

Sustainable Tourism Development Impact at Small Island Tourism Destination at Timor-Leste; A Systematical Literature Review

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Abstract: Sustainable tourism development (STD) is important for developing tourist destinations with the specifics of small islands such as Atauro Island, Jaco Island, and Timor Island in Timor-Leste. This research aims to obtain several variables for sustainable tourism development based on positive and negative impacts on economic, social, and environmental goals, and to form an analytical conceptual framework through the As6 variable applied to the sustainable tourism development on small islands in Timor-Leste. This research adopts the systematic literature review (SLR) to investigate impacts of the As6 variable. This research considered the methodological process of developing an analytical framework for STD with an initial search process using the keyword impact of tourism development, 60 papers were identified, followed by the next combination of keywords, the impacts of sustainable tourism development on small islands, resulting in 29 papers, and in the third stage of the search continued by using the keyword impact of sustainable tourism development on the small island of Timor-Leste combined with variable As6, only 7 papers were identified. This research has temporarily resulted in the formation of an analytical framework concept which can be concluded that sustainable tourism development with all its impacts describes complex interactions between humans and environmental, social, and economic systems from an AS6 perspective.

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Introduction

This paper provides an understanding of the concept of sustainable tourism development (STD) and the importance of balancing economic growth with environmental conservation and social welfare. The rationale is that STD is needed to study the positive and negative impacts of using various variables resulting from the previous selection of As4 from (Buhalis, 2004a), and developing it into As6 (Attractions, Activities, Accessibilities, Amenities, Ancillary, Authority) in accordance with the needs of sustainable tourism development in small island destinations such as Atauro Island, Jaco Island, and half of Timor Island as the mainland of Timor-Leste.

JMET Vol. 2, No 2 (July 2024)

These three small islands have formed the country of Timor-Leste as a member of the 38 countries of the association of Small Island Developing States (SIDS) (UNCTAD, 2022). Geographers, morphologically, have defined the concept of small islands as islands measuring less than 10,000 square km (Nunn, 1986). Globally, the UN has noted that in 2014 there were 32 countries (United Nations, 2014), and in 2023 report there will be 38 member of SIDS (UNCTAD, 2022) spread across several regional areas including the Caribbean; Pacific; and Africa, the Indian Ocean, the Mediterranean, and the South China Sea.

Timor-Leste has two small islands, namely Atauro Island to the north of the city of Dili and Jaco Island (Currie, 2017) to the east of Lautem Municipality. The geographical position of Atauro island have on latitude coordinates are: **-8.236871**, and longitude coordinates **125.576729**, or the *Islands* place category with the GPS coordinates of 8° 14' 12.7356" S and 125° 34' 36.2244" E. The Atauro island has located at north of municipal Dili, between Wetar Island and Alor Island. Municipality of Atauro Island, have area 140.5 km square, and Vila Maumeta as capital city, number population 10.302 living in 2.119 households. Meanwhile, Jaco Island has covering an area of 11 km square in the eastern part of the island of Timor, Overall, Timor-Leste has an area of 14.919 km square (Financas, 2022). These three islands are coastal and marine tourism destinations that are well known nationally and internationally (Carter et al., 2001; Wahyudin et al., 2019). The differentiation characteristics of the two islands between Atauro, Timor, and Jaco island are: Atauro and Timor Island has residents who live permanently, meanwhile Jaco Island has a smaller size, is not inhabited by humans, this island only inhabited by various mangrove plants, various types of birds and wild deer and other flora and fauna, and during the dry season tends to lack fresh water sources.

Tourism sustainable development has the main concept of sustainable development which is assessed by measuring the economic, social, and environmental, relationships and impacts which are very large in the modern world today and are still developing (Streimikiene et al., 2020). The concept of sustainable tourism development (STD) aims to achieve a balance between the economic, environmental, and social needs of all stakeholders in considering the impacts of tourism. Various literature discusses the development of the tourism sector only in the economic dimension with measurements at various scales, or only in the social dimension or only in the environmental dimension (Mostafa et al., 2020a). Other literature only discusses a combination of these three dimensions, such as researcher (Kurniawan et al., 2019; Twining-ward & Butler, 2002; Wahyudin et al., 2019) that only researching and emphasizing the impact of tourism development from economic and environmental dimensions only. Although the concept of sustainable tourism development is still debated and there is very little literature that specifically discusses sustainable tourism development in the perspective of As6 (Attractions, Accessibility, Amenities, Available packages, Activities, Ancillary services) by (Arif et al., 2019; Buhalis, 2000a), and As4 (Attraction, Accessibility, Amenity, and Ancillary) by (Mussadad et al., 2019). However, it is very important to discuss sustainable tourism development in the AS6 (Attractions, Activities, Accessibilities, Amenities, Ancillary, Authority) perspective in small island destinations such as those in tourist destinations especially in Timor-Leste. Thus, sustainable tourism development in small islands is very important and requires monitoring in relation to economic, social, and environmental dimensions whose positive and negative impacts can be measured through the As6 (Attractions, Activities, Accessibilities, Amenities, Ancillary, Authority) variables and including each indicator.

The question that arises is whether sustainable tourism is realistic in developing countries with small island characteristics, with all the limitations and weaknesses or advantages of small

islands as tourist destinations. What is the work analysis model or framework that can be adopted and adapted for the country of Timor-Leste for sustainable tourism development that can further alleviate poverty, improve human health and welfare at least for short-term capacity building before sustainability? Can the ideals of practical sustainable tourism through the As6 (Attractions, Activities, Accessibilities, Amenities, Ancillary, Authority) variables be implemented in tourist destinations for both communities who have the power to be fully involved and not involved in sustainable tourism development? Is the Timor-Leste government's commitment, through various regulations and assistance to sustainable tourism, a response to ideals to advance society as a whole? If sustainable tourism on small islands could be implemented in various countries, what would its characteristics be? We examined these questions using a systematic review of the peer-reviewed published and grey literature. We specifically looked for articles that adopted a small island sustainable tourism focus and provided a clear context for considering the sustainability agenda through the variable As6. We seek guidance on an analytical framework in developing a dynamic small island sustainable tourism sector and maintaining sustainability ideals. We also found gaps in knowledge identified and research needs highlighted. The methodology used here is based on the systematic strategy of literature review as has been used by several previous researchers.

Research Method

This study employed a systematic scoping review to assess the impact of tourism development literature with respect to four criteria including (a) the relevance to the As6s (Attractions, Activities, Accessibilities, Amenities, Ancillaries, Authority), and (b) the subjective and objective indicators. The scoping reviews are commonly utilised to provide an exploratory overview of a topic, map the literature, and identify key concepts, theories and sources of evidence and are best designed where an area is complex or has not yet been comprehensively reviewed (Mostafa et al., 2020b). Systematic scoping reviews differ from full systematic reviews in terms of the specificity of the research question, with systemic reviews being highly specific and less exploratory, as well as the extent of the literature reviewed, with scoping reviews often being limited to a single appropriate database. Scoping reviews are increasingly utilised in the social, economic, and environmental sciences, including tourism, and for evidence-based policy-making in relation to intervention selection based on As6 variables and indicator.

The present study reviewed journal articles published in Google scholar starting from 2004 up to 2024 for the impact of tourism development with As6 indicators and indices with which to the Timor-Leste and or small island tourism destinations. The Google Scholar it incorporates a larger selection of tourism journals, but still includes all article types and indexes all authors, institutional addresses and bibliographic references for each publication indexed in the database. A keyword search of the title, abstract, and keywords was conducted using the search terms in the impact of tourism development with As6 indicators.

This initial search using keyword the impact of tourism development resulted in 60 papers being identified. Another keyword search for tourism impact and As6 indicator yielded 29 papers, continue to keyword search for tourism impact in small island tourism destination and As6 indicator yielded only 7 papers. This figure was reduced to 96 papers following the removal of duplicates. Screening the abstracts for relevance to sustainable tourism indicators reduced this figure further to 10 papers. To identify research in relation to subjective indicators, a further search was undertaken for cognate keywords previously identified in related literature, including the impact of tourism

JMET Vol. 2, No 2 (July 2024)

development with As6 indicators scale, and tourism impact scale. This search yielded 7 papers describing the use of subjective on tourism development indicators and exact on As6 indicators of tourism development from either resident or tourist perspectives. For duplicates were removed, leaving 3 papers to be reviewed in full. These 29 papers were filtered through a manual abstract review. This filtering process led to the exclusion of papers based one or more of the following criteria: (a) the full paper could not be retrieved (7 papers excluded), and (b) central themes that do not address any of the sustainability dimensions with indicators (6 papers excluded, because published in Portugues language). In conclusion, 29 journal articles were reviewed for this study.

Table 1: Inclusion and exclusion criteria

Inclusion	Exclusion criteria.
Articles published after 1 January 2004	Articles published after 1 June 2024
Full text available	Full text not available
English	Non-English
Available via Google Scholar; ADB; UNWTO; UNDP search	Not available in these databases
Journal article; conference paper; thesis; dissertation; discussion paper; report; book chapter (where PDF available)	Edited book; book review; editorial
Focus on the impact of tourism development with As6 indicators on Timor-Leste as small island tourism destination.	Not relevant to the impact of tourism development with As6 indicators on Timor-Leste as small island tourism destination.

The Table 1 has illustrated the article selection process. In the inclusion part the SLR have six criteria's: the relevance to the STD related to the As6 variables and the positive and or negative subjective and objective indicators, were used as the main themes for reviewing the papers, and possible sub-criteria under each theme were considered as sub-themes for built of conceptual analytical framework. Then, the papers were reviewed separately based on predetermined variables or subthemes, with each variable meeting the criteria by at least two authors to establish the reliability and consistency of the SLR. Deductive thematic analysis was then applied to review and analyze the papers based on variables based on related criteria.

The Conceptual Framework

The conceptual framework of this research was adopted from (Buhalis, 2004a; Buhalis et al., 2023a) and enrichment of research about the development of tourism destination in Timor-Leste by Vong (2016). Integration of key variables and indicators representing economic, environmental, social, and cultural dimensions of sustainability related to the As6 (Attractions, Activities, Accessibilities, Amenities, Ancillary, Authority) indicators of STD. Establishing appropriate and effective variables to manage certain tourist destinations, impact, and contribution of tourism to sustainable tourism development. The results of previous research have contributed to research on sustainable tourism indicators by developing an indicator framework (Mostafa et al., 2020b; Rasoolimanesh, 2017). This research is a form of effort to operationalize the concept of tourism sustainable development which has led to the development of several indicators in the hope of measuring the dimensions of sustainable tourism development, especially in tourism sustainable development in small island destinations. Several previous studies from SLR show the various

JMET Vol. 2, No 2 (July 2024)

positive and negative impacts of tourism on sustainable development. This concept proposes that a sustainable society must have a full goal of measurable environmental, economic, and social impacts. The tourism industry gets attention when it is supported by the idea that tourism development will be a solution for local progress.

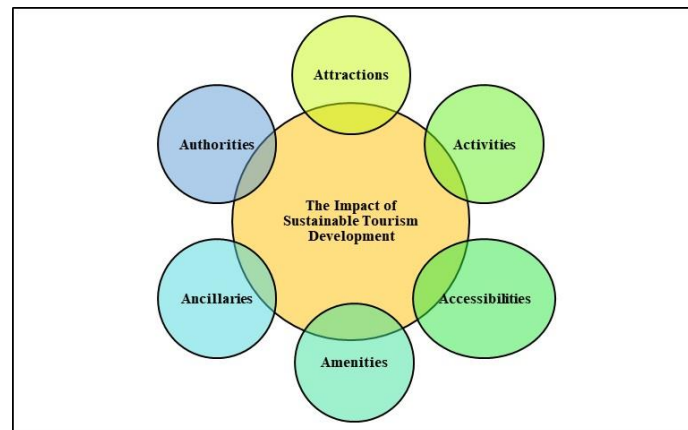


Figure 1: The diagram of conceptual framework analysis of the STD impact using As6 variables

Article in the Literature Review

The schema of systematic literature review As6 (Attractions, Activities, Accessibilities, Amenities, Ancillary, Authority) at small island destination in context of tourism sustainable development. Review of existing literature on the point of view the indicators of As6 (Attractions, Activities, Accessibilities, Amenities, Ancillary, Authority) related to the economic, social, and environment of tourism sustainable development in positive and or negative impacts in every small island destination area

Attraction

Sustainable tourism development is about respecting and preserving the cultural heritage, traditions, and way of life of local communities. It aims to promote authentic experiences that benefit both visitors and residents, while ensuring that tourism does not lead to the commodification or exploitation of culture. This was emphasized by (Carter et al., 2001) that successful tourist destinations are destinations that have produced industrially managed tourist attraction products and services. Tourist attractions that can be managed as industries and services are divided into several classifications, including: cultural qualities typical of local residents, and can be expressed in the form of (1) physical art, buildings, prehistoric or historical sites or buildings that still exist (e.g; water parks, city parks, green spaces, soccer fields ball or golf); (2) dance and music attraction, (3) culinary arts or traditional food (Buhalis, 2000b; Carter et al., 2001; Currie, 2017; Wahyudin et al., 2019). Thus, tourist attraction products are managed industrially and services, from the unique cultural qualities of the local population and can be expressed in the form of (1) physical art, buildings, prehistoric or historical sites or buildings that still exist (2) dance and music, (3) culinary arts or traditional food found in tourist destination areas can have a positive impact on sustainable tourism development.

The experience of several small island state development (SISD) countries is that sustainable tourism development in small island tourist destinations generally has positive benefits or impacts in the economic dimension, especially with great potential for beautiful natural attractions (Carter et al., 2001; Kurniawan et al., 2016; Pratt, 2015; Wahyudin et al., 2019). The positive impact of attraction variables on sustainable tourism development, previous research has proven that natural attractions are economically cheaper than building artificial attractions. In this case, the attraction variable has worked in an interconnected manner between the economic dimension and the environmental dimension (Brătucu et al., 2017; Carter et al., 2001) in the practical implementation of sustainable tourism development. On the environmental side at Timor-Leste destination like Atauro, Jaco and Timor Island itself, the attraction of tourism are dominant by natural attraction such as beach, marine biodiversity, mountain, various of vegetation and wild bird or wild deer animal (Birkić et al., 2019; Wahyudin et al., 2019). The attraction of natural beauty which are natural tourism assets include climate, natural vegetation and related fauna, mountains, and beaches, so sustainable tourism development must consider preserving these natural attractions, and managing them as assets that are very important for the future of tourism (Carter et al., 2001). The Atauro Island, as one of the marine tourism destinations in Timor-Leste, has a coastal area as a protected area with an area of 50.85 Ha, located in the village of Vila Maumeta (Decree Lei No 5/2016 de 16 de Março about Sistema Nacional de Areas Protegidas) (Silva & Bui, 2021).

The results of previous research conducted by Carter (2011) stated that, in the social dimension of STD in Timor-Leste, especially in tourist destinations Tutuala, this area also includes the Jaco Island destination at Lautem Municipality which has a rich cultural heritage in the form of music and dance, folklore, crafts, tais woven fabric, cultural customs or lifestyle, existing architecture inherited from the Portuguese colonial era. All of tourist attractions are expressions of culture and various other traditions that attract tourists. Several cultural attractions such as the existing Portuguese guest house (*Pousada*) architecture are influenced and modified by colonial history and occupation (Carter et al., 2001). The development, conservation, and preservation of cultural wealth in the Tutuala tourist destination will have a positive impact not only on the social dimension, but simultaneously on the economic and environmental dimensions. Where this culture grows and develops in the daily lives of the Tutuala people themselves, directly or indirectly it has practicing sustainable tourism development behaviours (Carter et al., 2001; Scott, 2012; Wahyudin et al., 2019). Economically, several of the tourist attractions mentioned above are community-based tourism products that require the development of capital-intensive investment and partnerships at all levels. Preserving these natural and cultural tourist attraction assets is very important for the future of tourism in East Timor. From the economic dimension, the tourist attraction in question is built on a small scale including attractions, culinary, traditional gastronomy (Scott et al., 2019), entertainment and tourism/transportation (Carter et al., 2001).

Based on the author's observations in the field from Tutuala, Com to Jaco Island, in general community-based tourist attractions tend to be more guaranteed in sustainable tourism development, because they do what is part of their daily life culture, the food sources that are processed are taken in a limited way from existing nature. around them, culinary attractions are carried out in household businesses on a small scale, sometimes the positive impact is not felt, not very significant, the women weave traditional cloth while maintaining the authenticity of their regional motifs, in certain products they use several colours that come from nature. The results of this observation have been strengthened by previous researchers who stated that have proven that the culinary arts in Timor-

JMET Vol. 2, No 2 (July 2024)

Leste do not attract foreign tourists, although some consider traditional Timor-Leste food to be memorable (Carter et al., 2001; Currie, 2017; Hall, 2001a).

The presentation of arts and culture attractions is more interesting and its quality is important for the local community to improve. Previous research results have proven that culinary arts in Timor-Leste do not attract foreign tourists, even though some consider traditional Timor-Leste food to be memorable. The presentation of arts and culture attractions is more interesting and its quality is important for the local community to improve. The natural tourist attraction in coastal and marine areas on Atauro Island which is famous and attracts many foreign tourists is the rich biodiversity fauna of fish and corals, dolphins and whales (Hall, 2001b; Scott et al., 2019; Wahyudin et al., 2019), and special attraction on interest tourism (Cohen, 2011). The dimension of social and cultural in tourism sustainable development include the indicators: community engagement and benefits, local communities are involved in tourism planning and decision-making processes, as well as the distribution of tourism benefits among community members, cultural preservation, assesses the preservation of cultural heritage sites, traditions, and practices in the face of tourism development, to prevent cultural commodification and exploitation.

Timor-Leste can seek to attract visitors who are looking for “adventure experiences and ecotourism attractions, because Timor-Leste has several tourist destinations that are well known among international and domestic tourists such as Jaco Island with Tutuala Beach, and the nearby forest, Let Clere River Reserve, Tilomar Nature Reserve, and Lore Nature Reserve; on Atauro Island, beach tourism and hot springs and the sea which is the migration route for whales, in inland areas there is the Manucoco nature reserve; In Dili there are several beach tourist destinations such as Tasi Tolu, Cristo Rei beach; in Manatuto there is Behau beach in Manatuto, pilgrimage tourism in Soibada; in Liquica which is famous for its rocky beaches, coral reefs, and other surface and underwater features (Ministry of Economy and Development RDTL, 2012). Previous experts and researchers stated that in the economic dimension of sustainable tourist development, that attractions are classified based on market segments or types of tourists who come to visit the destination include: (1) ecotourism, (2) shopper groups, (3) family groups (Carter et al., 2001) (4) certain religious pilgrimage groups (Harnadi, 2016; Meimand et al., 2017).

The wealth of tourism attractions in the form culture of pre-historic heritage in Tutuala and its surroundings. According to the results of previous research in the Tutuala tourist destination, there is evidence from prehistoric times about the mobility of groups (clans) of the population at that time in the form of former walled and open settlement sites (*lata*), caves (*veraka*) occupied by ancestral figures, and shelters. stones and caves used in prehistoric times and during the Japanese and Indonesian occupation. Several former settlements were also found on Jaco Island (*Totina*). *Lata* and other types of sites became the focus of ritual and work for dispersed kin groups who exploited the surrounding forest and tended nearby cultivation (nutmeg) gardens. Former walled settlements also have limited ceremonial spaces called *sepu* and ancestral graves (*calu lutur or narunu*), while settlements and caves occupied by Fataluku ancestors contain *tei* guard sites (*lata toton*). As an additional element to the stone walls that apparently served to fortify the *lata*, several species of cactus (*latu*), each with different mosquito repellent properties—were planted along and around the perimeter of the enclosure (McWilliam & Traube, 2011).

Activities

The main tourism activities on these small islands include scuba diving, swimming, snorkelling, swimming, sunbathing, canoeing, sport fishing and surfing, cycling routes around of Island. Regarding the ecological system, tourism activities have a very high negative impact on the environment, reaching 41%, and contribute greatly to changes in the ecological system and ecosystem quality (Kurniawan et al., 2019), The same tourist activity can also be carried out by tourists who come to visit Atauro Island, Jaco Island, Cristo and Tasi tolu beach at Dili, and Behau beach in Manatuto (Currie, 2017; Klinken & Williams, 2016a; Silva & Bui, 2021; Wahyudin et al., 2019). Sustainable tourism development on small islands such as in Atauro or Jaco Island is not only successful with the presence of beautiful coastal attractions or the beauty of marine biodiversity, something that cannot be denied is the tourist activities carried out by tourists when they are at a tourist destination which gives value to a destination. it can be developed and tourism activities carried out by tourists and daily activities for tourism services by local residents will ensure the sustainability of tourism itself (Carter et al., 2001; Tompkins et al., 2017; Wahyudin et al., 2019).

Previous research conducted by (Kurniawan et al., 2019) on the small island of Gili Terawangan in NTB Indonesia, stated that when tourism activities in small island tourist destinations exceed the carrying capacity of the island, including intensive development of tourism facilities, this will increase the visitor population, the urbanization process is in line with increasing needs. Regarding space, this situation can change the landscape quickly, decreasing sea water quality, damaging seagrass beds, coral reefs and the availability of fresh water and land for settlement area (Tompkins et al., 2017). Sustainable tourism development must pay attention to managing conditions and reducing negative impacts on the environment as much as possible. Tourist areas must be managed by utilizing carrying capacity in calculating the number of visitors and tourist activities they carry out. The development of small island coastal tourism is very dependent on sustainable marine development (Buhalis, 2023a), for example, tourist activities of interacting more closely with wildlife through snorkelling and diving, whale/dolphin watching, and fishing are popular tourist activities provided by many destinations, on the other hand, there are many tourist trips for snorkelling, diving, or watching whales and dolphins. involving ferries and speedboats to offer experiences at sea. Based on observations in the field, researchers saw that tourist activities and accessibility like this also took place in the coastal areas around Atauro Island and Jaco Island. Thus, the tourism industry, which includes rapidly growing activities and accessibility, also causes damage to the sea (e.g. damage to wildlife/habitats and loss of biodiversity), some of which is irreparable and permanent (Buhalis et al., 2023b; Carter et al., 2001; Wahyudin et al., 2019).

The Atauro, Jaco, and some areas of Timor Island like Behau beach in Manatuto, are growing as coastal and maritime tourism destinations, where guests can go on as many adventures' activities such as diving, as well as some cycling routes around of small island (Currie, 2017; Klinken & Williams, 2016b; Wahyudin et al., 2019). Continuous visits by tourists who come to small island destinations with the intention of carrying out tourist activities can be done if there are still clean beaches, sand, and seas. The process of building sustainable tourism not only involves tourist activities carried out by visitors but is also supported by residents who serve various needs of these tourists, including working as tour guide, snorkeller /guide for snorkelling or diving. They also sell local handicrafts, creating local market with those activities boat services (Government of RDTL, 2016; Ministry of Economy and Development RDTL, 2012), several diving companies rent equipment and offer training, guided dives and boat trips to Atauro island (Klinken & Williams,

JMET Vol. 2, No 2 (July 2024)

2016a; Wahyudin et al., 2019). They promote conservation/management of the national park, and everything is managed in a cooperative way (Government of RDTL, 2016; Ministry of Economy and Development RDTL, 2012). The results of previous research regarding accessibility from the main island of Timor to the island of Atauro and Jaco island or vice versa in carrying out marine tourism activities, have experienced difficulties and limitations in arranging tourist trips by boat, when leaving and when returning to land at the agreed time, p. This is due to sea conditions with waves that are too high to pass through the Ombai Strait, or Jaco Strait (Klinken & Williams, 2016a; Wahyudin et al., 2019).

Accessibilities

Timor Leste as a country with small island characteristics, development in the tourism sector is dominated by coastal and marine tourist destinations, especially on Atauro Island, Jaco Island and several beaches with natural beauty and rich diversity of mangroves and coral. The annual report from the Statistics head office (2019) has proven that Timor-Leste has experienced the highest increase which affects the speed of development in the information and communication sector reaching 33,3% (Statistics, 2019). The successful development of the communications sector will have a positive impact on electronic promotion and accessibility to tourist destinations, which ensures sustainable development in the tourism sector. According to the latest research, it is proven that the Timor-Leste government has invested in infrastructure development including: roads, airports, Tibar Port, and ferry facilities connecting the main island of Timor, with Atauro Island and the Oecussi enclave region (Pinto et al., 2024). With the construction of infrastructure and facilities, it is hoped that the accessibility of human transportation (including tourists), goods and services will be faster, easier and more affordable as a form of government service to public needs.

Previous research from Mbaiwa 2005 has proven that the experience of developing economically and socially sustainable tourist destinations in Botswana's Okavango River Delta, by the CBO Trust, carried out partnerships and joint venture contracts with safari operators, sales of hunting quotas, handicrafts, grassland products, as well as small-scale tourism businesses. The results of these financial profits have been reinvested in the need for accessibility to tourist destinations in the form of transportation, vehicles, and boats (Mbaiwa, 2005a, 2005b). The financial profits that reinvested in developing accessible transportation facilities to this tourist destination are a guarantee for the sustainability of tourism development for the population and the region itself. Sustainable tourism development in Timor-Leste as a small island destination has prioritized infrastructure development to facilitate accessibility of residents, goods, and services between small islands. The development of inter-island accessibility is made easier by the presence of the Dili port, the Pertamina port in Dili specifically for fuel oil; a port in Metinaro Manatuto for popular daily diving and increasing fishing; Atauro port to facilitate tourists visiting the island of Atauro with the extraordinary quality of coral reefs and marine life; port in Com which can be used for fishing businesses and tourist access to Jaco Island (Ministry of Economy and Development RDTL, 2012).

In this way, sustainable tourism development have a positive impact from the development of the latest technology which results in innovation in mega construction for accommodation and tourist facilities, fantastic city parks, convention facilities with various event themes, all of which are built in the city center making it easier to access and comfort for visitors. customers, or visitors who come (Kurniawan et al., 2019). The results of previous research conducted by (Pratt, 2015) has stated that in most SIDS member countries, the transportation sector is a strategic sector for connectivity and

JMET Vol. 2, No 2 (July 2024)

accessibility between islands, this is because the characteristics of SIDS locations are isolated from main markets, the accessibility to the transportation sector is very important for economic development including sustainable tourism development. The positive impact on economic growth is influenced by transportation sector spending which directly revives the growth cycle of the tourism area. The further researcher (Pratt, 2015) has stated that appropriate economic policy and tourism development planning: determining the type of tourism that can be developed to maximize the economic benefits generated by tourism on small islands such as Atauro Island and Jaco Island. To increase value and long-term economic stability, initiatives are needed to create performance-based reward structures for tourism operations, supporting tourism and hospitality education, to foster entrepreneurship and become an entrepreneur by combining technological and marketing knowledge (Pratt, 2015), and establish a series of small-scale tourism projects across the range of accommodation, attractions, cuisine, entertainment, and tours/transport. These form the basis of further development (Carter et al., 2001). The accessibility to the tourism destination, all visitor and local resident need information on day trips, price of ticket, short stay accommodation, local cuisine, entertainment, local events and attractions, including collection of information on local events, attractions, accommodation and entertainment in ones packages (Carter et al., 2001). Furthermore, several accessibility strategies underlying the development of tourism destinations in Kuala Lumpur City designed by the tourism authority DBKL are: tourism marketing and promotion 1); tourism resource development 2); Shopping, dining and entertainment 4) Recreational attractions 5) Health and education 6) Tourism facilities and infrastructure 7) Tourism support services and facilities (Anuar et al., 2013a).

Amenities (include all accommodation that available)

To reduce the negative impacts as small as possible in the process of sustainable tourism development in SIDS countries from the social dimension, stakeholders must pay attention special to community involvement, a dynamic political environment and special interest activities to attract investment in the development of tourist facilities including hotel, accommodation, and restaurant (Nahak et al., 2021; Pratt, 2015). Increase institutional accountability, reduce social problems of corruption and parochialism, apart from that, in the environmental dimension as a small island region, sustainable tourism developers need to consider carrying capacity, land and the availability of fresh water, climate changes (Connell, 2018; Pratt, 2015). These policy challenges in the social and environmental fields are very necessary to meet the needs and ensure the sustainability of island countries themselves (Pratt, 2015). The development of the tourism sector in Timor-Leste is at an early stage characterized by a small number of international tourists and newly developed tourist infrastructure (King et al., 2009); with the main attractions of community-based, environmentally friendly ecotourism (Ministry of Economy and Development RDTL, 2012). However, the problem is that a small number of accommodation facilities are not equipped with adequate toilet and waste processing facilities, or accommodation facilities are not equipped with restaurants, so tourists have to bring their own food (Silva & Bui, 2021). The development of the tourism sector in Timor-Leste is still at an early stage of development characterized by a small number of international tourists and newly developed tourism infrastructure. In 2005 the European Commission helped the government of Timor-Leste to fund and start the construction of environmentally friendly accommodation infrastructure (traditional house huts) at the Eco-tourism destination in Tutuala, development of community-based tourism, building trekking in the mangrove forests of Jaco Island, local residents

JMET Vol. 2, No 2 (July 2024)

creating a market local with activities selling local handicrafts. The development of environmentally friendly accommodation infrastructure (traditional house huts) in the Eco-tourism destination in Tutuala has had a positive impact on the economy of the Tutuala community with an average income of \$50,000 per year (Ministry of Economy and Development RDTL, 2012).

In developing tourist destinations (including small island tourist destinations), accommodation facilities are complete with restaurant, catering, retail, tour guide and other tourist services. This accommodation facility is also closely related to accessibility facilities which provide convenience in comfortable transportation connections with major cities throughout the world, smooth connectivity (including the availability and availability of tour packages, tour travel), management of tourist destinations, and the provision of adequate business-related facilities. Apart from that, complete tourist destination areas also provide various public goods (such as natural landscapes, views, seas, lakes, socio-cultural environments, atmosphere, etc.) (Buhalis, 2004b). Despite the completeness of accommodation facilities and accessibility, due to the characteristics of this small island nation: its small size; lack of resources; remoteness; and environmental vulnerability, the multiplication of tourism income for the local economy tends to be smaller. For every tourist dollar spent in these island countries, on average only \$0.69 stays in the local economy: for example for American Samoa, the cost is only \$0.44, for the island of Niue \$0.35, for Vanuatu 0.56 (Pratt, 2015)

In sustainable tourism development on small island, it is very necessary to consider; the proportion of tourism accommodation areas, the proportion of residential areas, and marine tourism activities carried out as indicators of spatial aspects and the value of the ecological system. Previous research conducted by (Kurniawan et al., 2019) has proven that guest house development is a very feasible and sustainable method for accommodating tourists compared to hotel development, because hotel accommodation facilities place greater ecological pressure and island vulnerability compared to guest houses. Increasing land conversion is a solution to reduce pressure due to increasing residential areas and tourist accommodation, coastal erosion, decreasing the quality of coral reef ecosystems, shallow groundwater levels and changing brackish water to salt water (Kurniawan et al., 2019).

Ancillary

The occurrence of negative impacts in the process of sustainable tourism development in SIDS countries from the economic dimension is a lack of investment, in general and especially in facilities, social problems of corruption and parochialism, lack of institutional accountability and failure in planning and implementing policies, thereby reducing the positive impacts resulting from tourism potential to benefit small islands. Policy challenges in the field of economics and management of tourist destination areas are very necessary to meet the needs and ensure the sustainability of island countries themselves (Pratt, 2015). Positive economic, social, and environmental relations between urban, peri-urban and rural areas by strengthening national and regional development planning, especially in the implementation of SDG 11 "is to encourage the creation of cities and human settlements that are inclusive, safe, resilient and sustainable" can also implemented in ancillary indicators of tourism development. In this case, tourism activities cause various environmental, socio-cultural, and economic impacts on destination communities. Although these impacts are often considered negative and damaging to tourist destinations, the positive impacts should not be ignored (Buhalis et al., 2023c).

The development of new technologies has resulted in innovations in the construction of recreational facilities including the development of year-round climate-controlled water park recreation complexes, timeshare hotel and condominium projects, mega and fantasy theme parks and events, convention facilities built near clusters of hotels and trade city centres, service complexes independent, and real estate development combined with recreation facilities with a view to attracting customers and tourists (Kachniewska, 2014a). Previous studies have explored the positive and negative impacts of local residents' perceptions of the development of tourism facilities. The construction and development of tourism facilities has had a positive impact on the lives of local communities; providing increased income, employment opportunities, increased living standards, improved public infrastructure, as well as the promotion and preservation of local culture (Jaafar, 2016). The trend of increasing awareness in the hospitality industry of its interdependence with other components of the tourism market, including industries such as recreational activities, recreational facilities, the MICE industry, and new technologies, as well as academics, centres and consulting companies (Kachniewska, 2014b). Other research also states that the development of facilities and the availability of recreation have provided several positive socio-cultural impacts, including: improving the quality of life, improving the quality of community social services such as fire and police protection, increasing cultural understanding, preserving cultural heritage and increasing cultural exchange (Bello et al., 2017).

In the environmental dimension, the development and construction of recreation and entertainment facilities which are man-made attractions or attractions which are non-natural in nature can have a negative impact on the environment, for example restoration activities for traditional houses which are diversified as recreational facilities, however to reduce the negative impact is to use alternative options for tourists can shop for souvenirs, eat together and interact between tourist and the residents of the traditional house by eating typical of the traditional house in question (Muresan et al., 2016; Wahyudin et al., 2019). The results of previous research conducted by (Suess et al., 2018), have proven that the experience in America in facing an increasing aging population and the cost of health services, quality holistic health care by the private sector has resulted in America becoming an attractive health tourism destination for many tourists visit. The ancillary measure by quality of health services and facilities has a positive impact on changing the quality of life of local residents, while increasing the possibility of visits by domestic and international tourists for the same purpose. Diversifying medical tourism as an important industry to improve the economy, tax revenues, create jobs and the local health service system as well as tourists has multiple positive impacts. The previous research using a qualitative approach conducted by (Pyke et al., 2016) has results a produced a concept which emphasizes that health facilities and services are an inseparable part of tourism for the welfare of local residents and tourists who come to visit tourist destinations. This research has also produced a public health model for local residents that is applied in the tourism context and has identified potential, supporting and inhibiting factors.

Improving recreation facilities and infrastructure has a positive impact from an environmental perspective because various tourism facilities are related to tourism activities, increasing awareness of the protection of heritage resources, improving local recreational facilities and resources. However, the increase in recreational facilities has had a negative impact on the environment; creating more waste and pollution, causing discomfort and destroying the local community's way of life (Chen & Chen, 2010). Ancillary variables can be seen from the availability of information and communication technology facilities in a tourist area, because the initiative community tourism (ICT)

facilities encourage intelligent acceleration of interactivity between environments. An emerging trend in tourism is Smart Tourism, which can help destinations collect and analyze data taken from various sources to maximize destination competitiveness and improve tourist experience, promotion and marketing by emphasizing sustainable tourism development. Researchers (Buhalis, 2020) have stated that the tourism industry in the future will be able to link tourism technology with sustainability in achieving SDG 9 (Buhalis et al., 2023c).

In recent decades, many small islands have experienced major changes in settlement patterns, socioeconomic conditions, and the environment due to climate change; extratropical cyclones (ETC) cause huge deep sea waves of extraordinary size, have a negative impact in the form of major damage to the coasts of small islands, coastal erosion has become widespread, sea flooding and inundation have a negative impact on settlements, utilities, infrastructure, tourist facilities, damage to transportation facilities (roads, ports, airports), damage to public facilities (water supply, energy generation), damage to health and safety infrastructure, damage to cultural assets. Negative impacts and natural damage can be reduced by building engineering structures such as soil nails, gabion baskets (i.e. cages filled with stones), retaining walls and engineered drainage systems, engineering principles to reduce damage to settlements due to storms. Although not all permanent structural and engineering techniques along the coastline can reduce negative impacts or prevent coastal erosion, collective work is also needed to overcome the impacts of climate change on small islands. Although traditional settlements on the high islands of the Pacific were often located inland, the move to coastal locations was encouraged by colonial and religious authorities and more recently through the development of tourism (Tompkins et al., 2017). Previous research related to negative impact on environmental and biological diversity in tourism destination development may include: use of land and resources for accommodation, tourism ancillary facilities and other infrastructure provision, including road networks, airports and seaports, extraction and use of building materials (e.g., use of sand from beaches, reef limestone and mangrove wood, damage to or destruction of ecosystems and habitats, including deforestation, draining of wetlands, and intensified or unsustainable use of land (Gebhard et al., 2007)

Building new infrastructure or renovating existing infrastructure, including transportation and telecommunications infrastructure for effective accessibility functions, accommodation facilities aim to increase the competitiveness of destinations and the tourism industry. In this case, the tourism industry in the future needs to focus more on sustainable tourism facilities and infrastructure that enable access and have a positive impact on overall use, especially by tourists with disabilities, as well as disadvantaged and vulnerable groups, such as the elderly, children and or pregnant women (Buhalis et al., 2023c)

Authority

Implementation of infrastructure program the construction of accommodation environment friendly (traditional house huts) in the Eco-tourism destination in Tutuala, funded by the European Commission, in its implementation the Timor-Leste government has been assisted by the NGO Haburas, Local Authorities at the municipal level, together with the local community (Ministry of Economy and Development RDTL, 2012). It appears that the involvement of public authorities, NGOs and local communities has had a positive impact on the continuity of sustainable tourism development, especially in ensuring the availability of accommodation for visiting tourists. To ensure the sustainability of tourism development, authority, stakeholders, including academics, industry

JMET Vol. 2, No 2 (July 2024)

players, destination residents, and consumers or tourists must apply smart sustainable tourism development strategies. Manage tourist destinations with marketing knowledge based on information, tourism marketing promotion, by adhering to ethical principles and ensuring the welfare of all parties involved in tourism transformation, supporting sustainable development and inclusive local communities (Buhalis et al., 2023b).

Learning from previous research conducted by Kurniawan on the small island of Gili Terawangan in NTB Indonesia, that when stakeholders in the island's tourist destination in development planning did not consider to the increase in population (resident local residents and/or visitors) whose numbers exceeded capacity limits. Also, the negative impact from the environmental dimension loss of renewable resources, the rate of ecosystem degradation, the environmental impact of tourism activities, the rate of reuse/recycling, the health of the human population, and the loss of non-renewable resources. This is because coastal and marine tourism is in coastal and marine ecosystems which are interconnected and have complex interactions (Kurniawan et al., 2019). Previous research by (Buhalis et al., 2023b) has led to the idea that the Destination Management Organizations (DMOs), which are controlled by stakeholders, must pay attention to the needs of disadvantaged (poor) and marginalized communities and involve them in tourism activities, because tourism activities are activities for everyone, inclusive, which promote accessibility, participation for all members of society.

Solutions to overcome the negative impacts of climate change in small island tourist destinations must pay attention to the relevance and application of community-based adaptation (CBA) principles in island communities to facilitate adaptation planning and implementation and to overcome rural poverty in resource-dependent communities. CBA research focuses on empowerment that helps communities to help themselves, through monitoring marine catches, selecting local priorities and building local knowledge and capacity, on more effective management of local water resources, through increasing knowledge capacity on climate change; and the establishment of mechanisms to facilitate greater access to technical and financial resources from outside the community, mitigation options that facilitate adaptation; policy decisions that combine adaptation and mitigation impacts applied to coastal forestry, energy supply and tourism (Tompkins et al., 2017). Learn from previous research conducted by Anuar., et al., (2013) in Malaysia has proven that the Kuala Lumpur Tourism Policy by the Kuala Lumpur Airport Council (DBKL) as a regional authority, is to accelerate the development of sustainable tourism, develop products and innovative tourism services. DBKL guarantees the comfort, safety and welfare of tourists, encourages marketing and promotional activities, focuses on developing "Malaysia My Second Home" by developing new products including ecotourism, agrotourism, cultural heritage tourism, meetings and exhibitions, sports and recreation tourism, educational tourism with the aim of improve overall quality of life. Creating garden city facilities (ancillary) that are sensitive to nature and in accordance with Malaysia's location in a tropical region, as well as infrastructure facilities related to quality accommodation (Anuar et al., 2013b).

Destination management organizations (DMO) can be qualified by government intervention through public bodies to protect natural resources and cultural resources in tourist destination areas with the aim of supporting the local economy and community welfare and ensuring prosperity and contributing to sustainable development. The quality of institutions in tourist destination areas is important because it can influence tourist flows and can play an important role in economic sustainability in countries rich in natural resources (small islands). Poor governance of small island

DMOs and political risks harm tourism activities. Tour operators and service providers may stop their activities in the event of political instability that hinders the development of the tourism industry due to lack of security and peace. Institutional quality indicates the quality of institutions that regulate laws, government property rights, constitutions, and traditions that are important for personal relationships between stakeholders (Ifikhar et al., 2022). Low involvement of tourism stakeholders in long-term tourism development efforts, especially to address problems related to decision making and action on climate change with the aim of protecting society and the environment, is very urgent for the future vision of the tourism industry. So in the accessibility variable, policies are needed to accelerate the transition towards low-carbon and circular business solutions; to create new opportunities in energy generation and halve transport emissions by 2030; and to integrate nature-based solutions into their operations (Buhalis et al., 2023c)

Result and Discussion

Previous research conducted (Gebhard et al., 2007) has provided confidence in this research that the attraction variables of natural beauty and biodiversity of biological resources have a positive impact on the economic sector including: creation of income for local communities and maintenance of natural resources in tourist destination areas itself (1) ; funding infrastructure development (2); providing employment opportunities and services in the tourism sector (3); provide direct benefits to develop other natural product related products locally and regionally for the development or maintenance of sustainable practices. On the other hand, the negative side of all this is that when there is a change in the flow of tourists, it can result in residents who have been working in the tourism sector losing their jobs, suddenly losing their source of income and this can cause an economic crisis. Based on a literature review of previous research results, it appears that the attraction with accessibilities, and accommodation variables, the attraction variable is closely related to the authority variable as follows: The Timor-Leste government, through the General Director at the Ministry of Tourism, encourages the exploration of tourist attractions to have the lowest possible negative impact, without degrading natural and cultural wealth 1); The challenges to tourism in Timor-Leste are numerous and include cost, accessibility, limited infrastructure and hospitality. One of the characteristics of small island vulnerability is dependence on imported goods, so food and accommodation costs in Timor-Leste are expensive, however many tourists, staff and international advisors have to pay higher prices (Currie, 2017). Furthermore, researcher (Buhalis et al., 2023b), stated that tourist activities that are water sports, such as surfing, yachting and scuba diving, are also one of the main motivations for traveling and attract tourism and because of the natural resources of the sea which are especially clean and clear. The positive impact of tourism and water sports activities is increasing income for regions and residents in tourist destinations, in sustainable tourism development strengthening economic pillars. On the other side of the dimension of developing sustainable tourism, the accessibility indicator, tourism activities consume a large part of energy consumption, so policies and transportation system applications are needed that support environmentally friendly energy consumption. Thus, ecotourism destinations, especially on small islands such as Timor, Atauro and Jacoa, need to adopt renewable energy sources, such as solar panels and parabolic antenna systems, as well as sustainable energy techniques to obtain better effectiveness and increase production applied to the provision of accommodation facilities.

According to the author's observation, although the law on the national territorial protection system (Government of RDTL, 2016) has designated part of Atauro Island as a protected coastal and

JMET Vol. 2, No 2 (July 2024)

marine areas, it is very unfortunate that stakeholders have not included the coastal areas and marine waters of Jaco Island in the law in question. Various research and direct observations in the field of coastal and marine habitats around Jaco Island as a marine tourism destination which is known for having an extraordinary wealth of diverse flora and fauna as tourism attraction, very suitable for management and protection by law, especially on an eco-tourism scale that guarantee the tourism sustainable development process in Timor-Leste. Sustainable tourism development is measured by the availability of accommodation facilities, hotels and lodging as facilities that support tourism activities in each tourist destination. From the economic dimension, the construction of accommodation facilities can provide financial benefits, employment opportunities, a source of income and reduce poverty for local residents. However, in the environmental dimension, the construction of accommodation facilities that are not planned and managed well will have negative impacts, including the processing of food waste, water waste, the need for clean water for accommodation facilities will reduce the quality and availability of fresh water (Buhalis et al., 2023b). Thus, planning for the development and management of accommodation facilities in small island tourist destinations must pay attention to land capacity, increase the efficiency of clean water use, implement integrated water resource management, which is very important to protect and restore water-related ecosystems.

Sustainable tourism respects and preserves the cultural heritage, traditions, and way of life of local communities. It aims to promote authentic experiences that benefit both visitors and residents, while also ensuring that tourism does not lead to the commodification or exploitation of culture. Community involvement support to the local authority apply in sustainable tourism including involves local communities in planning, and decision-making processes and encourages their active participation in tourism development initiatives. The authority is helps to empower communities and ensure that tourism development aligns with their needs and aspirations. Sustainable tourism seeks to raise awareness among tourists, businesses, and local communities about the importance of environmental conservation, cultural preservation, and responsible tourism practices, education and training programs can help to promote sustainable behaviour and practices.

Previous research conducted by various researchers stated that the variables of cultural richness attraction, transportation accessibility, ancillary variables have a positive impact on social life, namely the arrival of tourists (incoming migration) from outside can increase education and empowerment of local residents. The positive impact of the ancillary variable is that the availability of health facilities encourages improvements in the quality and health services not only for tourists but also for local residents. The negative impact on the variables of cultural wealth attractions, social life and transportation accessibility is that the arrival of tourists (incoming migration) from outside can cause social degradation of children and teenagers (for example local prostitution, drug abuse, etc.), degradation of respect for society customs and local customs and cultural values, disintegration of local cultural systems, intergenerational conflict and changes in gender relations, erosion of traditional practices and lifestyles, local communities losing access to their land, resources and sacred cultural sites, which are an integral part of maintaining the system traditional knowledge and traditional lifestyle.

The importance of observing and measuring variable authority in sustainable tourism development is the need for tourism management planning with its positive impact as a tool to achieve results more efficiently and cost-effectively, based on identifying the worst problems, prioritizing work and resolving these problems. Stakeholders make plans to identify and ensure

sustainable tourism management. Protected area managers, local governments and tourism operators are consistent and provide information and communication to managers and the wider community with the aim of ensuring their support and involvement in the process from the start and avoiding possible conflict occurs. The involvement of stakeholders (authorities) in tourism management planning for sustainable tourism development needs to pay attention to; Long term planning for 5 – 10 years (strategic planning) with broad but realistic goals (1); medium-term planning up to 5 years (tactical planning) to define medium-term steps to achieve long-term goals (2); short-term planning for one year (operational planning) includes specific activities necessary to meet medium-term goals (3). Previous research related to negative impacts on the environment and biodiversity in the development of tourism destinations may include: intensive or unsustainable use of land and resources for accommodation, tourism facilities and other infrastructure provision, including road networks, airports and ports for ancillaries; extraction and use of building materials (e.g. use of sand from beaches, coral limestone, and mangrove wood, damage or destruction of ecosystems and habitats, including deforestation, draining of wetlands) to enhance man-made attractions. This negative impact can also arise from culinary tourism attractions through excessive or unsustainable consumption of flora and fauna by tourists (for example, through picking plants; or purchasing souvenirs made from wild animals, especially endangered species such as coral and turtle shells; or through unregulated hunting, shooting and fishing; groundwater extraction, intensive water demand from the tourism sector results in decreased water quality (freshwater, coastal waters) and waste pollution. Research proves that noise can disrupt the lives of wild species, disrupting normal behavior and potentially affecting mortality and reproductive success (Gebhard, Meyer, & Roth, 2007). Based on observations of small island tourist destinations, especially in the waters of Atauro Island, the noise of ship engines can disrupt whale migration activities.

Infrastructure and hotel accommodation facilities that support tourism activities can be used to support food production, processing, and distribution, generate tax revenues from tourism that can be reinvested in health services and waste processing, and can contribute to the quality of health of tourists and the entire local community. They experience economic and cultural benefits from their participation in tourism, helping to improve their physical and mental well-being and health. From tourism investment projects (e.g. hotels, restaurants, and tourist attractions) local residents can achieve the availability and sustainable management of water and sanitation, water-related utilities (e.g. wells, tankers, water lines, electric pumps), water access and security, as well as cleanliness and sanitation. for tourists, employees, and local residents, increasing water use efficiency, reducing related pollution and increasing technological efficiency. The positive impact of providing hotel accommodation and home stays for tourists is that it opens employment and income opportunities because accommodation owners also involve local guides and restaurant owners in providing travel guides and food for tourists. Based on the results of research conducted by (Silva & Bui, 2021), it is stated that the lack of tourist guide associations and related training, resulting in a lack of guiding skills, a lack of events that become tourist attractions, the number of regular guests per week throughout the year is still quite low, low government participation in various planning implementations. and sustainable tourism programs, local communities have not been included in discussions on tourism development management and planning, only allowed to attend meetings as observers, and there is still no community support for developing tourism. In this way, the positive impact of the development and provision of accommodation facilities for tourists on society is no less significant. Social tourism participation provides opportunities to improve well-being, normal

JMET Vol. 2, No 2 (July 2024)

functioning, and social inclusion suggesting that social tourism can be a useful warfare model and policy tool for governments to reduce inequality and improve social welfare. inclusion. If not managed well, tourism may exacerbate disparities between countries, not reduce them. Rethinking tourism development must create a more sustainable way into the future. Tourism must be socialized and responsible for the social and ecological boundaries of the planet. To reduce disparities within and between countries by paying attention to social, economic, environmental, and political justice in tourism.

Conclusion

Summary of the study's findings and their significance impact values for promoting small island destination through tourism sustainable development and then As6 variables.

1. The sustainable tourism development needs the number of islands or data series used in each As6 (Attractions, Activities, Accessibilities, Amenities, Ancillary, Authority) on each indicator will improve the quality of the results of the analysis for the next stage, small islands have different economic, social, and ecological characteristics depending on the geomorphological, carrying capacity, and location aspects of the island.
2. The current research findings have practical implications for policy makers and institutions to refer to the planning on short and long-term, contribution and encourage the growth of sustainable tourism development in balanced economic, social, and environmental dimensions, by increasing positive impacts and reducing negative impacts as low as possible on all variables As6 (Attractions, Activities, Accessibilities, Amenities, Ancillary, Authority) on each indicator.
3. Sustainable tourism development requires a strategic approach to implementing multi-sectoral and cross-sectoral measures, as well as facilitating adaptation in a way that is fairer (for tourists, migrants, and local residents), integrated and sustainable. In terms of efficient use of fresh water, recycling of waste water, conversion to non-fossil fuel-based energy, for created tourism activities, accommodation and transportation facilities that offer additional benefits with or without the threat of climate change for small island tourist destinations such as Atauro and Jaco islands, and the Timor as main island itself.
4. Sustainable tourism development with all its impacts describes the complex interaction between human and environmental, social, and economic systems from an AS6 perspective. Sustainable tourism aims to achieve ecological sustainability, economic viability, and social equality in small island tourist destinations through seven important indicators including: job creation (1), business continuity (2), improving quality of life (3), maintaining water quality (4), waste management (5), energy conservation or renewable energy applications (6), and maintaining the integrity of society and stakeholders (7).

Recommendation

The results of SLR research in the form of a conceptual analytical framework need to be continued to ensure that each variable from As6 has various indicators that are suitable for application with a quantitative, qualitative or mix-method approach in sustainable tourism development in small island tourist destinations, especially in Timor-Leste.

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