# Partnerships for the Governance of Coastal Resources

## A Literature Review

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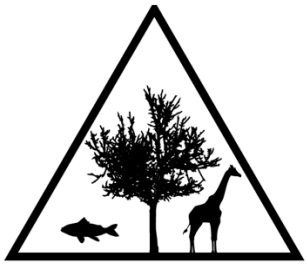

NEPSUS Working Paper 2017/4

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NEPSUS is a research and capacity building project based at the Department of Business and Politics, Copenhagen Business School, Denmark and the Department of Geography, University of Dar es Salaam, Tanzania. Other participating partners are the Department of Social Sciences and Business, Roskilde University, and the Sheffield Institute for International Development, University of Sheffield.

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# Partnerships for the Governance of Coastal Resources: A Literature Review

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**Abstract**

This working paper takes stock of the academic literature on the governance of coastal resources and examines the emergence of various instruments, their implementation experiences and their implications in terms of sustainability outcomes. More specifically, it seeks to interrogate the literature in order to: (1) highlight the types of actors involved, their relations and their networks; (2) identify the main processes involved in the governance of coastal resources and different partnership models; and (3) evaluate the outcomes of these processes on social and ecological sustainability. It is the result of activities undertaken by the New Partnerships for Sustainability (NEPSUS) research and capacity building project, which analyses sustainability partnerships in three key natural resource sectors in Tanzania: forestry, wildlife and coastal resources. This paper reviews the overall literature on governance of coastal resources, with the aim of identifying gaps and shaping methodological choices for fieldwork.

**Key words:** Sustainability, Co-management, Coastal Resources, Governance, Legitimacy

## 1. Introduction

Coastal and marine environments including seafood, coral reefs, mangroves and sea grasses ('coastal resources' thereafter) are highly productive and complex ecosystems that provide diverse ecological fits, livelihood options and income to hundreds of millions of people around the world (Andrew et al., 2007; Béné et al., 2006; FAO, 2014; UNEP, 2006; Zeller et al., 2006). However, these important ecosystems have experienced severe and potentially irreversible destruction due to a combination of local to global natural and anthropogenic forces (Baquiano, 2016; Courtney and White, 2000; Fernandez, 2007). Consequently, during the last three to four decades, many governments in the tropics have introduced natural resource governance systems in search for the best approaches to achieve conservation objectives while at the same time securing livelihood needs in coastal social and ecological systems. These reforms have steered management goals away from strict conservation objectives and towards the 'sustainable use' of resources, which entails an expansion in the number and kind of stakeholders involved, and the development of various forms of collaborative arrangements. These arrangements are characterized by the transfer and/or sharing of rights, roles and powers from central to local public authority (decentralization), and from state to non-state actors – including local communities, business and NGOs. The main challenges in management of coastal resource has been accommodating development and economic activities, including those by extractive sectors such as the oil and gas industry, at the same time as responding to pressure on resources such as mangrove, fish and corals, and the impact of climate change.

This paper takes stock of the academic literature on the governance of coastal resources and examines the emergence of various instruments, their implementation experiences and the implications in terms of sustainability outcomes. More specifically, it seeks to: (1) highlight changes in the types of actors, their relations and their networks involved in sustainability partnerships; (2) identify the main processes involved in the governance of coastal resources and different partnership models; and (3) evaluate the outcomes of these processes on social and ecological sustainability. This paper is the result of activities undertaken by the New Partnerships for Sustainability (NEPSUS) research and capacity building project. NEPSUS assembles a multidisciplinary team to analyse sustainability partnerships in three key natural resource sectors in Tanzania: forestry, wildlife and coastal resources (fish, corals and mangroves). In each of these sectors, NEPSUS assesses whether co-management with local communities and private and civil society actors, and putatively more participatory processes in the governance of renewable resources, result in more equitable and sustainable livelihoods and environmental outcomes. In relation to coastal resources, we seek to compare 'more complex' partnerships (Beach Management Units) to relatively 'simpler', more traditional, top-

down and centralized management systems (Marine Parks), and to instances where sustainability partnerships are not in place. This paper reviews the overall literature on governance of coastal resources (globally and in Africa) to identify important research gaps and shape methodological choices for fieldwork. Two other papers deal with conceptual issues of the overall NEPSUS project (Ponte et al., 2017), and provide background information on the governance of coastal resources in Tanzania and in the selected study locations (Katikiro et al., 2017).

## 2. Emergence and evolution of multi-stakeholder governance in the management of coastal resources

The governance of natural resources in the past three decades has shifted from centralized management by the state to systems based on devolution of power and responsibility to local government, communities and non-state actors. These new approaches are commonly referred to as 'community-based' coastal management or 'co-management' (Christie and White, 1997). Critics of the centralized, top-down governance systems that operated until the 1980s and early 1990s used empirical and game-theoretic evidence to argue for the adoption of alternative approaches – variously referred to as participatory, integrative, collaborative, multidisciplinary, multi-sectoral, multi-stakeholder, democratic, interactive, holistic and/or ecosystem-based (Baquiano, 2016; Bremer and Glavovic, 2013; Christie and White, 1997; Courtney and White, 2000).

The term *co-management* has been particularly popular to describe these forms of governance in the case of coastal resources (Pomeroy, 1998). It is characterized as a system that allows for the integration of social, economic and environmental issues and facilitates community participation and ownership (Christie and White, 1997; Pomeroy, 1998). Christie and White (1997) called this a paradigm shift – from a central to a collaborative approach in the management of natural resources, where science and policy instruments are informed by more traditional ways of managing resources among communities. Most of the literature distinguishes between state-led and community-led co-management. State-led co-management is characterized by administrative sanctions, and is often seen as politicised and marred by lack of capacity and resources. Community-led co-management is seen as being based on social, rather than administrative, sanctions, but also as suffering from free-riding and unequal power relations within a community (Kearney et al., 2007).

Co-management entails two related processes: (1) decentralization (full or partial) of authority from central to local government authority (a vertical movement); and (2) the involvement of non-state actors and local communities (Baquiano, 2016) (a horizontal movement). On paper, participatory governance as applied in co-

management facilitates the involvement of local communities in planning and management, in allocating resources and in enforcing regulations (Kuperan et al., 2008). Proponents of this approach argue that it is the most appropriate management approach for coastal resources as they are embedded in complex socio-ecological systems that require meaningful consideration of both social and ecological dimensions (Sorensen, 1997). However, the process of co-management is complex and context-dependent (Pomeroy, 1994). The degree of community-level engagement and control can be quite different – ranging from consultative to coordinative, complementary and critical (Pomeroy, 1995, 1994; Sen and Nielsen, 1996). Participation by communities can be limited to consultation in the design phase, but can also involve active roles in implementation – leading to different degrees of legitimacy at the community level (Oracion et al., 2005). The NEPSUS project seeks to examine the dynamics of power and participation among the different stakeholders involved – in order to explain for possible divergence in sustainability outcomes.

## *3. Main actors and facilitators of coastal resource partnerships*

Co-management relies on national policy support, donor funding and involvement of international institutions, therefore scale is one of its distinguishing characteristics (Christie and White, 1997). A number of different actors take part in the co-management of coastal resources, including central/local government, international organizations, NGOs, community representatives and business. They play different roles and the governance dynamics are shaped by the number, nature of actors involved, and by the local context in which the partnership operates. In this section, we review how the literature sees the different roles of these actors as they operate in co-management systems (Courtney et al., 2002).

### *3.1 Central and local governments*

In top-down system of governance, the state is the sole manager of coastal resources – especially those of greater national significance. The state creates laws and policies defining decentralization, legitimation of rights and sharing of benefits, including institutional and capacity building (Kearney et al., 2007). The state supports local communities and non-state actors by providing them with rights to access and use resources, takes part in decision making, and draws different benefits (Kearney et al., 2007). In decentralization processes, the expectation is that the central state plays a minimal role, leaving more room to local government and non-state actors, including local communities. However, central government still holds power and can exercise it from time to time in relation to 'resources of national

interest', e.g. large ecosystems with multiple resources.

When discussing the role of the state in co-management approaches, it is important to distinguish between central and local government. Central government is the main policy maker and collects revenue. Local government is an implementer (Baquiano, 2016). Local government is supposed to ensure the sustainability of coastal resources but may prioritize harvesting and revenue collection instead of conservation, as the value of conservation is more difficult to monetize. Central governments may prioritize 'national development' rather than conservation, and allow large-scale investment in coastal areas, such as for oil and gas extraction. Although conservation supports tourism, an important source of income in most of tropical countries, the extraction of oil and gas often trumps tourism. The co-existence of these actors, their interests and their impact on sustainability are a key subject of interest to NESPUS. One of the challenges of ensuring sustainability is to examine the interests and resources that all stakeholders hold.

### *3.2 Local communities*

Community, in the context of our project, is defined as a group of coastal resource users (and those affected by such use), who is found in the vicinity of the resource and has the right to use and conserve it. Under 'traditional' systems of governance, which existed before colonialism, communities were the sole managers of natural resources. However, state interest in controlling resources over time led to the dismantling of many community-based management systems, paving the way for state ownership. In some cases, with the subsequent move towards decentralization, resource use and ownership moved to local governments and communities through different legal and policy instruments. The literature shows that management systems that are mostly or exclusively in the hands of local communities have their weaknesses, due to possible free-riding behavior and webs of extended family relations that prevent enforcement groups to apprehend or impose sanctions to violators (Christie and White, 1997). In some cases, even when the local communities are successful in their conservation efforts, they may be overpowered by central government when it comes to promoting investments of national interest (Johnsen and Hersoug, 2014).

In state-led co-management, communities are often assumed to be lacking the capacity to manage natural resources, leading to the execution of capacity building programmes (Kearney et al., 2007). However, local communities are important holders of useful indigenous and local knowledge that needs to be meaningfully integrated. When that happens, communities in turn are more likely to provide useful skills, take responsibility and be more accountable (Baquiano, 2016). There

has been a number of programmes supporting communities, mostly channeled through NGOs.

### *3.3 NGOs*

The failure of the state in achieving conservation, especially in top-down systems, has led to the increasing involvement of NGOs in coastal resource governance, especially as donors increasingly prefer working with NGOs rather than governments. Yet, NGOs are often viewed as competitors for scarce resources by the state, hence their participation in partnerships can create internal tensions. In some cases, NGOs create structures that are not in line with existing systems – for example, they may offer substantially higher allowances to the communities when participating in different processes, such as in meetings. This may hinder the process of continuity after an intervention has ended.

Nevertheless, the involvement of NGOs in co-management allows partnerships to leverage additional human and financial resources – with management delegated to NGOs through agreements with either the state or local communities (Terk and Knowlton, 2010). In some cases, NGOs have taken the lead role in the management of marine parks, although the government keeps administering the fees (Terk and Knowlton, 2010). NGOs normally operate through donor- and/or state-financed projects, therefore their involvement is temporary and requires an appropriate handing over to the community for long-term sustainability – a difficult challenge. Most NGOs have been focusing on conservation and on supporting restrictions of resource use in their projects.

### *3.4 International organizations and bilateral donors*

The UN has been one of the main early supporters of ecosystem-based approaches to natural resource management and a main provider of the science behind it. For example, the idea of co-management was first formalized at the UNCED Rio Earth Summit Agenda 21, then revised at the 2002 World Summit on Sustainable Development, due to lack of clear goals and slow implementation of Agenda 21 (Bremer and Glavovic, 2013). In the 2012 Rio Declaration, an ecosystem-based approach was promoted to manage coastal resources – moving the focus from resources to ecosystems and from management to governance (Bremer and Glavovic, 2013). Since then, the vision of sustainability has been mostly framed through the lenses of co-management (Courtney et al., 2002) and community-based management, which are now practiced in many countries (Fernandez, 2007; Sorensen, 1997). Aid agencies such as USAID have also been involved in co-management of coastal resources, both through funding governments and NGOs and as implementers. Collectively, UN agencies and donors have driven the co-

management agenda, and also further broadened it from a focus on ecosystem conservation to also consider livelihoods and other socio-economic outcomes.

### *3.5 Business*

The involvement of the business sector in the governance of natural resources is a relatively a recent phenomenon that arose with the adoption of neoliberal policies, coupled with the increase in activities of multinational corporations in many developing countries (MNCs). Many of these MNCs have invested in natural resource extraction, which has important impacts on resource stocks and the environment. MNCs are required to carry out environmental and social impact assessment, and some provide funds for projects managing resources in the areas where they operate – as part of environmental management or corporate social responsibility activities. Coastal areas are also a target for a number of investments – ranging from tourism to oil and gas exploration, and from building ports to the establishment of special economic zones for export. The involvement of business adds to the challenges of sustainability partnerships as they need to achieve profits. The extent to which the co-existence of business, livelihood and conservation interests has yielded sustainable results has not received much attention in the literature. An exception is Bluwstein (2017), who argues that it is accumulation that drives these partnerships, rather than conservation motives. Thus, partnerships with business need to ensure not only social and ecological sustainability, but also the economic viability of business operations. The main question then becomes to what extent these partnerships in coastal resources are able to balance the needs of the state, of communities and of profit maximization for business.

The NEPSUS project seeks to examine the relations between these different actors in coastal areas, and the extent to which conservation, livelihood and business outcomes are balanced or not. The recent involvement of the oil and gas exploration industry in coastal areas of Tanzania has brought with it a number of other investments in infrastructure. The extent of which these new investments strengthen or weaken the livelihood and conservation needs of local communities remains to be assessed.

## *4. Participatory Governance Processes in Coastal Resource Partnerships*

Very often, co-management involves a series of donor-assisted projects and the integration of communities in the governance of coastal resources (Courtney and White, 2000). The original focus of co-management was conservation, but it became clear over time that local communities involvement in enforcement is difficult when they are dependent on coastal resources for their livelihoods (Fernandez, 2007). As

a result, co-management is now seen as performing four different key functions: conservation, enforcement, participation of local communities (knowledge and capacity building), and social and economic development (Kuperan et al., 2008; Pinkerton and John, 2008; Pomeroy, 1999). These functions will not be carried out successfully if actors and processes are perceived as illegitimate by the main stakeholders. Therefore, NEPSUS pays particular attention to the process of legitimacy in order to understand how partnerships are formed, to what extent they are accepted in a community, what challenges and conflicts may arise, and how these factors impact on sustainability outcomes (both socio-economic and environmental).

### *4.1 Participation of communities in co-management*

One of the key processes that allow participation of communities in co-management of coastal resources is decentralization. In many cases, community participation is limited to the dissemination of information (Kweka, 2011), a lower step of what Bruns (2003) calls the 'ladder of participation'. Communities are not homogenous (Agrawal and Gibson, 1999) and for decentralization to be effective there is a need for clear institutional mechanisms. Some scholars observe that in Tanzania community participation and governance (Cornwall and Brock, 2005) have been mostly limited to the district level, rather than the village level, thus perpetuating the neoliberal agenda at the local level (Gibbon, 1993) and leading to a deepened process of imperialism (Hart, 2002). For co-management to work properly, high levels of accountability and transparency between different actors and the willingness of the government to share power with the private sector are required (Kearney et al., 2007). The literature suggests that potential benefits of these processes can include: social and economic development; decentralization and more participatory decision-making processes; reduction of conflicts; increasing welfare of resource users; and increasing financial resources for the state and possible reduction of challenges to its authority (Pinkerton 1989 and Jeantot 1989 in Pomeroy, 1999). Another important process is the government's definition of property rights, which can assign legitimacy and allocate power to different actors and configurations of actors in these partnerships (Kearney et al., 2007; Thiel, 2010).

Partnerships are socially constructed through interaction among different actors (Fernandez, 2007). Positive interactions can be nurtured by trust and commonality of mandate, and evolve around the sharing of resources, expertise, vision, and systems at various levels of management. They develop within the fabric of existing social capital, knowledge, group dynamics, working relations, concerted action, consensus building, and formal and informal rules (Fernandez, 2007). Partnerships exercise power where specific spaces are created as governable objects. They

place claims to empowerment of local communities that are supposed to enhance community capacity to control and improve participation in the management of coastal resources (Johnsen and Hersoug, 2014). In the best cases, local communities take active engagement in designing, monitoring, planning and entering into agreements, and partake responsibilities, power and obligations (Kearney et al., 2007), but this is the exception rather than the rule. Partnerships enact a political regime that is constructed and negotiated between multiple public and private actors, some of whom are focused on profit maximization, not on conservation efforts per se (Quist and Nygren, 2015).

The literature often mentions four types of property right regimes that operate in co-management: state-owned (restricted for community use and considered reserved areas); private-owned (assigned to individuals or companies for business purposes); communal (used and managed by the community); and open access (used by any of the other partners) (Pomeroy, 1999). In reality, pure state and pure community ownership are rarely found (Pomeroy, 1999).

The government can formally recognize community rights, but this may lead to conflict, as it shapes the incentives of local resource users to conserve the resources. Co-management is time consuming and is associated with high costs of implementation, monitoring and enforcement (Kuperan et al., 2008). Its enforcement ranges from the imposition of government fees and fines, to social sanctions, such as asking someone to leave the community. Social sanctions may be particularly problematic when resource users are unwilling to report fellow users in the case of breach of rules (Fernandez, 2007). Fleishman (2006), for example, argues that while co-management is seen as an 'innovative' way of addressing conservation, it is also associated with high transaction costs that can sometimes lead to negative sustainability outcomes and benefit local elites, at the expenses of the community as a whole.

### *4.2 Legitimacy*

According to Therkildsen (2014), legitimacy is a nebulous term in both its theoretical conceptualization and empirical application. In this paper, we examine the term 'legitimacy' as applied in the literature on the management of common pool resources, such as fisheries and other coastal and marine resources. The term was originally associated with 'authority', or 'the probability that a command with a specific content will be obeyed by a given group of persons' (Weber, 1947: 152 as in Tanner, 2007: 44). It has also been applied to indicate 'the political order's worthiness to be recognized' (Habermas, 1976; McGuire and Sanyal, 2006). A number of authors have opted for narrower conceptualizations of legitimacy – related to the 'right' of a governing entity to exercise its rule, as well as the rights of

those being ruled to recognize the authority of the former (Lockwood et al., 2010; Tyler, 2006); the power of making decisions or representing others (Dugan, 2004 as cited in Hoffman, 2009, p. 40); and the ability of local governments to tax (Therkildsen, 2014).[1]

Others have emphasized the need to consider more expansive notions of legitimacy by relating it to existing social institutions, rules, norms, laws and procedures (Hoffman, 2009; Tanner, 2007; Wilshusen et al., 2002). Tanner (2007: 79), for instance, adopts Suchman's (1995) definition of legitimacy as perception that the action of actors are accepted and are socially constructed. Newman et al. (2004) and Barwick et al. (2014: 63) claim that legitimacy can be obtained by creating consensus around a vision – through what they call 'leadership and effectiveness at producing outcomes'. Legitimacy has also been viewed as the 'co-construction process between designers and stakeholders' (Barnaud and Van Paassen, 2013). We understand that legitimacy is not constant, it changes over time, and it is influenced by culture. It is important to study how actors in co-management attain legitimacy and factors shaping and leading to its changes over time. NEPSUS is interested in how certain partnership types for management of natural resources gain legitimacy over time, while others are perceived as illegitimate and cause conflict.

The literature on legitimacy has identified key elements and pre-conditions for the legitimacy-building processes to succeed. Pinkerton and John (2008), for example, look at how fishing regulations become legitimate in the eyes of affected local fishers in a Canadian community and propose four stages in the development of what they call 'input legitimacy': (1) establish a vision, mobilize scientific instruments and develop regulatory tools; (2) achieve political acceptance of local authority; (3) gain regulatory capacity and moral standing for local communities; and (4) revive environmental values (Pinkerton and John, 2008, pp. 685–689). Their case study suggests that the participation of a community in stock assessment with scientists through the provision of local knowledge helped establish regulatory authority. They also argue that the order in which various forms of authority are exerted is important. Moral legitimacy could only develop after scientific, regulatory, and political legitimacy are in place. We therefore study legitimacy from a legal and regulatory point of view, but also in terms of stakeholder acceptance, expectations and achievements.

On their part, Turner et al. (2016) distinguish between value-based and behavioural legitimacy (see also Bernstein, 2004; Levi et al., 2009). In their case study of

[1]According to Therkildsen (2014) the ability to collect taxes is taken as an indicator of legitimacy. If local authorities cannot mobilize local revenues, this indicates a lack of legitimacy which, in turn, constrains their ability to be effectively involved in NRM (Natural Resource Management) on a consensual basis (p.76).

Australia's Greater Barrier Reef Marine Park (GBRMP) (Turner et al. 2016), they identify two key factors contributing to value-based legitimacy: trustworthiness of the governing authority, and justice (i.e. both procedural and distributive). To them, trustworthiness can be measured by how the public perceives the way partners conduct their management. They suggest that procedural justice, or procedural fairness, is measured through enforcement in regulations. High levels of trust in the governing bodies and distributive justice are crucial determinants of stakeholders' perceived legitimacy of management decisions.

In NEPSUS, we intend to study perceptions pertaining to input, processes and outcome legitimacy. A holistic and comprehensive analysis of legitimacy is provided by Van Tatenhove (2011), who builds on previous work by others (Edelenbos et al., 2009; Engelen and Sie Dhian Ho, 2004; Risse and Kleine, 2007; Scharpf, 2004, 1999; Van Tatenhove, 2008). Van Tatenhove, (2011: 91–92) distinguishes four forms of legitimacy in co-management 'policy arrangements': *input legitimacy* (i.e. the extent to which decisions reflect the 'will of the people', their support, participation of those affected by decisions and representation of interests and preferences); *throughput or process legitimacy* (i.e. 'the concern for the quality of the structure and procedure of a policy-making process in terms of legality, transparency, fairness, responsiveness, deliberation, openness and efficiency'); *output legitimacy* (i.e. the governing body's capacity to solve problems requiring collective action and deliver the wished outcomes); and *feedback legitimacy* (accounting to stakeholders on the outcome of policy processes and the quality of feedback relations).

Based on this typology, Tatenhove formulates the following questions: (1) Does the policy arrangement represents the interests of all involved (input legitimacy)? (2) Will the policy arrangement provide solutions for the problems as defined by participants, and will participants accept the results and outcomes of the negotiations (output legitimacy)? (3) Is the policy-making process transparent, are the rules clear about who is allowed to participate, and do participants know their roles and responsibilities (throughput legitimacy)? And (4) Does the policy arrangement account to other decision-making and policy arrangements (feedback legitimacy)? (2011: 100).

In NEPSUS, we adopt a variation of this approach, placing special focus on input legitimacy (inclusion, balance in stakeholder representation), process legitimacy (governance procedures, participatory mechanisms, accountability) and output legitimacy (immediate results achieved). For us, input and process legitimacy deal with procedural fairness, where the focus is on the quality of the decision-making process in terms of deliberation, participation, transparency and accountability. In general, for partnerships to gain input legitimacy and process legitimacy, there should be participation of all relevant actors and interests, and particularly of

marginalized groups; and there should be clear accountability mechanisms and transparency. Output legitimacy, on the other hand, relates to whether governance arrangements contribute to collective problem solving or to societal goals such as conservation and/or the wellbeing of local communities (Ponte et al., 2017).

### *4.3 Conflict management*

Four important observations emerge in the literature concerning conflict in natural resource management: (1) conflict is ubiquitous (Anderson et al., 1996; Ayling and Kelly, 1997; Buckles, 1999); (2) conflict often has class, cultural, social and political undertones, featuring groups that claim to own the resource and others who have an interest in conserving it (Buckles 1999); (3) conflict occurs at different scales – household, local, regional, national and even global; and (4) its intensity varies from 'confusion and frustration' to 'violent clashes' among members of a community (Buckles, 1999: 1–10). For example, in their study of conflict management in Mombasa Marine National Park and Reserve (MMNP &R), Tuda et al. (2007: 71), found out that a 'formal conflict-resolution mechanism that operates impartially and represents all stakeholders' interests equally' was lacking. Instead, emerging conflicts were approached on an ad hoc basis or disregarded until they reached a crisis point (see also Bennett and Dearden, 2014; Hinkey and Recksiek, 2003; Lewis, 1997).

Other layers of conflict arise: between policy makers and the scientific community or conservation NGOs when policies are designed to serve political purposes instead of conservation (Bremer and Glavovic, 2013); around the definition and application of rights to access resources and fishing rights (Guénette and Alder, 2007); between local communities and large corporations (Johnsen and Hersoug, 2014); and between livelihood and conservation objectives (Oracion et al., 2005). Much of the literature suggests that negotiations are crucial for conflict management. Therefore, co-management processes need to involve all stakeholders in a meaningful dialogue from the beginning, and to reach clear agreements with local communities (Bremer and Glavovic, 2013; Guénette and Alder, 2007).

## 5. *Environmental and livelihood outcomes of sustainability partnerships*

The question as to whether co-management has led to sustainable development is key in the literature, which shows mixed results and suggests a need to balance social and ecological sustainability (Cinner et al., 2012; Evans et al., 2011). In most partnerships, there are delays in intervention, and the measurement of medium-and long-term impacts can be difficult, since there could be other intervening factors

which can shape outcomes. There are different kinds of hierarchies in co-management of coastal resources and different degrees of delegation and responsibility which warrant a comparison with different outcomes. Important outcomes to be assessed are: the protection and maintenance of marine biodiversity; resource recovery; impact on livelihoods; and community empowerment (Katikiro et al., 2015).

There has been no systematic evaluation of the effectiveness of co-management in terms of livelihood and conservation needs (Béné and Neiland, 2006). Measuring the sustainability outcomes of partnerships for management of natural resources entails measuring their performance, levels of community participation, and impact on conservation and livelihoods (Béné and Neiland, 2006, 2004; Neiland and Béné, 2003). Nevertheless, since all co-management interventions aim at increasing participation of stakeholders, they can be evaluated at least partially in these terms. Successful co-management is meant to be flexible, participatory in rule-making, able to manage conflict, share power, decentralize leadership, and generate and maintain knowledge sharing and learning (Pomeroy, 1998).

The literature suggests that co-management appears to be most successful when it relies on both 'modern' and 'traditional' knowledge (Christie & White, 1997) and when it builds systems of accountability and joint responsibility by the state, civil society, the private sector and the scientific community (Bremer and Glavovic, 2013). Success of co-management also seems to be facilitated by several other factors: a relative balance between legal, political and economic power between actors/partners; readiness of actors to negotiate alternatives; the leveraging of pre-existing social capital and networks; and the involvement of diverse actors/stakeholders with resources and expertise – as well as financial means (Bäckstrand, 2006; Kallis et al., 2009; Lockwood et al., 2009; Pattberg and Widerberg, 2016).

Diversity of actors in collaborative governance can stimulate innovative solutions through their interactions and through their networks (Beierle and Konisky, 2001; Lasker et al., 2001; Lockwood et al., 2009; Stone, 2015; Vangen, 2003). These factors come together in many combinations, and have yielded different outcomes – depending on the social and political contexts where partnerships are operating. At the same time, these partnerships share a number of common features, such as sharing of power, responsibilities, information, knowledge, and skills (Kooiman, 1999; Laquimia and Eweje, 2014).

Other literature has highlighted that these partnerships often fail to meet their stated goals due to lack organizational capacity and resources, that they are characterized by low or unmeasured outcomes, and that they fail to foster

inclusiveness of marginalized actors (Pattberg and Widerberg, 2016). A variety of actors *per se* does not necessarily lead to better outcomes, as each partner may represent specific interests, embody different worldviews, yield different degrees and kinds of power, and bring with it specific hopes, expectations and claims. In these situations, increasing the number of stakeholders and the complexity of procedures may actually inhibit rather than facilitate the governance of natural resources (Jentoft and Chuenpagdee, 2009). Actors may indeed have irreconcilable interests, no matter how much participants agree on basic values and principles – leading to different perceptions of problems and their solutions (Jentoft and Chuenpagdee, 2009). Different capabilities of actors often result into power imbalances. Smaller and weaker actors are prone to marginalization in decision-making, also because they lack expert knowledge to engage into more technical discussions (Ansell and Gash, 2007; Ponte and Cheyns, 2013). It is against this background NEPSUS seeks to measure the sustainability outcomes of different kinds of partnerships. By comparing governance and outcomes, it seeks to recommend which governance systems yield the best sustainability outcomes in what contexts.

The existing literature on the outcomes of co-management has normally kept the socio-economic and environmental elements of sustainability separate. In measuring coastal resources, there are specific scientific ways of monitoring the sustainability of fish, mangrove and corals. These can be done by collecting perceptions by resource users and/or through biological measurements. Surveys have often been used to measure socio-economic sustainability in comparison with baseline studies. But other studies have also used social storylines, discourse analysis, interviews, and focus groups with community members, programme managers, and government and local officials to capture ideas, attitudes, discourses and practices of co-management partnerships. Different scientific methods have also been used to study environmental sustainability – including the use of satellite imagery and GIS to assess mangrove cover, and various techniques to measure fish catches and stocks. Other methods have included visual surveys, remote sensing, GIS and modelling to understand complex ecosystems and social ecologies (Baquiano, 2016; Bremer and Glavovic, 2013; Christie and White, 1997; Guénette and Alder, 2007; Kearney et al., 2007). The existing literature has highlighted in particular the need for comparative studies (Pomeroy, 1993) and participatory research approaches (Courtney and White, 2000).

NEPSUS will draw from a number of methods. First, perceptions by the communities involved in a partnership will be measured using both qualitative and quantitative methods. Second, ecological sustainability will be assessed using: GIS for mangrove coverage; secondary data sources for coral, including trends in dynamite

fishing; and fish assessment surveys for changes in stock, species type and size and volume.

## 6. *Two Types of Partnerships: Marine Parks (MPAs) and Beach Management Units (BMUs)*

For the purpose of our project, we examine two main types of partnerships in the governance of coastal resources: (1) those where the state is the main initiator and still maintains the main control over resource access, but invites other actors in management responsibilities; this form can involve different constellations of multiple stakeholders, different kinds of activities and a variety of systems of decision making (Pomeroy, 1999); and (2) those where it is mainly the local community that manages the resource – together with other actors (e.g. an NGO or the state) (Pomeroy, 1999), even though the state may have had an important role in initiating the process. In Tanzania, these two forms have taken the shape of Marine Parks (MPAs) and Beach Management Units (BMUs) – the latter also includes networks of BMUs that form Collaborative Fisheries Management Areas (CFMA).

### *6.1. Marine Parks*

Marine parks are large in scale, focusing on more than one resource, usually an ecosystem, and can be transboundary in nature, with multi-stakeholder involvement at the global, regional, national and local scales. The design, purpose and effectiveness of MPAs have been discussed in a number of studies (Agardy et al., 2003; Björklund, 1974; White, 1988). MPAs became a regulatory measure aimed at reducing pressure on coastal resources. In 1995, a total of 1,306 marine parks were reported globally (Kelleher, 1999). Today, every coastal country has some form of an MPA – in developing countries, these have been usually spearheaded by conservation institutions such as the UN, IUCN and WWF. One of the main aims of MPAs is to ensure sustainability, but many of them have faced challenges due to lack of support by local communities (White, 1988).

MPAs aim at conserving marine ecologies and, at the same time, taking care of the socio-economic and livelihood needs of local communities. They have been named differently in different literatures – as parks, areas, management areas, no take areas, preservation areas, sanctuaries, conservation areas, coastal parks, sensitive sea areas, national marine parks, and marine conservation areas (Agardy et al., 2003). Many MPAs are divided into different management zones, with different degree of access and use for local communities. The 'no take zones', where resource use by the communities is prohibited (Agardy et al., 2003), have often

been a point of conflict, as local communities previously had access to resources in the areas that are now restricted.

The design MPAs includes important decisions on the size of land/sea to be set aside, and on how to organize access/use in different zones and for different resource targets (Agardy et al., 2003). Community participation, the use of indigenous knowledge on resource use and conservation goals are also key issues. In most MPAs, the central government plays a key role in governing coastal resources, but other partners are also involved, usually NGOs and local communities. MPAs have different access rules in different areas and normally employ a user-fee system to regulate access where it is permitted. They are guided by formal agreements, plans, frameworks and/or MOUs (Terk and Knowlton, 2010). MPAs are a form of decentralized governance where management authority and responsibility is at least partly shared at the local level (Baquiano, 2016). Their construction can be heavily dominated by a technical science framing, with less attention to socio-economic dynamics and limited or no use of local knowledge (Bremer and Glavovic, 2013). MPAs have often been criticised for having little involvement of the local community in the management of marine resources, leading to calls for the establishment of locally-managed MPAs (Katikiro et al., 2015).

*6.2 Beach Management Units (BMUs)*

Fisheries resources in various water bodies are known to face the challenge of poor management. Their sustainability are increasingly threatened as a result of activities attributed to a lack of proper management regimes. The precarious situation of fisheries resources has necessitated the use of alternative management approaches apart from more centralized management systems, such as those of MPAs. Another form of co-management is that of Beach Management Units (BMUs) – which were initially adopted by Kenya, Tanzania and Uganda in 1998 on Lake Victoria.

Prior to the introduction of BMUs, fisheries management around Lake Victoria was purely under the control of the state, with little or no provision for involving other stakeholders (Ogwang et al., 2009).[2] BMUs are fisheries management partnerships that are run by community-elected committees, which are mandated to implement and enforce fisheries legislation at the local level. They aim at promoting community involvement in fisheries resource management. In the past decade, this approach has been expanded to the coastal waters of Kenya and Tanzania to improve community participation in the management of marine fisheries.

[2] In other parts of the world, we can also find local institutions that play similar roles to those played by BMUs. For example, in Fiji there is a customary marine tenure known as *qoliqoli* (Almany et al., 2015; Sloan and Chand, 2016).

In BMUs, the main stakeholders are mostly based at the local level and can include fishers, fish mongers, boat owners, engine and gear repairers, traders, ice suppliers, village/community representatives, local government representatives, and fishery officials. These initiatives are at least in theory more organically including community knowledge and rely on community enforcement of rules and application of penalties. They are started, recognized and/or registered by central or local governments, and are sometimes supported by NGOs. In some cases, they also link to other contiguous communities by forming community fisheries management areas (CFMAs).

The literature on BMU is largely focused on the fisheries of Lake Victoria (Nunan, 2010). It shows that the operation of BMUs is supported by government policies and regulations, including the definition of 'Guidelines for Beach Management Units' (published in 2003 in Uganda, 2007 in Kenya , and 2009 in Tanzania. While these guidelines have been useful in the directing activities of BMUs, they are in need of an update to take on board various issues raised by communities and policy makers (Kanyange et al., 2014). Several studies (Eggert and Lokina, 2008; Kateka, 2010; Nunan et al., 2015) have documented that BMUs in East Africa lack of support from government, and that their enforcement power at the local level is weak. The functioning of BMUs has been inadequate due to lack of financial returns from both fishery stakeholders and government, leading to poor discharge of duties.

## 7.Conclusion

This literature review on partnerships for the management of coastal resources indicates that different models are being used under the umbrella of 'co-management'. We have highlighted that several factors can be at play when explaining the different performance of different models: the number of actors and their configurations and networks; the level and kind of decentralization of authority and resources; the level of legitimacy achieved in view of key stakeholders; and different kinds and degrees of participation by local communities. We have then highlighted the main differences between the two models that are being implemented in Tanzania (MPAs and BMUs): the scale at which the main decision maker is located (national vs local); the target of conservation (ecosystem vs fishery); and the level of decentralization and involvement of communities (lower in MPAs and higher in BMUs). At the same time, we have shown that they both aim at ensuring both social and ecological sustainability. In a companion working paper (Katikiro et al. 2017), we provide more specific background information on the case studies selected for empirical investigation: The Mnazi Bay Ruvuma Estuary Marine Park, and selected BMUs in Mtwara region, Southern Tanzania.

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