean policy). The aim of these committees is to foster cross-sector collaboration among stakeholders for effective coastal and marine management, including by cooperating with neighbouring countries.

5.1.3 Policy framework and network of actors

The complexity of governing transboundary issues and shared challenges in the region has required the support of an actor network at all levels. TMC is shaped by international and regional agreements, conventions and declarations, which are realised through policy processes at the regional as well as the national and local levels in member countries. Regional policies for the marine and coastal environment in particular, such as the ECROP and the St George's Declaration, are critical drivers for cooperation among OECS members. They provide a guiding framework, linking the often reactive national level of governance (Geoghegan, 2015) and global-level agreements that are difficult for SIDS and other island states to translate to their own contexts, and for which they must collaborate on to achieve mutual benefit.

A particular driver for TMC among the network of actors is the OECS Commission which has been instrumental in developing relevant policy and programmes; accessing funding; managing projects as well as partnering with other stakeholders on a variety of projects. Through its integration ambitions, the implementation of a Regional Transboundary MSP Framework is expected to have the OECS Commission play a major role in facilitating cooperation for future transboundary MSP initiatives in the region (Mahadeo, 2022). There is further potential for the OECS Commission to make use of its many partnerships and relationships with other entities, such as through its membership in the CLME SAP Interim Coordination Mechanism (Renard and Walker, 2021).

While the analysis of the actors involved in the projects has revealed an important leadership role of the OECS Commission in advancing cooperation among OECS members, some projects were shown to have a more bottom-up approach, which includes participation of community actors in planning and implementation processes, including vulnerable groups, such as women and youth. Including these groups increases education and awareness raising at the national and local levels, serving as a driver for TMC through sharing of best practices and knowledge, as well as co-creation and transformative collaboration across countries.

5.2 Gaps in the projects and literature

The analysis of the selected projects reveals a gap in publicly available and accessible information and documents on projects, including reports, evaluations and assessments. This gap has been a constraint for the methodology of this paper, as well as for awareness raising of stakeholders and a wider public audience. More regular and timely updating of project websites is necessary, particularly when a project has concluded. Among the available project documents assessed as a part of this analysis, an evaluation report of the CROP revealed a cooperation gap and missed opportunity to include the francophone OECS members Guadeloupe and Martinique into the project, which would have furthered efforts towards strengthening regional integration, particularly among full and associate members (Renard and Walker, 2021). This matches the findings of this paper, given the distribution of projects among OECS members, with full members involved in 60 percent of the projects and associate members almost half that at 33 percent. Furthermore, while the CROP delivered several communication products, the evaluation report identified a gap in communication which would have been filled through a comprehensive communication strategy, allowing for public awareness raising, as well as accessing available project information and documents via the OECS website (Renard and Walker, 2021). Another identified gap is the limited participation of private actors particularly from the international, Wider Caribbean and Regional levels, reflecting a weaker link between industry and the science-policy-society interface in the region. This has also been recognised at the political level, as expressed by a government official during the launch of the PWFI project, calling for commitment from the private sector towards ending plastic pollution in the region (International Union for Conservation of Nature (IUCN), 2020).

The literature review (section 4.1) revealed a dearth of scientific research on TMC in the Eastern Caribbean. Only a handful of academic articles (Chakalall et al., 2007; Fanning et al., 2009; Baldwin and Oxenford, 2014; Graham, 2022) focussed on the Eastern Caribbean. While the WCR was significantly more studied, this article makes a case for improved knowledge management in Eastern Caribbean projects through reporting and where possible, in a transdisciplinary setting involving researchers, academic contributions. Within the literature globally, the limited focus on themes such as social justice and equity, ocean literacy and heritage and culture in relation to transboundary cooperation is not surprising. Academic research within the marine social sciences has only been on the rise within the last few years, but is a rapidly growing field, with increasingly greater subject areas from the social sciences making contributions to our understanding of societal relationships with the ocean (McKinley et al., 2022).

5.3 Methodological constraints and limitations

The longitudinal approach to studying TMC in the Eastern Caribbean has several limitations. An interdisciplinary approach was taken to the research and qualitative methods applied for data collection and analysis of the TMC projects. In qualitative research, the data collection process is often quite flexible and iterative, meaning there is the potential for incomplete and/or inaccurate data sets due to the availability, accessibility, and/or quality of the data sources and the methods of collection. It must be acknowledged that there is no OECS database from which projects could be selected, but rather the search involved an initial scoping of the OECS and project websites, as well as databases and lists at the wider Caribbean level, such as the above mentioned CLME+ and IW : LEARN project databases. It should be noted that the CLME+ database did not allow for the search criteria to include the British Virgin Islands. A further context-related challenge is the limited information available about the projects on their respective websites, as well as the consulted databases. Some provide basic information but remain to be updated, even after the project has ended. Furthermore, scientific publications on TMC in the region are scarce. As a result, information was primarily obtained from grey literature, including project documents from project websites as well as available and accessible reports. This has curtailed both the final listing of projects (some had to be discarded due to inability to determine if they met the set criteria) as well as the level of analysis. It should also be noted that the associate members of Martinique and Guadeloupe are French speaking and so any projects involving those countries with information available only in French could have been missed. An effort was made to access French language documents, but the main search was carried out in English. Considering all of the above factors, the projects identified for the final analysis are a non-exhaustive list as there may be additional projects which were not discovered during the scoping

exercise. The article therefore presents a first stocktaking of TMC among OECS members through a mapping of projects and initiatives, and aims to provide the groundwork for further research. An in-depth analysis of the dynamics of cooperation within the projects is outside the scope of this work.

The data analysis included iterative and reflexive processes and applied inductive reasoning, where themes were derived from the data, rather than testing predefined hypotheses. We acknowledge that this is open to limitations, including researcher bias based on preconceptions, assumptions, values, language, interpretation, as well as disciplinary bias (Repko, 2008). To help mitigate against this, analytical duties were shared among the team, and interpretations discussed before reporting to give an objective point of view as was possible. Triangulating data from multiple sources to cross-check and validate the findings, for example, confirmation from regional experts through interviews, could have been an additional measure applied to ensure accuracy. However, this was not possible at the time of the study. While we acknowledge there are several limitations of the method applied, the objectives of the research have been met. An overview of the various dimensions of TMC in the OECS was explored through an analysis of policy projects taking place over the last decade, and trends in and drivers for transboundary cooperation on maritime issues were identified.

6 Conclusion

The research has highlighted the consolidation of transboundary cooperation on marine-related themes, particularly among OECS full-members. Over the years, the integration efforts of the OECS Commission through various policy measures and support and guidance to member countries has allowed regional and national level actors to emerge as leaders who work alongside WCR and international actors for project delivery. In particular, the OECS Commission has increasingly assumed a leadership role across a diverse array of projects relevant to the Eastern Caribbean Region over the last decade. Policy objectives for the management of transboundary fish stocks and critical ecosystems, and increasingly complex challenges such as Sargassum, plastic pollution and climate change, can only be achieved through the participation of a diversity of public and private actors across the region. However, it must be noted that while shared issues and challenges drive cooperation, the need to access funding, and only being able to do so through consortia of several members, has to some extent promoted cooperation, while also influencing which members are involved.

The continuously developing regional policy framework being established under the OECS provides a way forward for further cooperation among the countries, including for implementing TMSP. Additionally, there is potential to leverage existing networks and mechanisms to increase regional cooperation among OECS members on identified thematic issues shared across the islands. Additional opportunities and avenues for knowledge exchange and sharing of best practices are some of the options mentioned in this article. Further, while this article provides a better understanding of TMC in the Eastern Caribbean through a first stocktaking and mapping which has highlighted the increasing number and diversity among projects, further research on this topic with a regional focus is needed. Diving deeper into the dynamics of cooperation among the OECS members can give greater insight into how other factors such as power relations and networks among actors shape transboundary cooperation and ocean governance across the Eastern Caribbean.

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The main part of this article was drafted and conceptualised while Linda Del Savio was at the World Maritime University—Sasakawa Global Ocean Institute.

Data availability statement

The original contributions presented in the study are included in the article/Supplementary Material. Further inquiries can be directed to the corresponding authors.

Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work, and approved it for publication.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

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Appendix I

Longlist of TMC projects and initiatives in the Eastern and wider Caribbean region provided as separate Supplementary Material (PDF).