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# Ecosystem services approach for community-based ecotourism: towards an equitable and sustainable blue economy

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## ABSTRACT

This paper examines the role of community-based ecotourism within the developing market dynamics of the blue economy. The blue economy has become synonymous with generating wealth from ocean-related activities while protecting and supporting marine ecosystems. For remote coastal communities and Small Island Developing States, local economic development is a challenging balance between protecting marine biodiversity and maintaining sustainable and direct access to ecosystem services. In this paper, we present results of a study in the coastal region of South Sulawesi Province, Indonesia in the Coral Triangle. The paper illustrates that community-based ecotourism supports sustainable use of marine resources and offers an entry point for low-resource coastal communities to take part in the blue economy. Complementary livelihood pathways that enhance primary income and support ecosystem services play a key role. Study findings show that three key areas where multilateral support is most needed for communities with ecotourism aspirations are: waste management, hospitality skills, and market access. From these findings, we present a model for community-based ecotourism in the blue economy. The model demonstrates important interactions between community, the local economy, and coastal ecosystems, and the important role community-based ecotourism plays in creating effective mechanisms for preserving natural and cultural heritage.

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## KEYWORDS

community-based ecotourism; blue economy; ecosystem services; coastal tourism; sustainable livelihoods

## Introduction

The blue economy concept is becoming increasingly important in many fields, including coastal and marine tourism, which has been identified as one of the key sectors of the blue economy with high potential for growth (Ehlers, 2016; Lubchenco et al., 2016); Visbeck et al. (2014). Generally, the blue economy is understood as the use of ocean resources for sustainable economic development, improved livelihoods, and ocean ecosystem health (Nathan J Bennett et al., 2019; Michel, 2016). As a concept, the blue economy is relatively recent, originating from the United Nations Conference on Sustainable Development held in Rio de Janeiro in 2012 (Smith-Godfrey, 2016). Conceptualizations of the term vary and include: oceans as natural capital, oceans as good business, oceans as a source of livelihoods, and oceans as a source of new wealth and a driver of innovation (Silver et al., 2015; Voyer et al., 2018). Some industries,

however, refer to the blue economy simply as any economic activity in the maritime sector whether sustainable or not, while others tend to focus on emerging industries such as marine biotechnology or deep sea mining (Smith-Godfrey, 2016). The central theme of the blue economy, however, remains the same - socially equitable and sustainable development and the promise of ocean-based economic growth.

The various conceptualizations of the blue economy concept are by no means mutually exclusive and recent policy initiatives have attempted to incorporate several or all of them (Voyer et al., 2018). Many coastal and island countries with lower to middle income levels perceive growth in coastal and maritime sectors as opportunities for sustainable development. Developing countries and Small Island Developing States (SIDS), for example, emphasize the use of ocean resources to provide employment and income, focusing on small-scale fisheries, tourism, and aquaculture to alleviate poverty and provide food security while seeking investment in measures to reduce climate and environmental risks to people and infrastructure (World Bank Report, 2017). For Pacific Island nations, specifically in the densely populated region of Southeast Asia, the blue economy platform provides a more robust sustainable development model by acknowledging local power dynamics and institutions, as well as the influence of outside agents (Keen et al., 2018).

Although understanding of the blue economy differs, resulting in different types of implementation activities, there are a number of commonalities. One of those key commonalities is the valuation of the social and economic benefits derived from healthy ocean ecosystems, acknowledging that economies and human wellbeing are devalued through unsustainable practices (Voyer et al., 2018). The other key commonality is the increased designation and delimitation of spatial boundaries in the ocean, an issue originally addressed by the UN Convention on the Law of the Sea (UNCLOS) adopted in 1982. This is particularly important for many coastal nations, specifically SIDS, in the form of exclusive economic zones and spatial planning which allow for increased access to ocean resources. Certainly, the benefits that people derive from the oceans play a significant role in the global economy. This acknowledgment has taken the conversation beyond viewing the ocean economy solely as a mechanism for economic growth. As the result, the blue economy concept has expanded the discourse towards ways to improve human wellbeing and social equity, while significantly reducing environmental risks and ecological scarcities (Pauli, 2010).

Whilst much of the blue economy literature has focused on the high-level adoption of the term as well as policy-making and investment, much less is known about the enabling conditions of successful activities, including the functions of individual sectors. In those instances where users compete for space or resources, a number of authors have expressed concern that traditional users who are less politically powerful may lose control of or access to marine resources that they previously used (Barbesgaard, 2018; Nathan James Bennett et al., 2015; Garland et al., 2019; Mazor et al., 2014). This is particularly pressing for community-based ecotourism ventures. To that end, improved understanding is needed as to the ability of remote communities to participate in emerging coastal tourism markets. Regrettably, researchers know far less than we should about what role small-scale sustainable tourism, particularly community-based ecotourism, can play in the blue economy. How can community-based ecotourism deliver on the trifecta promise of the blue economy - more social equity, less environmental risks, and ongoing support for the local economy?

The purpose of this paper is to examine the role of community-based ecotourism in the blue economy taking an ecosystem services approach - the use of ecosystem services and biodiversity as part of an overall sustainable development strategy. This paper emerges from a case study of coastal communities in Southwest Sulawesi in the Coral Triangle. The Coral Triangle is a marine area located in the western Pacific Ocean which encompasses waters of Indonesia, Malaysia, the Philippines, Papua New Guinea, Timor Leste and Solomon Islands and is known for its high marine biodiversity. Applying an ecosystem services approach and examining community aspirations,

perceptions, and the socially constitutive role of informal institutions, we propose a model for community-based ecotourism within the blue economy. Thus, this study explores the under-researched developing market dynamics of the blue economy at a community level. In this article we argue that community-based ecotourism offers one of the few entry points for low-resource coastal communities to take part in the blue economy, and with adequate support, can help steer alternative livelihood pathways towards more sustainable outcomes.

## Ecosystem services approach

The world's oceans, seas, and coastal areas are the largest ecosystems on the planet, and are critical to the livelihoods and food security of billions of people around the world. The blue economy paradigm calls for balance between deriving economic value from the oceans and protecting sensitive ocean ecosystems. This rationale not only considers the economic benefit to an industry, but also the effects an industry has on ecosystem services. It raises the question – is a particular industry sector good for the ocean, benign or neutral for the ocean, or does it harm the ocean and reduce marine ecosystem service delivery?

The ecosystem approach is a well-established integrated strategy for ecosystem and natural resource management that promotes conservation and sustainable use in an equitable way (Beaumont et al., 2007; Beaumont et al., 2017). The Ecosystem Services Approach (ESA) takes this strategy one step further by suggesting that ecosystem services are incorporated into decision making to ensure that the complex relationships between nature and humans is clearly understood and explicitly included (Daily et al., 2009). The essence of ESA is to consider the full range of potential benefits to humans from ecosystems in a strategic way and to engage specialists and stakeholders in identifying the nature of potential benefits. The intent is to avoid unintended consequences that often arise when only a narrow range of benefits and beneficiaries are considered. Broadly, ESA seeks to integrate ecological, social and economic perspectives from all stakeholders in a particular situation and facilitate a dialogue about the benefits that humans obtain from nature in a language that is easily understood by a wide range of stakeholders (Cork et al., 2012).

Many coastal communities around the world are highly dependent upon the functions, goods and services provided by marine ecosystems (Glaeser, 2019; Kittinger, 2013; Pomeroy et al., 2016). Healthy marine and coastal ecosystems support food systems and livelihoods, regulate climate, and are closely associated with quality of life including recreational and cultural values (Millennium Ecosystem Assessment, 2005; Moberg & Folke, 1999). Historically, neoclassical economics has largely ignored the essential contribution of healthy ecosystems to human wellbeing in decision-making (Robert Costanza et al., 1997; Daly, 1968; Freeman et al., 1973; Gómez-Baggethun et al., 2010; Ross et al., 2019).

Over the last four decades, academic literature has steadily progressed the understanding that natural systems are necessary for survival and, therefore, should be safeguarded. The ecological economics literature helped steer the sustainable development discourse by differentiating between weak and strong sustainability. Strong sustainability stipulates that there are certain functions that the environment (natural capital) performs that cannot be duplicated by humans or human-made capital (Daly et al., 1995; Ekins et al., 2003). The economic term 'capital' refers to a stock that yields a flow of services over time (Robert Costanza & Daly, 1992). Weak sustainability, on the other hand, states that man-made capital can be a substitute for natural capital (Hediger, 2008). Unlike weak sustainability, strong sustainability assumes that the natural, human, social and built (manufactured) capitals are complementary, but not interchangeable (Robert Costanza & Daly, 1992). The distinction between the two schools of thought involves different ethical positions with respect to environmental stewardship; weak sustainability emphasizes the necessity of maintaining the stock of total capital, both man-made and natural, while strong

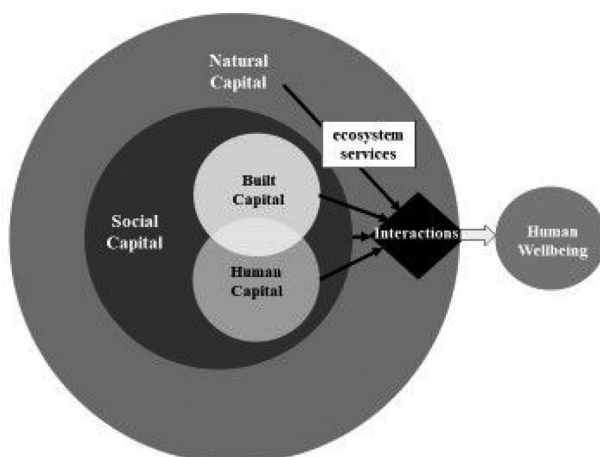


**Figure 1.** The interactions between built, social, human and natural capital affecting human wellbeing as per (Costanza et al., 2014, 2017).

sustainability emphasizes the necessity of maintaining the stock of natural capital rather than total capital as a prerequisite of sustainable development (Hediger, 2008). Within ecological economics, the ecosystem services literature in particular, has shaped the understanding that benefits derived from healthy ecosystems support human wellbeing and the rest of nature and, therefore, should be incorporated into decision making so that they are properly valued and protected (Braat & De Groot, 2012; Robert Costanza et al., 2017). The concept of ecosystem services is multi-faceted and has undergone several changes over time. In this study, 'ecosystem services' is understood as the *'ecological characteristics, functions, or processes that directly or indirectly contribute to human wellbeing: that is, the benefits that people derive from functioning ecosystems'*. (Robert Costanza et al., 1997; Robert Costanza et al., 2017; Millennium Ecosystem Assessment, 2005). The ecosystem services literature points out that connections between ecosystem processes, functions, and benefits to humans are complex, non-linear, and dynamic (Robert Costanza et al., 2017; Hamel & Bryant, 2017) and that the services from ecosystems do not simply flow to human wellbeing without the complex interactions between natural, human, built and social capitals (Robert Costanza et al., 2014). Capacity to improve quality of life, therefore, is dependent on all four capitals and their systemic interaction. Each capital is of inherent value. Thus, strong sustainability posits that investment in one capital will not compensate or substitute for lack of investment or loss in another (R. Costanza et al., 2008). The important relationship between the four capitals was recognised and framed by Costanza et al. (2014), (Figure 1). Figure 1 depicts the role of ecosystem services in the production of various human benefits, and how human, built, and social capitals are physically and spatially dependent on natural capital.

The value of goods and services provided by healthy ocean ecosystems is conservatively estimated at USD 24 trillion (Hoegh-Guldberg, 2015). Coastal ecosystems, such as coral reefs, seagrass meadows, and mangroves not only provide spectacular destinations for visitors, they also provide essential functions that support food security, ensure water quality, sequester carbon, and reduce the risk of storm surges, just to name a few (Arkema et al., 2015). A recent study estimated that coral reef ecosystems alone represent US\$19 billion a year in economic value through diving, snorkeling and other on-reef activities, and an additional US\$16 billion a year through reef-adjacent tourism, such as seafood and beach-related travel (Spalding et al., 2017). More than seventy countries, including Indonesia where this research took place, have coral reefs that generate more than one million dollars per square kilometer (Harborne, 2016). Over the past decades, the importance and value of the world's ecosystem services and natural capital has gained momentum. Increased understanding of the way in which nature benefits people has

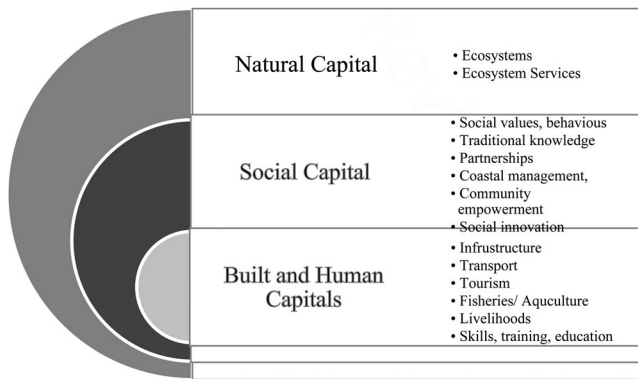


**Figure 2.** Applying ESA to frame components of the blue economy.

led to a suite of sustainable management approaches. It has also helped inform decisions on conservation and enterprise development attributing explicit economic value to natural resources (Assessment, 2005; Robert Costanza et al., 1997; Robert Costanza et al., 2014; Gómez-Baggethun et al., 2010).

Applying strong sustainability criteria in tourism is challenging (Collins, 1999). To help shape the ESA narrative within tourism and the blue economy discourse, we apply the higher level grouping of the four capitals, as shown in Figure 1, to the components of the blue economy. The components listed in Figure 2 relate ecological processes to the benefits that flow to people.

Framing the components of the blue economy through the ESA lens highlights the vital role of marine ecosystems in sustaining communities and local economies. The components listed on the right side of Figure 2 represent dynamic systems without which the blue economy cannot be achieved. The nested relationship between the four capitals underscores the sustainable use of marine resources while supporting local economies. Healthy and functional ecosystems minimize ecological scarcity, thus empowering communities and strengthening social capital, which in turn, supports economic stability. Figure 2 further highlights the interdependent relationship between sustainable coastal management and marine dependent industries and livelihoods. The link between natural resource conservation and the competitiveness of an ecotourism destination is an important one (Donohoe & Needham, 2006). Ecotourism is conceptualized broadly and includes dimensions of environmental conservation, socio-economic well-being of hosts, and interpretation and education, generally considered to take place within a natural setting (Walsh & George, 2019). However, Boley and Green (2016) reflect that without environmental conservation, ecotourism would simply be a form of nature based tourism focused on commodifying nature for economic gain.

### **Coastal ecotourism, an important component of the blue economy**

Coastal and marine tourism is a significant part of the tourism sector and is a vital component of a growing blue economy (Cerqua, 2017; Jackie Ong & Smith, 2014; Silver et al., 2015). In many countries, in both developed and emerging economies, tourism is appropriately viewed as an engine of economic advancement, and a pathway for improving the lives of people and communities that might otherwise struggle to grow and flourish (Saufi et al., 2014; Spenceley & Meyer, 2012). As one of the world's largest industries, tourism contributes trillions of dollars to the global economy and supports the livelihoods of an estimated one in ten people worldwide (Brumbaugh, 2017; Theobald, 2012). Coastal and marine tourism is projected to become the largest value-adding segment of the ocean economy by 2030, at 26% (Brumbaugh, 2017).

Furthermore, coastal ecotourism development provides important livelihood alternatives for many rural and low-resource communities. For professions such as fishing and farming, which tend to be seasonal, diversification into tourism offers additional pathways to supplement primary income (Ford & Acott, 2015). For example, fishers and farmers can choose to gain additional income to fishing or farming by developing new tourist services, activities and attractions, as opposed to replacing their primary livelihoods (Gao & Wu, 2017; Spenceley, 2012).

Community based ecotourism (CBET) and community based tourism enterprises (CBTE) refer to low-impact, ecologically sound livelihood alternatives requiring basic levels of infrastructure (Fennell, 2007; Okazaki, 2008). CBET is generally considered to sit within the realms of ecotourism, and similar to community-based tourism (CBT) more broadly, CBET aims to empower and preserve the social, cultural, and natural resources of the community (Goodwin & Santilli, 2009; Manyara & Jones, 2007; Mitchell & Muckosy, 2008). Research on the development of CBET shows homestays as among the top viable activities promoted within communities to reduce the incidence of rural poverty (Bhalla et al., 2016; Manyara & Jones, 2007; Sarkar & Sinha, 2015). Due to low start-up costs, homestays are easy to implement, especially in remote locations. In addition to affordable lodging options, homestays also provide travellers with unique experience of the hosts' culture and lifestyle (Imran & Nguyen, 2018).

Sustaining and protecting the natural ecosystems that underpin coastal tourism opportunities is a formidable challenge for both governments and communities alike. CBET has been shown to provide communities with a positive feedback loop for sustainable ecosystem management (Kontogeorgopoulos, 2005). This type of tourism has been linked to promoting stewardship and interest in preserving the natural environment, albeit with some criticisms (Kiss, 2004). In lower and lower-middle income countries, which host a large portion of the world's population living within 100 kilometres of the coast, growing the blue economy requires supporting sustainable coastal livelihood options. Through a network of homestays, traditional goods and handicrafts, local seafood and produce, CBET has the potential to facilitate development of small and medium size enterprises to promote sustainable tourism.

## **Study area and background information**

### ***Indonesian context***

With nearly 55,000 kilometers of coastline, and with over fifty percent of the population living on the coast, Indonesia is likely to benefit from the rapid growth in the blue economy. Unfortunately, many marine ecosystems in Indonesia and other parts of the Coral Triangle marine area are under threat from ocean plastic pollution, illegal fishing, over-exploitation and impacts of climate change (Hoegh-Guldberg, 2015; Jambeck et al., 2015). The Coral Triangle is located in the western Pacific Ocean and is considered to be the world's epicenter for marine biodiversity, supporting more than 600 of the world's coral reef species (Veron et al., 2009), including the highest diversity of reef fish, seagrass, and mangroves (Green et al., 2008). The biological resources of the Coral Triangle also sustain over 120 million people (Hoegh-Guldberg, 2015). For coastal communities in this region, economic development must include a delicate balance between protecting marine biodiversity and maintaining a sustainable and direct access to ecosystem services.

Many of Indonesia's coral reef areas are heavily exploited and the sustainability of the coastal ecosystems is threatened by over-fishing and illegal fishing practices (Cinner et al., 2013; Hoegh-Guldberg et al., 2014). It is estimated that 74% of Indonesia's coral reefs are damaged, primarily due to over-exploitation, and destructive fishing practices such as the use of dynamite and cyanide (Ferrol-Schulte et al., 2015). These, and other anthropogenic factors, have significant negative impacts on coral reef and seagrass ecosystems, and consequently on fisheries and the livelihoods of local communities (Cinner et al., 2013). Further, coastal communities are particularly vulnerable

to manifestations of climate change including sea level rise, coral bleaching, and extreme weather events (Cinner et al., 2013; Ferrol-Schulte et al., 2015; Ross et al., 2019).

The Indonesian government has recognized the growing demand in the ecotourism market and has designated many coastal regions exclusive economic zones (Nirwandar, 2015). An exclusive economic zone (EEZ) is a sea zone prescribed by the 1982 United Nations Convention on the Law of the Sea over which a state has special rights regarding the exploration and use of marine resources (Vicuna, 1989). In addition, the recent Indonesian policy framework for coastal and marine policy interventions has called for adaptive approaches and the provision of alternative livelihood options in order to decrease the pressure on marine ecosystems and increase the resilience of small rural coastal communities (Ferrol-Schulte et al., 2015).

For this study, we sought coastal locations with an emerging, but not yet established tourism market. The study was carried out in the Selayar regency, which is part of the province of Southwest Sulawesi, Indonesia in the Coral Triangle (Figure 3). The regency is spread across an area of 10,505 km<sup>2</sup> which includes Selayar island and many smaller adjacent islands located in Takabonerate Marine National Park (UNESCO, 2015) with a population of approximately 133,000 (Statistics Bureau of Selayar Regency, 2018). Selayar Island is the main island of the Selayar Islands (*Kepulauan Selayar*). There are 73 islands, but less than a dozen are inhabited. The Selayar Straits separate Selayar Islands from the mainland of Sulawesi.

The majority of the population lives on the coast and depends on coral reefs and small-scale fisheries for food and income. Most of the small-scale fishers are artisanal, with fishing fleets dominated by small boats with small outboard motors (BPS-Statistics Indonesia, 2017). Fish are an important part of the local diet with nearly half of the households registered as fishers (Statistics Bureau of Selayar Regency, 2018). The islands have a wet equatorial tropical climate, with a mean annual rainfall of 2520 mm (BPS-Statistics of Kepulauan Selayar Regency, 2018). The west monsoon season, January-May, brings rough seas and strong winds for the west side of the Selayar Island, and is typically referred to as the wet season. The east monsoon season, July-December, brings rough seas and strong winds for the east side of the Selayar Island. During both monsoon seasons, these are too rough for fishing on the coasts receiving the monsoon, and fishing are restricted to the opposite coast during that season. This means few communities (only those with access to both coasts) can fish year-round: most fishers require secondary fishing grounds or alternative livelihoods. Though some villages are heavily dependent on fishing, most Selayar households have mixed sources of livelihood, including farming, specifically coconuts (copra), cloves, cashews, candlenuts, and livestock such as beef cattle and goats. Some livestock is used for consumption and the majority is raised for sale to other districts of the South Sulawesi Province, predominately the city of Makassar.

Selayar has a slowly emerging ecotourism market. Although the number of visitors to Selayar is relatively low, its attractiveness for environmentally-oriented tourism is undoubtedly great. Meetings and interviews with the local government, including the Bupati (local mayor) and the Dinas of Tourism (department/ministry at regional level) revealed a strong interest in developing nature-based tourism in the region. At the time of the study, there were no major hotel chains in Selayar. Small locally owned hotels in the main city of Benteng are geared towards domestic visitors and local business travellers.

Selayar regency is not easily accessible for foreign tourists. The only direct flight to Selayar Island is from Makassar and up until 2018 was only available three times per week. Access to island atolls in the marine national park is by boat only with seasonal restrictions. In addition to the small passenger plane, Selayar can be accessed by an inter-island ferry from Cape Bira, a five hour drive from Makassar. There are currently no direct flights to Selayar from major tourist hubs in the region such as Bali or Singapore. As the result, the tourism sector on Selayar is relatively small, primarily driven by alternative/adventure tourists interested in diving and snorkelling. According to the local government department of tourism (Dinas of Tourism), in 2017, Selayar had less than 100 foreign tourists. Proximity to the Takabonerate marine national park, the third

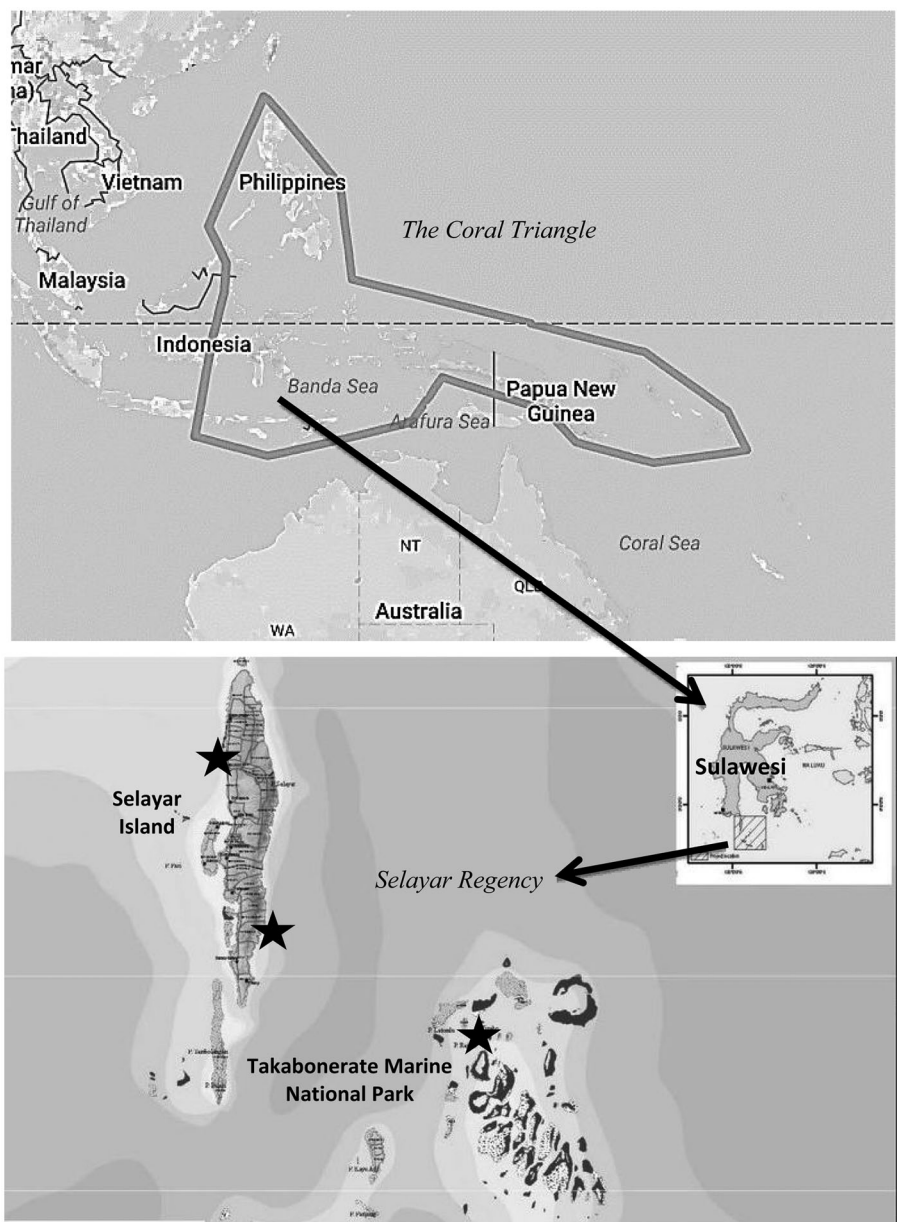


**Figure 3.** Map of the Coral Triangle, South Sulawesi shown in insert (*source: Google Maps*); lower map of Selayar Regency with three villages indicated by stars.

largest atoll in the world, attracts serious divers and adventure travellers. However, aside from occasionally employing local boat and dive operators, the existing tourism activities only marginally contribute to the local economy.

**Methods**

***Village selection***

We sampled sets of villages that were representative of the east and west coasts of Selayar Island as well as the island atolls in the marine national park. The three villages, Jinato,

**Table 1.** Household samples in the study area.

| Villages        | Household sample | Total households | Total village population |
|-----------------|------------------|------------------|--------------------------|
| Jinato          | 5                | 38               | 113                      |
| Patilereng      | 5                | 72               | 220                      |
| Barat Lambongan | 5                | 43               | 135                      |
| <b>Total</b>    | <b>15</b>        | <b>153</b>       | <b>468</b>               |

Patilereng, and Barat Lambongan, were selected as study sites (see [Figure 3](#), marked by stars). The villages were purposively selected as each of the village leaders had expressed an interest in developing community-based or homestay tourism in their villages during scoping visits by the research team. Further, these three villages have distinct characteristics, as well as similarities, and are in varying geographic locations of the region. The three villages are described below.

Jinato is a small remote island, 30 km east of main island of Selayar in the Takabonerate marine national park, the third biggest atoll in the world. Jinato is in close proximity to pristine diving and snorkelling and has approximately 40 households. Most of the households are fishers. There is no fresh water on the island. Water is rain harvested, brought in by boat, or desalinated at the small reverse osmosis desalination plant on the island.

Patilereng village is located on the east coast of Selayar Island and has approximately 70 households. Primary livelihoods include: fishing, cashew, nutmeg, coconut and clove farming. There is also a cottage handicraft industry of local souvenirs. Patilereng is in close proximity to a small scenic bay often frequented by dolphins, a reef (unfortunately heavily damaged), a waterfall, hiking and miles of scenic coastline.

Barat Lambongan village is located directly on the west coast of Selayar Island and has approximately 40 households. Just in front of the village coastline and reachable by a small boat is an intact coral reef, presenting potential opportunities for diving and snorkelling. The location is also ideal for viewing the sunset. Many local Selayar residents visit this village at sunset. The village has built a scenic nature trail on the coastline to allow access and is planning to charge local day visitors a parking fee. Barat Lambongan is a short drive from the ferry harbour and the main city of Benteng and the airport. Most households are both fishers and farmers.

## Interviews

This study adopted a qualitative approach, using in-depth semi-structured household interviews, unstructured interviews with key informants, and direct observation techniques. The research took place over six visits, including scoping, in an 18 month period between April 2017 and July 2018 as part of a larger project called *Capturing Coral Reef and Related Ecosystem Services* (CCRES), funded by the Global Environmental Fund (GEF) and administered by the World Bank. A total of 15 household interviews ( $n=38$ ) and 12 key-informants interviews ( $n=12$ ) were conducted with community members across the Selayar Regency. The data collected through these methods informed us about the aspirations, interests, and concerns of local communities in alternative livelihoods, in particular, the development of community-based ecotourism.

## Sampling

Five households were randomly sampled in each of the three selected village for a total of 15 households, representing 10% of all households across the three villages ([Table 1](#)). Owing to lack of a reliable address list to use as sampling frame, but the ease of identifying houses on location, we used systematic random sampling. Starting from a logical point, every third house with someone at home at the time of the site visit was approached for interviews. All available households preferred to do the interviews as a group with multiple households' members resulting in a total of 21 females and 17 males ([Table 2](#)). All respondents at the time of the interview were

**Table 2.** Sample statistics – household interviews.

|                                               | N         | % of sample |
|-----------------------------------------------|-----------|-------------|
| <b>Total Sample</b>                           | <b>38</b> | <b>-</b>    |
| Female                                        | 21        | 55%         |
| Male                                          | 17        | 45%         |
| Long term residents of the region (+15 years) | 37        | 97%         |
| Are supportive of community-based tourism     | 38        | 100%        |
| Have aspirations to run a homestay            | 31        | 82%         |
| Fishers and/or farmers                        | 34        | 89%         |
| Public servants                               | 4         | 11%         |

either household heads or family members. Their ages ranged from 20 to over 70 years. Household interviews were supplemented by data from unstructured interviews with key informants, including village heads (village chief), village committee members, chief of police, decision makers in local government, and local business owners. These used convenience sampling aiming for a range of roles within community. Some of the participants were selected and village leaders. Selection criteria for all participants were based on age (18 years old and older) and length of residence (>10 years). In total, 12 key informants were interviewed using unstructured format. Discussions with key informants were essential for gaining a better understanding of how tourism development is perceived, and what the aspirations and expectations were towards tourism from the wider Selayar community and by the local government. Interview notes were used to capture attitudes and perceptions and identify common themes.

**Procedure**

Interviews were conducted at each house, at a location of the respondents’ choice (e.g. front porch, community space, or inside the house). All willing adults from each household were interviewed as a group. The interviews were preceded by a short explanation of the study, and short ethical points including that participation was voluntary. All interviews were conducted face-to-face in Bahasa Indonesia through a translator. To add to observation evidence, the researcher took field notes, photos and video footage of proposed tourism sites, and interactions at community meetings and business development forums and workshops.

**Analysis**

Analysis of interviews used coding to generate themes from the data. Data was subjected to thematic analysis using constant comparison process and basic guidelines for coding qualitative data (Glaser et al., 1968). Given that ESA was used as the core lens to examine the role of community-based ecotourism, the initial coding focused on the presence of three key themes (*natural capital*, *social capital*, and *built and human capitals*) shown in Figure 2. This gave an initial structure to the analysis. Field notes were then revisited to verify frequently occurring expressions and any unexpected material that provided atypical evidence. Sub-themes of *motivations/vision*, and *limitations/concerns* that emerged from careful review of field notes were aggregated into two major categories, (1) *Equity and livelihoods* and (2) *Coastal management and conservation*, which were used to frame the findings. Interpretation of the two categories and the sub-themes is elucidated by direct quotes from the interviews (translated from Bahasa Indonesia) from 15 household interviews and 12 key-informant interviews, which are deemed as representative of the sample. Direct quotes are presented with an anonymous indicator of the interviewees; H (Householder) or K (Key informant). For the sake of brevity, only a selection of quotes is presented, and those selected for presentation are those which provide the best exemplars of the themes and issues raised by participants.

## Equity and livelihoods

### Motivations/vision

#### *Additional revenue for households and opportunities to diversify the local economy*

Participants expressed a strong interest and high aspirations for engaging in homestay-type tourism to earn additional income through CBET. Household interviews showed that many community members are eager to supplement their primary livelihoods, fishing and farming, with homestay tourism as a way to derive extra income and reduce their dependency on fishing. Many respondents also perceived homestay tourism to be “easier” than fishing, a common sentiment, exemplified in the following quote.

*If we have a homestay business and can get visitors once or twice a week, my husband would not have to take the boat out every day... he would not need to be away at sea as much. Running a homestay is much easier and takes less time than fishing. (H12)*

Interviews indicated that for fishers and farmers, livelihood insecurity is a common threat, primarily due to seasonal disruptions, weather and market instability. Small-scale homestay-type tourism, therefore, was perceived as a promising opportunity to supplement primary livelihood. The notion that community-based tourism can help diversify the local economy also emerged in the interviews with village leaders, village committee members, and local government officials who all viewed community-based tourism as a favorable alternative livelihood. For example, one respondent noted:

*As a destination, we (Selayar) have a lot to offer... there are more than fifty coastal villages, beautiful beaches, and a rich and interesting history including Chinese sea traders and the last Dutch colonial outpost... village tourism can also benefit other businesses in the community and bring in additional revenue for villages far away from Benteng (Selayar's biggest town). (K2)*

#### *Ecotourism development that benefits the local community not only external stakeholders*

At the time of this research, Selayar had four small niche diving/eco resorts, predominately foreign owned and catering to the European market, one small locally-owned beach front resort, a handful of dive shops, and one dive centre in Takabonerate marine national park. Since 2016, however, the number of foreign and Indonesian investors buying land in Selayar with beach access has been steadily increasing. Aside from a few local boat and dive operators employed by the existing resorts, tourism activities on Selayar only marginally contribute to the local economy. Private yachts and smaller cruise ships that sail to Takabonerate national park typically do not contribute to the local economy. There is a park fee to enter the marine national park; however, the collection of the fee is not enforced.

The current homestay sector in Selayar is small, and is primarily geared towards Indonesian domestic travellers, mostly through word of mouth. Interviews with the local government and community leaders confirmed formidable aspirations for expanding homestay village programs to bring visitors directly into contact with local people. In 2015, the Indonesian Central government introduced a national village funds program to support community empowerment and other social activities at a village level (Hidayah et al., 2019). All three village heads (a common term for a village chief or village leader) expressed that they were willing to use their local village funds to develop CBET, as the following exemplar shows:.)

*We want to develop opportunities for our village to benefit from tourism, we have Dana Desa (village funds) and can use them to build a jetty and a warung (café) to attract tourists to our community... we can build bungalows near the beach and visitors can come straight from the airport and stay here. They can go swimming, snorkeling and even fishing... now they (tourists) are picked up and taken straight to the dive resorts on the East coast, we never see them (K5)*

In Patilireng village, at the time of this research, a group of community members were building homestay-type accommodations (bungalows) near the beach using village funds. The

community members involved in the building project, six builders and their wives, expressed that the plan was to share the profits from the homestays among the community:

*We had a meeting in the community and decided that we will use the village funds to build ten bungalows so that tourists can come and stay, and the village can make some money from tourism. (H2)*

These views reflect the aspirations of local residents to engage in the emerging tourism market. The abovementioned quote also represents a common sentiment among respondents: those benefits from any existing tourism on Selayar are not being distributed to the community.

### ***Innovation, agency, inclusiveness***

Interviews also explored the vision for types of tourism that respondents would like to see in their community. The majority specifically identified building an industry around home-stay tourism in family homes both within the village and outside of the village, and believed that this type of tourism would be most effective in ensuring that the benefits will flow back to the community. They also expressed a desire for a consistent but small number of visitors, both domestic and international, at any given time for short stays. For instance, Patilireng community members envisioned approximately twenty visitors per month. This number, they felt, would off-set their initial investment in ten bungalows. There were also a number of innovative ideas specifically focused on education and environmental tourism, predominately among women:

*We have a very nice mangrove forest, my idea is to take visitors, maybe also student groups, on guided boat tours through the mangroves. I can employ a boat driver and two ladies in the village who can cook and provide food... I can sell group packages to visitors that will also include mangrove planting and snorkeling... (H9)*

In addition to snorkelling, other ideas of revenue generating activities for tourists included: taking visitors to turtle nesting sites, day-excursions to mountain villages to see high-stilt houses, guided waterfall treks, fishing excursions, cooking classes, and visits to the traditional clove farmers. Most respondents expressed the desire to involve other community members and relatives in tourism-related activities (e.g. as drivers, boat operators, cooks, and caretakers). Responses indicated that the overall perception was that small community-based tourism will unite groups inside the community to work together.

### ***Tourism can help create new markets for local products***

The interviews highlighted that community members perceive that community-based tourism can help other community businesses thrive. Within the regency, Selayar is known for its baked goods and food products made from nutmeg, coconut, cassava and candle nut. Interviews indicated that there was an established, albeit informal, small-scale home industry sector that included value-added products such as cashews, copra, oranges and clove. Market access is minimal, and as such, respondents who were farmers explained that they sell exclusively to collectors and other middle men. During the interviews, many community members demonstrated some of their handicrafts and shared product ideas that they believed community-based tourism can help support. The following quote exemplifies this idea:

*... we make many different decorations and souvenirs, some of the ladies here can make carrying bags and other useful items from plastic packaging, which the tourists might like to buy (H6)*

The notion that tourism can lead to secondary markets was a unanimous sentiment, particularly among women.

## Limitations/concerns

### Cultural influences

While the participants all saw small-scale tourism as a positive for their communities and a more sustainable economic sector than fishing, concerns were expressed around the impact and influence of tourists in their villages. For instance, some had concerns and reservations regarding the behavior of visitors whose values and culture does not align with local belief systems. The predominant cultural and religious influences in the area are Muslim. For instance, commons sentiment among respondents was the expectation that visitors might drink alcohol, use drugs, and have “less modest attire”. Some respondents cited bikinis as the type of beachwear that some of their community members would consider inappropriate:

*...foreigners have different culture...some people in our community might not be used to it...we might have to make special rules when visitors stay in the village...we will also use socialisation (community education workshops) to prepare community members in advance so people know what to expect and can get used to it (H5)*

Most of the concerns and perceptions about western tourists, such as the one exemplified in the above quote, were anecdotal and based on what respondents had seen on television or heard from stories about tourism in Bali. It is important to note, however, that none of the respondents interviewed have ever visited Bali. In Jinato, as a countermeasure, participants spoke of spending more time providing religious education for their children. In Barat Lambongang and Patilireng, respondents suggested using “socialisation” or education workshops for community members to anticipate potential immodest behaviour.

On Jinato Island, all the households interviewed were happy for international tourists to stay in homestays directly in their homes. Some have already prepared rooms for homestay tourism. However, the households interviewed from Patilireng and Barat Lambongan preferred that tourists stay in separately built accommodations, such as bungalows, which they referred to as community homestays. The preference was out of consideration for both the villagers and the tourists, as evident by this quote.

*...tourists like to be near the beach, they might also be disturbed if they are too close to the mosque. The call to prayer is loud and is very early in the morning (H7)*

### Lack of skills and human resources

Participants were also aware of the limitations and challenges they faced in developing tourism. All households in all three villages mentioned that they would like to get training and support to develop their homestay businesses. Specifically, many households expressed an interest in receiving hospitality skills training specifically in relation to ‘foreign visitors’. Respondents spoke of their lack of knowledge regarding the “different preferences and standards expected by foreign visitors”. Others spoke about receiving training for food preparation and to better understand “the type of attitude to have” towards visitors (i.e. how they should behave with western tourists). Most residents in remote Indonesian villages rarely see foreign visitors and can be very shy. Only one householder interviewed had experience with international tourists while working at one of the dive resorts on Selayar.

In Barat Lambongang and Patilireng, most respondents intended to split the profits from the village homestays between the community members, but it wasn’t clear what type of arrangements they plan to use. In Jinato, most respondents intended to run their homestays within the individual family groups, but planned to use the village funds to develop necessary infrastructure to attract tourists. All three village heads (chiefs) and some of the village committee members indicated that they needed assistance in developing a “design plan” for CBET, as this quote illustrates:

*It is necessary to create a design plan for tourism in our village. We will then present it to the Bupati ... we need help in making a design plan, can you help us? Do you know someone who can help us with this? (K8)*

This was a very common sentiment among the village leadership. Similarly, interviews with other key-informants showed the importance of developing a destination-business plan as a necessary first step in supporting their community, as well as desired assistance with promoting their island to attract visitors.

## Coastal management and conservation

### *Motivations/vision*

#### *Environmental stewardship*

In Selayar, as in many other parts of Indonesia, coral reefs and other coastal ecosystems are still being threatened by destructive fishing practices, such as bomb and cyanide fishing (Ferrol-Schulte et al., 2015). Livelihood insecurity and other socio-economic challenges have been linked to overfishing and destructive fishing practices (Batista et al., 2014). Analysis of household and key-informant interviews revealed that the prospect of community-based tourism creates a strong and immediate incentive for environmental stewardship. As an example, interviewee H15 noted:

*For us it's simple, if we have regular tourists staying here, we will do more to keep the beach clean. The reef is important, I think fishermen would actively protect the reef if the family also made money from tourism. (H15)*

The interviews showed that the promise of community-based tourism elicited pro-environmental thinking and consideration. Tourism as an incentive for conservation and the need to reduce destructive fishing practices was a common sentiment among the respondents, as evident by the following quote.

*... if tourists come to villages and the community is benefiting from tourism it can help empower community residents to solve the problem of illegal fishing, increase reef surveillance... coastal management would be better because tourism can make more money than fishing (K11)*

It was clear that the majority of respondents understood the term ecotourism primarily as nature-based tourism or nature-focused tourism, rather than tourism that specifically aims to support conservation efforts. However, all respondents were very proud of their natural assets and wildlife. Respondents also seemed very aware of the value that nature and healthy ecosystems bring to tourism. Many expressed the importance of protecting Selayar reefs and coastal areas to encourage tourism and promote Selayar as an attractive destination.

#### *Sense of pride*

All three villages expressed a sense of pride and value for the natural points of interest in and around their villages. Interviews revealed that all respondents believed that community-based tourism would bring more advantages than disadvantages to the community, and provide an opportunity to showcase Selayar and its natural heritage. For each of the villages, the tourism product was seen to be primarily nature-based activities such as diving, snorkelling and hiking. Most were uncertain of the logistics as to how visitors would get around, however, all were prepared to use community networks and resources to provide transport and other services. In Patilereng, respondents suggested incorporating cultural based activities such as cooking, local handicrafts, dances, and village life experiences. Several respondents in Barat Lembongan referred to local folklore of spiritual significance that was linked to their village and its proximity to the ocean, and they envisioned sharing the story with tourists as a point of interest.

Table 3. Results summary - key themes.

|                                      | Equity & Livelihoods                                                                                                                                                                                                                                                                                                                                     | Coastal management & Conservation                                                                              |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| <i>Motivations/Vision</i>            | <ul style="list-style-type: none"> <li>• Additional revenue for households and opportunities to diversify the local economy</li> <li>• Ecotourism development that benefits the local community not only external stakeholders</li> <li>• Innovation, agency, inclusiveness</li> <li>• Tourism can help create new markets for local products</li> </ul> | <ul style="list-style-type: none"> <li>• Environmental stewardship</li> <li>• Sense of place</li> </ul>        |
| <i>Limitations/Concerns</i>          | <ul style="list-style-type: none"> <li>• Cultural influences</li> <li>• Lack of skills and human resources</li> </ul>                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>• Marine debris and maintaining coastlines free from plastic</li> </ul> |
| <i>Support needed to enable CBET</i> | <ul style="list-style-type: none"> <li>• Hospitality training/upskilling</li> <li>• Market access</li> </ul>                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>• Waste management</li> </ul>                                           |

### Limitations/concerns

#### Marine plastic debris and waste management

A concern for all three villages was plastic waste and waste management. Marine plastic debris is a formidable challenge in the region, especially during monsoon seasons (extended periods of strong winds and high waves), when it washes up on the coastlines in vast quantities. There are no centralised waste management collection systems in the villages and all rubbish, including plastic waste, is either burned, taken to the village dump, thrown in the ocean, or left on the land. Although most participants were not concerned about household waste, including plastic, they did express concerns about being able to manage beach clean-ups and large quantities of waste in the event tourists did start visiting their village.

A summary of the key findings from this research is presented in [Table 3](#).

### Discussion

In this study, CBET emerges as a vital link between ecosystem protection, livelihood diversification, and local culture and heritage. Homestay tourism presents an effective pathway for conservation and local economic development, encouraging local residents to conserve historical, natural, and cultural sites as active custodians of their heritage (Bhalla et al., 2016; Goodwin & Santilli, 2009; Sarkar & Sinha, 2015). While marine based tourism and sustainable resource management in Selayar Regency and Takabonerate National Park are high priorities for the local, provincial and regency governments, currently there are minimal opportunities for the local communities to benefit from this emerging market. The few tourism activities occurring on Selayar contribute very little to the local economy. Local communities in the Selayar regency have strong aspirations for introducing homestay village programs to bring visitors directly into contact with local people, and are willing to use their local village funds to develop CBET. These aspirations, however, are not without challenges and concerns, specifically around potential values and behaviour displayed by visitors that might not align with local belief systems, and the self-acknowledged lack of hospitality skills and training.

This study aligns with previous research on rural and coastal ecotourism, (Ford & Acott, 2015; Gao & Wu, 2017), and confirms that for communities with diverse ecosystems, diversification into small-scale tourism offers an opportunity to supplement primary income and increase the social value of the sector. Fishers and farmers can choose to gain additional income on top of fishing or farming, as opposed to replacing their primary profession, by developing new tourist services, activities and attractions. This might include complementary tourism packages in addition to their primary, and often seasonal, fishing/farming activities (e.g. for fishers, this might include wildlife tours, sea angling, accommodation and catering) or through new product innovation

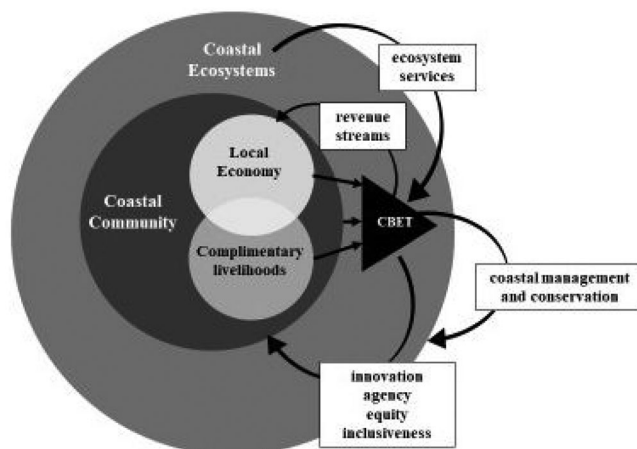


**Figure 4.** Community based ecotourism (CBET) in the blue economy.

(e.g. fishing by-products or crafts based on fishing skills, knowledge and heritage), which could be directly linked to fishing or farming activities, as well as coastal and historical heritage. Findings also showed that tourism was perceived as a platform for skill training and learning new ideas for the community.

### ***The role of community-based ecotourism in the blue economy***

For low-income communities in developing countries, local economic development is a challenging balance between protecting marine biodiversity and maintaining sustainable and direct access to ecosystem services (Garland et al., 2019). Diversifying local economies beyond primary livelihoods is critical to achieving sustainable and inclusive development. One of the key elements of the blue economy is to increase the long-term benefits of the sustainable use of marine resources. CBET as a socially just development opportunity until now has had limited attention in the blue economy discourse. Governments, private sector and non-governmental organizations need to consider the CBET model as a long-term view of success for the blue economy. Using the results of this study we present a theoretical model for CBET in the blue economy, Figure 4. The model incorporates the components of the blue economy framed by the ecosystem services approach (Figure 2) and the four-capitals as they relate to human wellbeing described by Costanza et al. (2014) (Figure 1). Figure 4 demonstrates the relationships and interactions between the capitals, (natural, social, human and built/economic), and the flows of benefits facilitated by CBET.

The model presented in Figure 4 shows the symbiotic relationship between community-based ecotourism and coastal ecosystems as well as the inherent pathways for returning benefits back to the community. For low-resource coastal communities, such as those in the Selayar Regency, CBET unlocks livelihood opportunities and helps support sustainable development through low-impact tourism. Protecting coastal ecosystems while promoting social capital and contributing to the local economy is at the heart of the blue economy paradigm. The proposed model highlights the important role CBET plays as an effective mechanism for nature-friendly tourism development. Tourists to sensitive marine areas provide an extra economic incentive for local communities to protect their natural environment that may not exist outside of the tourism sector (Boley & Green, 2016). Our findings show that community members in coastal villages perceive environmental stewardship differently through the tourism lens compared to the lens of their primary livelihoods. Community members acknowledged that potential visitors are put off by plastic litter and damaged reefs, requiring more vigilant protection of care for the environment. When the

perceived value derived from coastal ecosystem services is based on other uses apart from tourism, such as small-scale fisheries and aquaculture, the imperatives for conservation have been known to be less pronounced (Ford & Acott, 2015). Tourists inherently provide direct and immediate feedback on the state of the natural environment and health of coastal ecosystems. The positive feedback loops resulting from CBET have a strong potential to increase stewardship and conservation actions by the community, and provide an economic buffer for the more remote and less politically powerful villages, ensuring that they do not lose control of or access to marine resources that they previously used.

The findings from this study show that three key areas where multilateral support is most needed for coastal communities interested in CBET are waste management; hospitality training; and market access. For coastal villages in regions rich in biodiversity, such as the Coral Triangle, CBET can be an equitable and sustainable conduit for the blue economy at a community level. However, ecotourism does not always bring the environmental and social benefits envisioned (Ballantyne & Pickering, 2012; Isaacs, 2000; Krüger, 2005). Therefore, this study also points out that the success of the symbiotic relationship between CBET and conservation of natural and cultural heritage requires adequate support from all stakeholders. With appropriate training and regulatory frameworks to encourage sustainable practices, community-based ecotourism has the potential to protect marine biodiversity by bringing strong economic incentives for conservation.

## Conclusion

This study examined the role of community-based ecotourism (CBET) within the developing market dynamics of the blue economy. We found that for low-resource coastal communities, such as those in the Selayar Regency of Indonesia, development opportunities through coastal CBET present achievable pathways to supplement primary income and in some cases, support seasonal livelihoods such as fishing or farming. Furthermore, in remote biodiversity-rich areas, homestay and cultural ecotourism offers a means of contributing to annual community revenue, boosts community pride and relationships, and strengthens sustainable coastal management. We point out that community-based ecotourism offers an entry point for low-resource coastal communities to take part in the blue economy, and with adequate support, can help steer alternative livelihood pathways towards more sustainable outcomes.

Many coastal communities around the world are strongly dependent on the need to find a balance between protecting marine biodiversity and maintaining a sustainable and direct access to ecosystem services. Healthy coastal ecosystems support livelihoods and provide protection from natural hazards, coastal erosion and rising sea levels, particularly in small island developing states. The blue economy discourse has made considerable inroads towards bridging the gap between livelihoods and ocean health. Although different actors involved in marine and ocean governance are using the blue economy term in competing and often conflicting ways, the wider consensus is that economies and human wellbeing rely on healthy ecosystems.

Incorporating the ecosystem services approach as part of an overall sustainable development strategy, we present a model for CBET within the blue economy. The proposed model demonstrates the important role of community-based ecotourism in ecosystem protection, livelihood diversification, and benefit distribution. We argue that under the right leadership and appropriate support, community-based ecotourism has the potential to help protect marine biodiversity by providing strong economic incentives for conservation to the local communities in remote areas. By advancing sustainable CBET, local governments and the tourism industry have an opportunity to lead both blue economy initiatives, and in helping local communities protect their coastal ecosystems.

As is the case with any research, there are limitations that should be acknowledged. This study focused on one specific geographic area and took a qualitative approach. Therefore,

caution should be used when applying these findings to other geographical areas or different contexts or when attempting to generalize these findings. Nonetheless, the findings of this research provide an underpinning rationale for future research, which could take our model for community-based ecotourism within the blue economy and apply it in a range of contexts. Future research could also take a broader and more quantitative approach in order to test for commonalities and relationships between the various elements of the proposed model.

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