

A conceptual framework for environmental governance networks: an analysis of small island destinations in Indonesia and the Coral Triangle

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Abstract

The natural environment plays a major role in determining destination attractiveness in many small island destinations. This is particularly the case in settings which are characterised by limited natural resources and environmental carrying capacity. Some small island destinations in developing countries have adopted collaborative environmental governance networks as a means of advancing environmental protection. However, little is known about how such networks operate. Drawing upon two Indonesian examples within the area known as the “Coral Triangle”, this paper explains how environmental governance networks operate in the context of tourism development on small islands in developing country settings. The analysis is approached in three stages: Firstly, by reviewing the literature relevant to environmental governance networks and by proposing an applicable analytical framework. Secondly, two collaborative governance network case studies are examined. Thirdly, a revised conceptual framework is proposed to explain the operations, characteristics and effectiveness of environmental governance networks in the two case study settings. The frameworks from this paper can serve as a basis for further research into the operation of other environmental governance networks.

Keywords: developing countries, environmental protection, governance network, Indonesia, small island tourism.



1 Introduction

To establish and maintain competitive advantage, small island tourism destinations commonly place greatest emphasis on attractions based around the natural environment. Such destinations are characterised by limited natural resources and associated visitor carrying capacity. These circumstances are often accompanied by uncontrolled tourism development, environmental degradation, and diminishing destination attractiveness (Weaver [1], Williams and Ponsford [2]). Such conditions are particularly prevalent in small island developing country destinations where local government capacity is lacking, resident populations are poorly educated, and environmental awareness is limited (Apostolopoulos and Gayle [3]). As a result, environmental protection laws and regulations may be ineffective due to weak enforcement and resistance from residents, tourists and tourism businesses.

Researchers have made progressively increasing use of the tourism systems perspective to investigate and implement sustainable tourism practices, in acknowledgement of the need for “joint management” between relevant stakeholders such as “tourism, local government, ecosystem ecologists, NGOs and local residents.” (Farrell and Twining-Ward [4:117]). Soisalon-Soininen and Lindroth [5] have endorsed this shift in approach, noting the importance of stakeholder collaboration within tourism networks. Williams and Ponsford [2] have argued that concerted and collective action by tourism stakeholders is needed if the relationship between tourism and the environment is to be managed effectively. Environmental conservation is a major task in small developing country island tourism destinations and requires stakeholder collaboration. This is likely to involve the creation of networks and of a shared understanding which will enhance collaboration and shape environmental conservation practices (Svensson *et al.* [6], Ladkin and Bertramini [7]). Some small developing country island destinations have developed collaborative environmental governance networks whereby island stakeholders pool their resources for mutual benefit (Goreau [8], Hidayat [9], Mitchell and Reid [10]).

Most of the examinations of environmental governance networks within the literature have been theory based, prompting Erkus-Ozturk and Eradyn [11:123] to note that “case studies that define them are limited”. To develop a deeper understanding of how effective environmental conservation can accompany tourism development, further study is needed on the application of environmental governance network theories in small island tourism destinations. This paper adopts a staged approach to these issues. *Firstly*, a literature review is undertaken in fields relevant to environmental governance networks (EGNs). The review concludes by considering a conceptual framework suitable for application in small island destination settings. *Secondly*, the application of EGNs in small island destinations is discussed focusing on Gili Trawangan Island and Nusa Lembongan Island in Indonesia within the broader Coral Triangle area. *Thirdly*, the paper proposes a framework to explain the operation, characteristics and effectiveness of EGNs in the two case study settings, with a preliminary analysis of the characteristics of each of the EGNs.



2 Literature review

2.1 Governance and networks

The term governance has been defined as “activities of social, political, and administrative actors that can be seen as purposeful efforts to guide, steer, control, or manage societies” (Kooiman [12:2]). Governance provides a means of controlling the dynamics of a society and the concept has particular applicability to tourism because of its concern with social, economic, cultural and environmental consequences. The term is closely associated with the concept of government in its capacity as a form of political unit which exercises authority (Cooper and Hall [13]). Governance may also be manifest thorough a network (Svensson *et al.* [6]). Network governance has been defined as a “select, persistent, and structured set of autonomous firms (as well as non profit agencies) engaged in creating products or services based on implicit and open ended contracts to adapt to environmental contingencies and to coordinate and safeguard exchanges” (Jones *et al.* [14]:194). The concept is broader than government, may occur at different levels from local to global, and may involve government branches or agencies, as well as private firms, local communities and even volunteer groups where collective interests are acknowledged and collaborative actions are performed (Cooper and Hall [13]). The concept of governance is particularly applicable in the case of small island destinations within developing countries because local governments in such settings often lack relevant management competencies (Dahles and Bras [15]). Even where local governments have a genuine interest in addressing the challenges, they rarely have sufficient resources to reach solutions (Setiawati [16]). Collaborative action to provide network governance is helpful as a way of dealing with such circumstances (Cooper and Hall [13]).

According to the Competing Values Framework (Cameron and Quinn [17]), collaborative networks can be challenging because tensions may arise as a result of the various agendas that are brought by the different stakeholder groups. Provan and Kenis [18] noted three potential tensions: efficiency versus inclusiveness, namely a tension between “the need for administrative efficiency in network governance and the need for member involvement, through inclusive decision making” (Provan and Kenis [18:242]); internal versus external legitimacy, which is the tension that occurs when “building external legitimacy involves actions and activities beneficial to the overall network, but not to some individual participants or the internal needs of the network itself” (Provan and Kenis [18:242]); and flexibility versus stability, which is the tension that occurs when a network wishes to balance short-term goals with long-term foci (Provan and Kenis [18]). Such tensions influence power relations within the decision-making process, and exacerbate any differences between the espoused values of the network and its practices.

Provan and Kenis [18] have proposed three alternative approaches to network governance. These are respectively: Centralised Lead Organisation-Governed Networks, where a lead organisation assumes a coordinating role;

Participant-Governed Networks, which are more decentralised and less formal with network member decision making; and Network Administrative Organisations where a dedicated entity is established with a view to coordinating the activities. Beaumont and Dredge [19] proposed three alternative approaches in the case of tourism, namely a council-led governance network (where a council creates and coordinates the network), a participant-led governance network (where the network is created and coordinated by community members), and a Local Tourism Organisation-led governance network (LTO) where a separate tourism organisation is established for coordination purposes.

The various types of network display distinct characteristics. One way of examining the differences between the types of network is to consider their primary characteristics. Beaumont and Dredge [19] identified seven such characteristics being: facilitators of the network (the people or institution in charge); the network community (type of communities where the network is located and operated); location of the network (physical areas relevant to the network operations); the focus of network activity (aims and orientation); resourcing (sources of funding, knowledge and manpower), the background of the network facilitator (the nature of the persons or institution in charge); and roles and responsibilities (the main functions of the network).

2.2 Environmental governance networks

Another means of differentiating a network is on the basis of its orientation, one such orientation being an environmental one. In an assessment of environmentally sustainable tourism in Antalya, southern Turkey, Erkus-Ozturk and Eraydin [11] proposed two types of environmental governance network orientations namely: Action-Oriented Networks where the initiatives come from private and/or voluntary institutions within the same area, which are self-regulating with the aim of solving specific issues; and Policy and Planning Networks where the government or public institutions initiate and develop collaboration by coordinating relationships with other stakeholders such as NGOs, local business entities and local communities.

As illustrated in Figure 1, these two networks have different orientations. The policy and planning network has a mandatory dimension, because it is initiated by government or else by another public institution where government is the dominant stakeholder, and the main purpose is to address the need to generate and implement plans. An action oriented network, on the other hand, has a stronger voluntary ethos because it is initiated by private institutions and/or members of the community who collaborate with a view to addressing mutual and specific issues. The main purpose of such networks is to engage in direct action to tackle problems. Erkus-Ozturk and Eraydin [11] recommended further analysis of the comparative effectiveness of EGNs within different settings. Beaumont and Dredge [19] proposed seven parameters which they believe have relevance, because they are determinants of network effectiveness. The parameters are respectively: positive cultures, constructive communication and engaged communities; transparency and accountability; vision and leadership; acceptance of diversity, pursuit of equity and inclusiveness; developing

knowledge, learning and sharing expertise; clear roles and responsibilities of participants; and clear operational structures and processes of the networks (Beaumont and Dredge [19]). Such parameters are an adaptation of Dredge and Pforr's "principles of good governance" (Dredge and Pforr [20:69]). These principles arose from a literature review of the organisational structure and relational characteristics of networks, and from the roles and management of networks in the tourism context (Dredge and Pforr [20]).

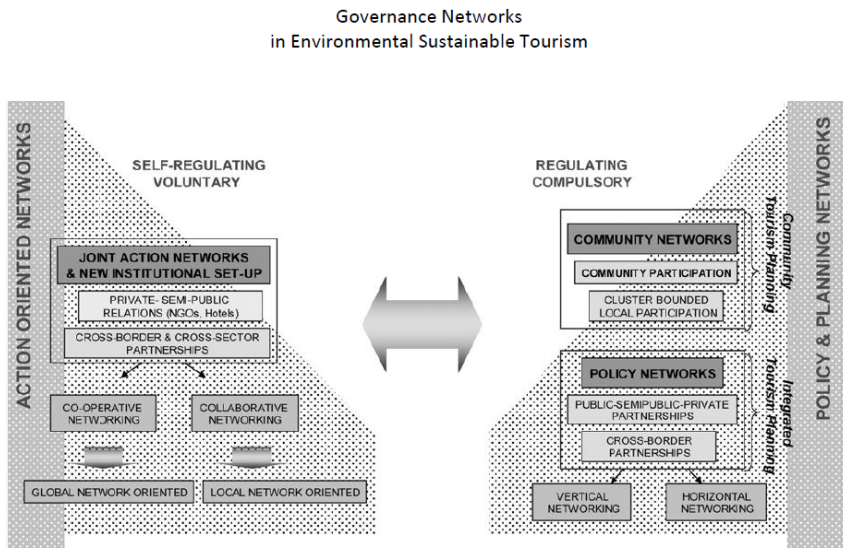


Figure 1: Governance networks in environmental sustainable tourism
Source: Erkus-Ozturk and Eraydin [11:115].

Since governance networks typically involve multiple stakeholders, the aims, efforts, and results of the network should be inclusive of their interests if legitimacy is to be maintained (Provan and Kenis [18]). Taking such interests into account and ensuring coordination will help to achieve inclusivity. This is important because stakeholders have divergent interests and agendas, and may be competitors. On this basis, the success of collaborative EGNs cannot rely exclusively on conserving the physical environment, but also depends on stakeholder interactions and their perceptions of how the EGN operates, of its effectiveness, and of its environmental outcomes.

3 Conceptual framework

Based on the literature review, Environmental Governance Networks (EGNs) may be viewed as organisations involving multiple stakeholders which may be private businesses entities, local residents, government agencies, and/or non-governmental organisations (Cooper and Hall [13], Farrell and Twining-Ward

[4]). As mentioned previously, the literature also indicates that seven parameters of effectiveness may be applied to measure organisational effectiveness (Beaumont and Dredge [19]). Such characteristics include any applicable tensions within EGNs, which are likely to vary in light of the diversity of prospective approaches and orientations (Beaumont and Dredge [19], Provan and Kenis [18]). This implies a need to evaluate the perceptions of stakeholders towards EGN operations, their effectiveness and how the EGN impacts on destination environmental outcomes (Provan and Kenis [18]).

As illustrated in Figure 2, the conceptual framework takes account of these five elements for EGNs in developing country small island destinations. The framework is an adaption of elements of Erkus-Ozturk and Eraydin's [11] classification of governance networks, of Provan and Kenis's [18] stakeholder perceptions of EGNs, and of Beaumont and Dredge's [19] network characteristics, tensions, and parameters of governance network effectiveness.

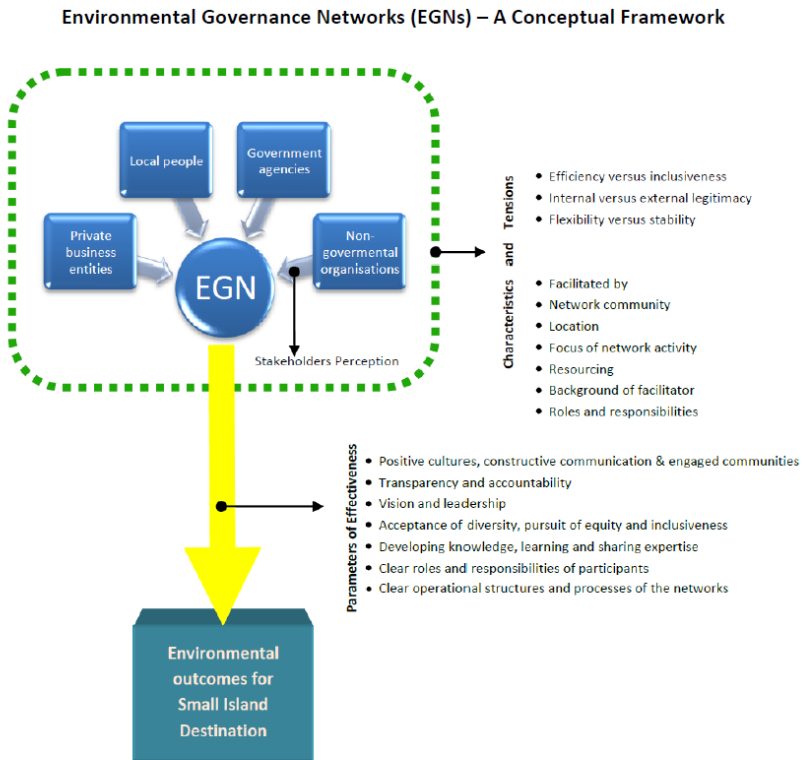


Figure 2: Environmental governance networks (EGNs) – a conceptual framework. Adapted from: Provan and Kenis [18], Beaumont and Dredge [19] and Erkus-Ozturk and Eraydin [11].

As portrayed in the proposed framework, an EGN is considered to be a collaborative organisation which brings together a group of collaborating stakeholders in pursuit of a mutual goal to conserve the environment, while accommodating tourism and other economic activities. Some distinguishing features include the characteristics, tensions, parameters of effectiveness, and stakeholder perceptions as these may be useful for measuring EGN achievements. The framework consists of five key elements, namely:

- EGN characteristics;
- Tensions arising from the agendas of different stakeholder and the dynamics of EGN operations;
- Parameters for measuring EGN effectiveness;
- The impacts of the EGN on destination environmental outcomes; and
- Stakeholder perceptions of the EGN, its operations, effectiveness, and environmental outcomes.

4 Methodology

A case study approach was adopted to examine the application of collaborative environmental governance networks in Gili Trawangan and Nusa Lembongan Islands. A preliminary analysis was undertaken of EGNs in the two islands based on secondary data and information obtained from academic journals, EGN reports, media releases and websites, and relevant newspaper articles. The information was subsequently evaluated to develop a revised conceptual framework that is applicable to the EGNs in the two island destinations. A preliminary analysis focuses on identifying the characteristics of the respective EGNs.

5 Discussion

5.1 Application in small island destinations

The circumstances confronting Indonesia as a developing country consisting of 17,508 islands are particularly relevant to the present investigation. According to a Mintel Country Report, Indonesia is one of the world's most biodiverse nations and is its largest archipelago (Ball [21]). The islands on the eastern part of Indonesia, along with Malaysia, the Philippines, Papua New Guinea, Timor Leste and the Solomon Islands, comprise the Coral Triangle Area which is one of the most significant conservation areas globally (Welly [22]). Many of these islands are heavily reliant on tourism revenues (Dodds *et al.* [23]). However, a combination of inadequate tourism planning, unsustainable tourism practices, destructive fishing methods, and coral bleaching has threatened the sustainability of the marine environment and hence the area's main tourist attractions. The adoption of a collaborative EGN approach has been evident in the cases of Gili Trawangan and Nusa Lembongan Islands to address these threats. The following sections examine the different approaches to collaborative EGNs in these two settings.



5.2 Tourism and environmental governance on Gili Trawangan Island

Located northwest of Lombok and unoccupied until 1976, Gili Trawangan Island is administered under the Lombok Regency, West Nusa Tenggara province and has a landmass of approximately six square kilometres. Following the first reported arrivals in 1981, tourism has progressively emerged as an economic activity. The primary emphasis on younger backpackers, divers, and surfers has led to its reputation as a “party island” (Hitchcock *et al.* [24], Kamsma and Bras [25]). More recent developments have included the establishment of up-scale tourism businesses such as high quality restaurants, hotels and spas. These reflect a trend towards attracting more affluent visitors and to the growth of Gili’s expatriate community (Ver Berkmoes *et al.* [26]). Since the island’s 800 inhabitants are predominantly Moslem, visitors are expected to respect the local traditions and religious beliefs, especially during the fasting month of Ramadhan (Guard [27], Hitchcock *et al.* [24]).

Gili Trawangan Island faces a number of environmental challenges. Waste management and recycling systems are badly needed since garbage in general and plastics in particular are strewn around the island (Dodds *et al.* [23]). Fresh water is scarce and most has to be brought in from Lombok Island (Graci [28]). Many of the coral reefs are also dying as a result of destructive fishing practices, the anchoring of boats on the coral reefs, and the impacts of dive tourism (Robbe [29]). As explained by Graci [28], the development of sustainable tourism has been impeded in Gili Trawangan Island by a combination of financial, social, and educational problems. Many stakeholders are resistant to change because of the costs associated with improved environment management, potential loss of income through restrictions of their activities, and lack of knowledge and education about the impacts of their actions on the environment (Graci [28]). There is an urgent need to build awareness of these issues and to facilitate collaboration between stakeholders so that they may be addressed.

To address these issues the Gili Eco Trust (GET) was established by the island’s expatriate-managed dive shops in 2002 as a not-for-profit initiative, prompted by destruction of the coral reefs due to global warming, untreated waste, uncontrolled tourism activities, and destructive fishing practices (Robbe [29]). The approach involves the collection of an “Eco Tax” by the various dive shops which is levied on divers and snorkelers. The revenue is used by GET to clean up the beaches, pay fishermen to desist from destructive fishing activities around the coral reefs, and rebuild the coral reefs through the Biorock Reef Program (Graci [28]). GET collaborates with the SATGAS – a law enforcement NGO formed by the locals – to undertake island patrols by monitoring fishing practices, protecting the reefs and running the Biorock program (Robbe [29]). In recent years, GET has focussed on waste management and recycling, and on environmental awareness education and training (Guard [27]). The dive shops are the dominant GET stakeholder (Segre [30]). The local government’s limited capacity in relation to tourism management and its minimal involvement in environmental protection has been compounded by the status of West Nusa Tenggara province as one of Indonesia’s poorest.

5.3 Tourism and environmental governance on Nusa Lembongan Island

Nusa Lembongan Island is located southeast of Bali and is under the administration of the Klungkung Regency, Bali province (Welly [22]). The 7,000 inhabitants on the eight square kilometres island are predominantly Hindu (Ver Berkmoes *et al.* [26]). Their cultural practices resemble those prevalent on Bali. There are several *Banjar* (neighbourhoods) with strong social connections to *Mengayah* (working bees) linking the various resident families. The families help each other to maintain their Hindu traditional ceremonies and celebrations in anticipation of later reciprocation. Although the population is significantly higher than is the case on Gili Trawangan Island, 85% of the residents are farmers growing seaweed, and tourism is not the major economic activity (Ver Berkmoes *et al.* [26]). Backpackers started arriving on the island during the 1970s. Though the first guest house was built in 1980, it was not until 1990 that commercial tourism activities commenced with the establishment of pontoons for cruise boats and a village tour (Long and Wall [31]).

The level and type of tourism development is similar to what occurs on Gili Trawangan Island. Both settings are moving away from backpacker style to more up-scale tourism (Ver Berkmoes *et al.* [26]). Nusa Lembongan's coral reefs are deteriorating rapidly, as a consequence of destructive fishing methods, and the overcrowding of boats, pontoons and other tourism activities (Wardany [32]). The marine area is overexploited because of competition between various income generating activities, including seaweed production, aquaculture, capture fisheries, and marine tourism. This over-exploitation has led to decreasing marine biodiversity, to falling catches of fish and seaweed harvests, and to an environment which is less attractive for marine tourism (Welly [22]).

The Nature Conservancy Coral Triangle Centre (TNC-CTC) is an EGN that operates in seven sites around Indonesia (Wardany [32]). One of these includes a group of three small islands south east of Bali Island, made up of Nusa Lembongan, Nusa Ceningan and Nusa Penida. Of these three islands, the former is most relevant as tourism is more developed there than in the other settings. 'The Nature Conservancy', an international NGO, is one of the partners that established the Bali-based TNC-CTC in 2000, (Suriyani [33]). In the case of Nusa Lembongan, TNC-CTC facilitated a collaboration between the local government (Klungkung Regency), central government (Ministry of Marine Affairs and Fisheries), the local NGO (Satya Posana Nusa/SPN), tourism business operators, and local fishermen and farmers (Setiawati [16, 34]). The Centre aims to create a Marine Protected Area (MPA) in order to protect the environment and safeguard coral reefs, fisheries, and food security in the region, whilst accommodating nature-based tourism activities (Welly [22]).

TNC-CTC has formed a community centre for training and advocacy in order to raise environmental awareness. It also conducts research to form strategies and a business plan for the proposed MPA, and facilitates stakeholder collaboration (Wardany [32], Welly [22]). The Nature Conservancy is the dominant stakeholder though national and local governments are actively involved in the network. The active participation of multiple parties is probably attributable to

the larger size and population of Nusa Lembongan Island. As a part of Bali Province, the Klungkung Regency Government is also more conscious of the contribution made by tourism and has substantially greater environmental protection and tourism management capacity than the poorer West Nusa Tenggara province.

5.4 A preliminary analysis of EGNs in Gili Trawangan and Nusa Lembongan islands

The two islands offer an interesting and instructive comparison. Both groupings are located in the Lombok Strait between Bali and Lombok Islands, possess attractive marine areas, have collaborative environmental governance networks, and are attempting to progress from being budget backpacker destinations towards more resort-based style, catering to more affluent visitors (Hitchcock *et al.* [24], Ver Berkmoes *et al.* [26]). The two islands differ in terms of size, demography, cultural practices, local government participation, and prevailing EGNs. The EGNs in the two settings have helped to replenish the marine environment while allowing local fishermen, farmers and tourism businesses to operate sustainably. In the case of Gili Trawangan, GET was instigated by a group of dive businesses and has progressively developed into an EGN involving almost all local businesses, locals, and tourists within the island (Robbe [29]). In Nusa Lembongan, TNC-CTC, in conjunction with local and national governments and the local community network, Satya Posana Nusa (SPN), is creating a marine protected area to protect the environment, whilst allowing the occurrence of nature-based tourism activities (Welly [22]).

Although the two islands are in close proximity and have similar dimensions and physical attributes, the respective EGNs have some distinctive characteristics. GET consists of local business operators and local residents, and local government participation is minimal (Segre [30]). Conversely, TNC-CTC links local community groups, national and local governments, and national and international NGOs (Welly [22]). These have important parallels with the two types of EGN that Erkus-Ozturk and Eraydin [11] proposed, namely: policy and planning networks and action oriented networks. This classification is relevant to the two case study islands because it conveys the different network conditions prevalent in small developing country island destinations.

The action oriented network applies to Gili Trawangan Island where the main stakeholders — tourism business operators, local fishermen and farmers, and local NGOs - have created the self-regulating GET private partnership. This collaborative action occurred voluntarily, based on a collective concern about the wellbeing of the coastal environment generally and of the coral reefs in particular. Local government has a minimal involvement in the network. On the other hand, the policy and planning network applies in the case of Nusa Lembongan Island where The Nature Conservancy—Coral Triangle Centre (TNC-CTC), a public-private partnership, connects local and international NGOs, local and national governments, local fishermen and farmers, and tourism business operators. The network was initiated by the government because of the island's need to regulate and plan tourism development. The network



categorization of the two EGNs complies with the approach adopted in Figure 1 (Erkus-Ozturk and Eraydin [11]) where an action-oriented network is portrayed as being self-regulating and voluntary, whereas a policy and planning network is described as being regulating and compulsory. Based on the prior discussion, the EGN conceptual framework can be applied to both case studies. The revised conceptual framework, proposed in Figure 3, illustrates how the different types of EGNs identified by Erkus-Ozturk and Eraydin [11] are applicable in these two case study destinations. Whilst the EGNs are focused on positive environmental outcomes, as previously discussed there may be a range of social, political, and economic factors which impact on the EGNs' ability to achieve these outcomes.

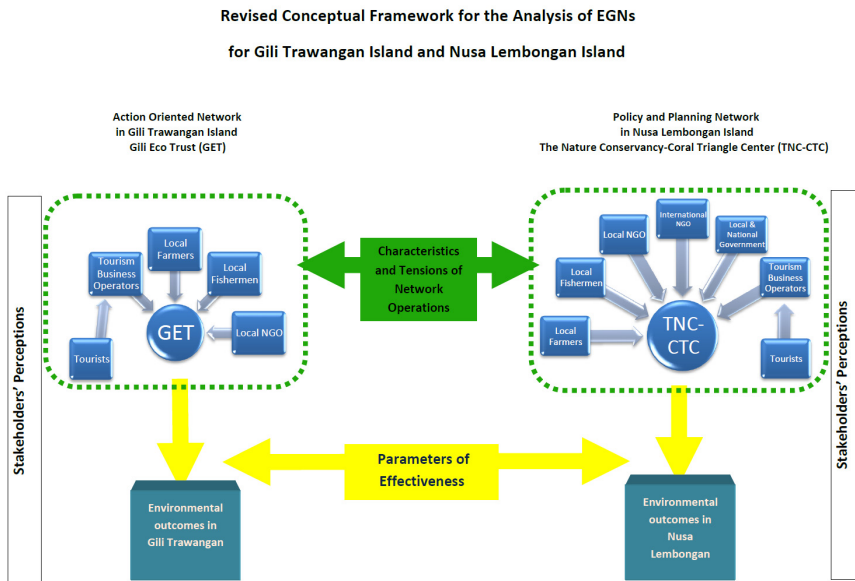


Figure 3: Revised conceptual framework for the analysis of EGNs for Gili Trawangan and Nusa Lembongan islands.

6 Conclusions and implications for further research

This paper has identified the importance of the natural environment for tourism in small island destinations and the emergence of Environmental Governance Networks (EGNs) as a means of addressing the associated challenges. EGNs are playing a major role in conserving and managing the natural environment, while accommodating sustainable tourism practices. This paper has proposed a conceptual framework to analyse EGNs, based on a literature review covering the fields of governance, networks, and environmental governance networks. A proposed framework has identified relevant stakeholders, and five elements for analysing EGNs, namely their: characteristics; tensions arising from EGN operations; parameters for measuring EGN effectiveness; impacts of the EGNs

on the environmental outcomes for destinations; and stakeholder perceptions of the EGN, how it operates, its effectiveness, and its environmental outcomes. The application of this framework to the two case study destinations has resulted in the classification of GET in Gili Trawangan Island as an action-oriented network, and TNC-CTC in Nusa Lembongan Island as a policy and planning network. From this preliminary assessment, a revised conceptual framework was developed to understand the operation of EGNs in these two small island destinations. A preliminary analysis of the characteristics of EGNs in both destinations revealed that GET is a more locally-based network, dependent on the support of local non-governmental stakeholders, whereas TNC-CTC has a stronger government and international NGO involvement in developing policies and plans for the network.

The conceptual framework can serve as a basis for further research into the operation of EGNs in relation to the five key elements that have been identified in this paper. In addition to researching the classification of EGNs based on their characteristics, further in-depth research about stakeholder perceptions of EGNs should be able to: validate and explain the operational tensions arising from the differing stakeholder agendas and the EGN operational dynamics identified in the framework; assess the importance of parameters of effectiveness in the operation of EGNs; identify other parameters to assess EGN effectiveness; and evaluate the impacts of EGNs on environmental outcomes for tourism in small island destinations. Such research will provide insights into whether one type of EGN is more effective than another for managing the sometimes conflicting interests of tourism and the natural environment in small island destinations. Further research will also be needed to understand how the type and scale of future development in the two case study destinations will impact on their respective EGNs and their capacity to achieve positive environmental outcomes.

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