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Governance, Community Resilience, and Indigenous Tourism in Nahá, Mexico

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Abstract: Employing resilience as the theoretical and methodological framework and focusing on governance, this long-term anthropological study analyzes the socio-ecological system of a small indigenous community, with community-based tourism development. After 10 years of ethnographic and participatory work with the Lacandon Maya of Nahá, Mexico, our anthropological research explores the complexities of community governance and its role in protecting the socio-ecological system. The processes of land restitution initiated by the Mexican government and the arrival of migrants from different ethnic groups in the surrounding areas have resulted in significant socio-ecological adjustments being made at the community level. A self-regulated governance system is evaluated to understand the drivers and variables that generated vulnerabilities in the system, as well as the factors that fostered resilience in the establishment of the Nahá's Natural Protected Area of Flora and Fauna. Our results show that although the current Lacandon political organization is fairly recent, pressures from neighboring communities have fostered resilience responses. To protect their space from such pressures, the Lacandon, convinced of their ethnic legitimacy as guardians of the Lacandon Jungle, have internalized the official political-environmentalist discourse. This role has had critical implications for the birth and development of the Indigenous tourism system.

Keywords: community-based tourism; indigenous tourism; socio-ecological resilience; governance; natural protected areas; Lacandon; Mexico

1. Introduction

The sustainable paradigm has been acclaimed as much as it has been challenged almost since its conception. To overcome its limitations, current trends in tourism advocate for a more complex view of communities and destinations, linking sustainable outcomes to the resilience thinking framework [1–4]. Under this perspective "sustainability must be conceived as a transition, journey or path, rather than an end point or achievable goal" [5] (p. 275), and therefore, research must focus on the study of complex socio-ecological systems (SESs) to gain a better understanding of "the capacity of people, communities, societies, cultures to adapt or even transform into new development pathways in the face of dynamic change" [6] (p. 44).

In indigenous contexts, in which changes in SESs are being brought about by major disasters and crises, as well as the gradual transformation of the communities' socio-cultural fabric [7], "the new ideal community is the one that is both sustainable and resilient" [8] (p. 18). Tourism in the Anthropocene is characterized by the constant need for adaptation and transformation, a context in which building resilience from the bottom-up becomes paramount [2]. In order to understand the processes, drivers, and variables that affect communities, the vulnerabilities to which they give rise, and the role tourism plays in these transformations, a holistic approach is needed. "Each socio-ecosystem will have its own ways of developing resilience and so a specific in-depth study of each case is required" [9] (p. 657). Anthropological perspectives and ethnographic methods can be beneficial in this endeavor [10].

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In a monetarized and globalized world, community-based tourism (CBT) has become a significant option for indigenous groups everywhere [11,12] to sustain their ways of life [13,14], while at the same time improving their livelihoods [15–18]. CBT can help in the political struggle to defend indigenous rights [19], displacements, and migration issues, offering sustainable alternatives to extractive industries [20,21]. It fosters cultural pride, identity, and heritage revitalization [22–24], while providing an excellent platform for correcting misperceptions about indigenous cultures [25–28]. However, in order to achieve these outcomes, it would be essential to develop a form of tourism "that is culturally sustainable, that is, owned, controlled, acceptable and desired by the indigenous communities affected, as well as economically sustainable" [29] (p. 1).

From a critical perspective, Kiss [30] considers tourism to be a very competitive and demanding industry and, therefore, inappropriate for rural communities without previous experience. Even when CBT ecotourism projects are successful, their scale is too limited to ensure real conservation change. She deems it to be almost impossible to evaluate CBT projects properly due to the lack of substantial research and accurate data. Since then, there has been an exponential growth in the literature on CBT analyzing social interactions [31,32], CBT enterprises [33–35], external agents such as intermediaries, non-governmental organizations (NGOs), and joint-ventures partners [36,37], its relationship to poverty alleviation and community development [38,39] and critical views [40–43], plus the crucial role of empowerment [44–46], participation [34,47–49], and governance for a sustainable future [50–53]. Nevertheless, critical and holistic approaches are still needed. The resilience thinking approach has provided an essential framework for CBT analysis, incorporating the all-inclusive approach to complex adaptive ecological-systems [9,10,54–57].

Nahá is an indigenous community located in the Lacandon Jungle of Chiapas, Mexico. In this remote village, CBT has become a vital element of the social, political, and economic dynamics of its approximately 300 inhabitants. Nahá possesses some unique characteristics that differentiate it from other nearby communities, also of Mayan origin, having generated a particular SES and some resilience strategies. The land restitution policies implemented by the Mexican government and the arrival of migrants from different ethnic groups in the surrounding areas have resulted in significant socio-ecological adjustments being made at the community level.

The purpose of this work is to contribute to the resilience body of knowledge concerning CBT and local governance. To frame properly the dimensions of space, time, and culture, this paper involves a case study of the indigenous Lacandon community of Nahá. The specific characteristics of this SES, together with its smaller size and greater isolation than other Lacandon communities, offer an ideal scenario for resilience analysis. The long-term anthropological perspective adds value to the case study, allowing for diachronic as well as prospective interpretations. By studying the multilevel government system, the relationships between agents, and the main developments in the community, the aim of this paper is to gain further insights into the drivers and variables that have generated vulnerabilities in the system, the thresholds that have marked regime shifts, and the mechanisms used by the community to foster resilience. It also delves into how these factors have affected the birth and development of the CBT project.

This paper also reviews sustainability in the theoretical framework of community resilience, community with a focus on agency and capacity, and governance with attention to the common-pool resources (CPR) used. After describing the methodological approach, the Nahá case study is addressed. On the basis of a presentation of the larger Lacandon Jungle SES, in which Nahá is inserted, the intention is to gain a deeper understanding of the Nahá governance system, its actions, and its outcomes.

2. Literature Review

2.1. Resilience Thinking

Definitions of resilience in SESs abound, with nuanced adaptations to each field. However, some common ground for understanding resilience is to be found in "the capacity of a system to absorb

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disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks" [58] (p. 1). Besides resilience (1), in order to analyze and understand SESs, another two attributes must be considered, namely adaptability (2) and transformability (3), and "researchers should not presume ipso facto that resilience is necessarily the preferred response" [59] (p. 1144). Adaptability is the capacity of individuals and groups in a system to influence resilience, either intentionally (managed) or unintentionally. The third attribute is transformability or "the capacity to create a fundamentally new system when ecological, economic, or social (including political) conditions make the existing system untenable" [58] (p. 3). The resilience thinking approach does not replace sustainable thinking. For Holling [60] (p. 399), 'sustainable development' is "not an oxymoron but a term that describes a logical partnership", as "sustainability is the capacity to create, test, and maintain adaptive capability", while "development is the process of creating, testing, and maintaining opportunity".

To represent the dynamics of SESs, resilience scholars use the adaptive cycle model, as shown in Figure 1, divided into four distinctive phases: growth and exploitation (r), conservation (K), release or creative destruction, also called collapse (Ω), and reorganization (α). Transitions between phases are represented by two loops—the foreloop between r and K is slow, incremental, while the second or backloop, links Omega and Alpha in a rapid process of chaos and renewal [58]. Systems can shift from a reasonably stable and predictable phase to chaotic collapse due to changes in the internal relationships between different components (low and fast variables), as well as the effects of external forces called drivers and shocks [61]. However, the cycle does not imply regular movements between phases, as human and natural systems are unstable and have nonlinear behaviors. Adaptive cycles occur at different scales in SESs, interacting with each other in 'panarchies'. These interactions generate significant cross-scale effects that are critical to understanding the performance of SESs.

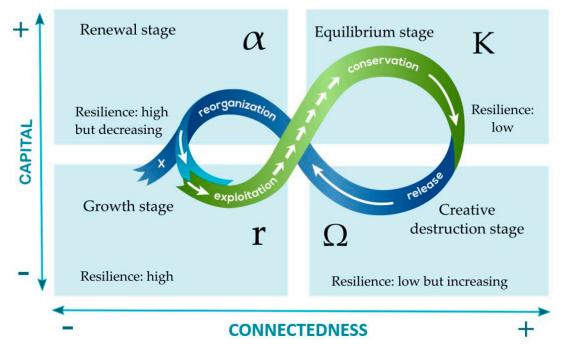


Figure 1. Adaptive cycle (based on Gunderson and Holling [62]).

2.2. SESs and Resilience at the Community Level

According to Ruiz-Ballesteros [57] (p. 45), the importance of the human components and actions in the functioning of an SES is so critical that, paradoxically, the biophysical variables, albeit indicative of its condition, "are not the most relevant causes of its capacity for resilience". Through constant interactions, incorporating new techniques and developing strategies to improve their livelihoods, humans continually modulate the social, cultural, and natural environments within which they are

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embedded. On occasions, the challenges posed exceed their adaptation capacity and shocks force a regime shift in the SES. In these cases, individuals and communities need to find suitable adaptive responses that allow them to reorganize, coping with new challenges without losing their defining identity. "The extent to which adaptive responses are effective also rests on the ability of stakeholders to mobilize and self-organize from the bottom-up in crisis situations" [63] (p. 307). Therefore "the key to reflecting on the resilience of a socio-ecological system is the way in which its human community functions" [57] (p. 45).

The interest of human agency and its role in SES dynamics is gaining momentum [64–66]. In the context of tourism, recently published works study resilience at the community level from an individual/household approach [67,68], as well as a collective point of view [56,69–74]. These studies consider human agency from two theoretical perspectives, viz. livelihood resilience and community resilience. The concept of 'livelihood resilience' responds to the need for a social and political turn in resilience thinking, being defined as "the capacity of all people across generations to sustain and improve their livelihood opportunities and well-being despite environmental, economic, social and political disturbances" [75] (p. 23). On the other hand, collective well-being is being studied from the perspective of 'community resilience', commonly defined as "the existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability, and surprise" [76] (p. 401). Both perspectives insist on the central role of cultural values, diversity, ideologies, perceptions of risk, power relations and the influence of collective action and human imagination to transform habitats [59,77].

Davidson [59] (p. 1143) recognizes the capacity of a human system to "purposefully postpone the effects of ecological disruption to itself either in space or in time" through collective action. The active agency of a community represents a paradigm shift from a static vision of the system to a dynamic approach. In the former, the responsibility of "community well-being was placed on federal land management agencies", and communities were relegated to a passive role. In the latter, communities have the "ability to take planned action and effect change" [76] (p. 404). Nevertheless, it is also crucial to evaluate the limitations of such power as "communities do not control all the conditions that affect them" (p. 403). For example, community agency may be restricted by land ownership or access. It is also essential to bear in mind that any change imposed on an SES can lead to a greater or lesser disruption somewhere or at some time, connecting and confronting the agency of different groups.

2.3. Governance for Resilience

The literature on governance and complex adaptive systems stresses the need to overcome traditional theories and conventional bureaucratic procedures so as to offer a better response to the pressing needs of SESs [58,78–80]. Adaptive management can fail if the existing governance structures hinder an SES's proper functioning, "Because the stability landscape is constantly changing, the 'adaptive' part of both governance and management is required in all phases of the adaptive cycle" [58] (art. 5). Adapting institutions "concerns the capacity of people, from local groups and private actors, to the state, to international organisations, to deal with complexity, uncertainty and the interplay between gradual and rapid change" [81] (p. 3). In SESs, unlike in natural systems, "human agency is distributed unequally" and, therefore, "the exercise of power and privilege in society has enabled extraordinary concentration of control over the environment and resource decision-making" [59] (p. 1143). It is consequently crucial in the analysis of SESs to determine systems of governance and key individuals who influence interactions and provide opportunities for building trust, managing conflicts over resources, and forging ties between people and multilevel institutions [82,83]. For a better understanding of community resilience and institutions, we need to delve into CPR governance.

In 1990, Elinor Ostrom published *Governing the commons*, a seminal work that questioned Garrett Hardin's well known and generally accepted tragedy of the commons theory. According to Hardin [84], CPRs have the inexorable propensity to suffer from overuse, as individuals tend to act rationally, depleting shared resources for their own benefit. This theory is in keeping with the assumption of

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non-collaboration among the agents involved. Ostrom opposed this view of helpless individuals and the inevitable need of communities to be governed by the state or capital to survive. Her analysis of CPR systems, based on game theory and meta-analyses of large samples of global case studies, revealed the capacity of some communities to self-organize through an established system of agreements and sanctions. She revolutionized economic and political theory, challenging "the presumption that governments always do a better job than users in organizing and protecting important resources" [79] (p. 641). She also defended the need to overcome simplistic models of governance, where 'one size fits all', as this type of policy has proved to be ineffective. Instead, she underscored the pressing need to embrace complexity in the analysis of SESs, acknowledging that interactions occur at multiple levels and polycentric institutions are better equipped to deal with changes.

At the micro-situational level, the logic of rational, self-serving individuals is borne out when there is a lack of communication and agreement and sanction systems cannot be established for the use of CPRs. Be that as it may, those self-organized systems, in which users actively communicate and have developed their own rules and limits for shared use, tend to be more successful. In these cases, users can overcome predicaments, resolve conflicts, and create effective systems of governance that support sustainable CPRs. In coping with social dilemmas, the level of trust is central to attain cooperation within multilevel systems [78,79]. As to tourism, a lack of communication during the planning process, horizontal and vertical fragmentation, and the absence of community engagement have led to vulnerable SESs [70,85]; "informal and formal meetings, workshops, and travel experiences fostered trust, social capital, and attitudinal organizational commitment" [85] (p. 633); collaboration between communities and network structures have promoted flexibility and innovation [86]; connecting local/indigenous knowledge to managerial practices has improved heritage conservation [71] and crisis management [70]; and strategies of power-sharing and adaptive co-management have also proven to be successful [74,87].

3. Methodology

This study is based on long-term ethnographic field research [88] on indigenous tourism, conducted in the Lacandon Rainforest for more than 10 years. Since the first project in 2008, the authors of this paper have conducted ethnographic and participatory action research in different visits to Nahá (in 2008, 2009, 2010, 2011, 2012, and 2018). Participatory approaches and anthropological ethics have afforded the researchers a deeper understanding of the community, as well as a strong rapport with the informants. The long-term perspective allows for complex understanding, critical for the analysis of SESs. The data for this ethnographic case study was collected through participant observation, informal conversations, semi-structured interviews, in-depth interviews, and life stories of the key informants recorded over the years. The information was gathered in video and audio format, pictures, mind map graphics, and field notes. The diaries and field notebook of the authors, with its 'thick' descriptions [89], reproduce both the participants' views (emic) and the researcher's reflections (etic).

The community involvement in our research projects, as well as the participation of tourism agents, has always been critical for their development as a whole. From the beginning, the receptivity and willingness of community members and authorities to participate in the research allowed for the design of collaborative methods [90] and decolonizing approaches [91,92], aimed at empowering the co-researchers. These research partnerships have generated a wide variety of outcomes, with the community deciding on the issues of interest and topics that should be researched. The academic outcomes of the collaborative process have been returned to the community in the form of capacity building processes [93] and publications translated into local languages and disseminated among the locals [15,94], as well as video documentaries-screenings and photography exhibitions at the community center. Work was also carried out on the collaborative design of cultural tourism products [23]. The authors and all the researchers involved in the different phases of the project have always followed the protocols and rules established for committed indigenous research, based on models of respect, relevance, reciprocity and responsibility [95], and ownership, control, access, and

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possession (OCAP) [96]. For analyzing this work, we have acknowledged, after deep reflection, our position as Western researchers [97–99].

4. Case Study

According to Davoudi [100] (p. 305), one of the main challenges of "translating resilience from the natural to the social world" involves "defining a system's boundary", as all analyses "focus on some things and discount others", leading "to exclusionary practices" in the social context. With respect to tourism, Lew and Cheer [101] (p. 319) identify "three broad systems that research can examine from a resilience perspective": the attraction, economic, and community systems. Each of them is formed by diverse variables and responds in different ways to external drivers, "resulting in different resilience adaptive cycles". Equally important is to define the scale, both spatial and temporal, as "different boundaries of space and time can result in very different outcomes" (p. 320). In SESs, the cultural dimension of creativity and meaning is also critical. For this analysis, the three systems will be contextualized in time, space, and meaning [102].

4.1. The Lacandon SES

The Lacandon Jungle is one of the largest dense rainforests in the Americas, with a hot and humid climate. It rains practically all year round supplying the territory's multiple rivers, lakes, and lagoons with plenty of water. The flora is characterized by tropical forest vegetation in the north and low jungle in the south, which allows for the dense growth of large trees, such as cedar, mahogany, and ceiba. The terrestrial vegetation, with more than 4000 species, is also home to numerous reptiles. In this jungle, all orders of land mammals are represented, with more than 100 species, including jaguars, tigrillos, and pumas. Additionally, 341 species of birds have been recorded and, although little is still known about Lacandon aquaculture, all its rivers have endemic species, with large and very varied populations [103,104].

By the end of the 19th century, the jungle's rich biodiversity had attracted logging companies. This activity, together with the arrival of ranchers from the north of the country and the implementation of inadequate conservation programs [105], reduced the tree population by 30% in less than 50 years, with the resulting deterioration of the rest of the jungle's flora and fauna [103]. As the historian Jan de Vos [105] (p. 23) notes, "Several studies prefer to refer to the region as 'La Lacandona', because it has less and less jungle left." Despite its rapid devastation since the 1950s, the jungle is still one of the regions with the most exceptional biodiversity in Mexico. That is why the Ministry of the Environment, Natural Resources and Fisheries (SEMARNAP) and the National Institute of Ecology (INE) regard it as a preferential conservation area [103]. Currently, 40% of the surface of the Lacandon Jungle is protected by the National Commission of Natural Protected Areas (CONANP), as shown in Figure 2.

Regarding its culture, Lacandon cosmology, traditional ecological knowledge, and ways of life have attracted the interest of researchers and travelers since the beginning of the 20th century [104,106–109]. However, the essentialist and sometimes erroneous image of this small ethnic group does not always allow us to examine the real cultural wealth of the Lacandon and the area's tourism potential. The romanticized picture of the Lacandon that anthropologists, travelers, the media, and public agencies have tended to paint has transformed the external image of the Hach Winik into 'the most indigenous' among all the groups originating in Mexico, becoming a commercial symbol for the state of Chiapas [110]. Agriculture is central to traditional Lacandon life, being reflected in all its aspects, including religion [107].

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Figure 2. Natural protected areas in the Lacandon Jungle.

4.2. Crisis, Transformation, and Governance in the Panarchy

SESs cannot be understood in a single (temporal or spatial) dimension. Gunderson and Holling [62] explain the way in which complex adaptive systems and scales are nested in one another through the metaphor of the panarchy. For a deeper understanding of the role of CBT in this SES, it is first necessary to understand how CBT is nested in the larger system. The following section describes three different levels of governance for the panarchy analysis: the Lacandon Jungle, the 'Comunidad Zona Lacandona' (CZL), and the Nahá sub-community, as shown in Figure 3.

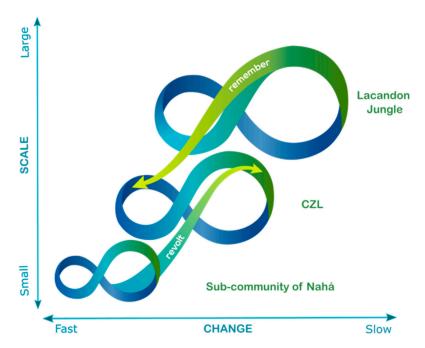


Figure 3. The Lacandon Jungle panarchy (based on Gunderson and Holling [62]).

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4.2.1. The Lacandon Jungle

According to Folke et al. [83] (p. 441), "a resilient social-ecological system may make use of crisis as an opportunity to transform into a more desired state". In the Lacandon Jungle, conflict has been the source of different crises, chiefly revolving around inter-ethnic struggles, for a long time now.

For the Lacandon, the first half of the 20th century was similar to the previous centuries, during which they lived in isolation, maintaining a minimum of external contacts and living in harmony with the jungle ecosystem. However, after World War II, Mexican political reforms on land tenure opened up the jungle to colonization and industrial exploitation. Encouraged by the agrarian reforms, Tzeltal and Chol Maya groups from the north of the county migrated to the Lacandon Jungle, bringing with them their traditional ways of subsistence unrelated to the jungle economy. According to de Vos [105], by 1950 there were approximately 1000 new settlers in the jungle, a number that would reach nearly 200,000 before the end of the century. Demographic pressures and changes in land use would be the main causes of jungle deforestation. The migratory pressure, along with the new government regulations, forced the Lacandon to abandon their traditional dispersed habitat and settle in communities, founding present-day Nahá, Metzabok, and Lacanjá Chansayab.

In the 1970s, the government of Mexico promoted two opposing initiatives. On the one hand, it continued to encourage ranchers from the north to migrate to the jungle areas, thus subjecting the land and the people to new pressures; and, on the other, stressing the need to curb deforestation it decided to create a protected agricultural area through land restitution. In 1971, the Mexican president, Luis Echevarría, signed a land restitution decree. Announcing his intention to protect the jungle and its culture, he granted all land rights to just one ethnic group, the Lacandon. The CZL, with an area of 614,321 ha, accounting for more than 64 km of rainforest, passed into the hands of just 66 heads of Lacandon families [111]. The presidential decree, "which made the tiny Lacandon community the largest landowner in Chiapas" [93] (p. 12), contained critical errors and did not recognize any other beneficiary of the more than 40 settlements of other ethnic groups that were totally or partially occupying the area.

4.2.2. The CZL

The land reforms brought with them the relocation and concentration of dispersed groups in consolidated communities, transforming the SES. Political pressure and social discontent forced a change in governance of the CZL and, in 1978, Tzeltal and Ch'ol Maya speakers obtained land rights, reducing the Lacandon land holdings to around 252,631 ha. However, the political power over the CZL remained in the hands of the Lacandon, as the president of the CZL, with the power of veto, had to always be a Lacandon. The mistakes made in the agrarian reforms, as well as an unequal distribution of privileges, were, and still are, a breeding ground for many conflicts in the area, including the indigenous Zapatista revolution in 1994 [105]. Local institutions are currently embedded in a broader governance system. The CZL depends on the municipality of Ocosingo, which, in turn, is subject to the Chiapas state government, which, like all Mexican states, is under the aegis of the national government. Since the enactment of the Agrarian Law, the highest authority of the communal property is the General Assembly of Community Members, in which holders of agrarian rights (communards) have voting privileges. Every three years, the communards elect the Commissariat of Communal Property (Comisariado de Bienes Comunales) and the Supervisory Council (Consejo de Vigilancia). Each institution has a president, secretary, and treasurer, whose responsibility it is to execute the assembly's agreements. As set out in the 1978 CZL agreements, the president of the commissariat must always be a Lacandon Maya, with Ch'ols and Tzeltals alternating in the other two positions.

Below this governmental tier, another level replicates the same structure for the six sub-communities, namely, Nueva Palestina, a Tzeltal and Ch'ol Maya community; Frontera Corozal, a community of Ch'ol descent; and the four Lacandon Maya sub-communities, Nahá, Metzabok, Ojo de Agua Chankín, and Lacanjá Chansayab, with its neighboring areas of Bethel and San Javier. The sub-communities of this multi-ethnic structure rely on traditional forms of governance for resolving

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internal matters. In contrast, when common issues are involved, these are discussed at the Lacandon Supreme Court, formed by commissioners, vigilance councils, representatives of the neighborhoods, and the council of elders. They meet periodically in a different village to analyze and resolve local issues and to deal with matters concerning the CZL as a whole.

4.2.3. The Sub-Community of Nahá

Nahá SES is currently formed by 87 families, with around 300 inhabitants. All men in the community are of Lacandon descent, as the traditional rules prevent males from other ethnic groups from settling there. This traditional arrangement is a resistance strategy to maintain ethnic power, but it forces young Lacandon women to move out of the community if they choose to marry a non-Lacandon man.

Outsiders? A temporary house, yes. But they cannot live here permanently. In order not to have enemies, it's better not to let men in. (Personal interview with K.G. 2012)

The assembly of the sub-community of Nahá comprises 52 communards and 35 household heads (communards' sons). Traditionally, spiritual and political leadership were exercised together, but since the death of Chank'in Viejo, the founder of Nahá, in 1996, the sub-community commissariat has become a political appointment. The assembly officially meets every three months, and attendance is compulsory, under the penalty of a fine, for all the 87 households (52 + 35). Nonetheless, community meetings are called whenever necessary, sometimes even three or four times a week, thus ensuring fluid communication and community engagement. The commissariat and the supervisory council are permanently involved in resolving local issues, as well as acting as intermediaries with other agents, neighboring ejidos, NGOs, international donors, and government officials, showing substantial bridging social capital [74].

In the years following the Zapatista uprising, essential central government resources were leveraged to improve the jungle's accessibility. A road linking the jungle to the main urban areas of Chiapas was built to facilitate the deployment of troops to combat the Zapatista insurgency. This gave rise to the transition from a subsistence agricultural economy to a mixed economy, bringing about profound changes in the social reality of the Lacandon people [107]. It was precisely in the midst of these changes that the Lacandon communities of Nahá and Metzabok, in an expression of self-regulation, petitioned the Mexican government. Worried about the conservation of the rainforest, they called for legislation to protect the natural environment of their territory. In September 1998, "presidential decrees were issued for the establishment of the Nahá and Metzabok Flora and Fauna Protection Areas, with 3.847 and 3.368 hectares, respectively" [112] (p. 54) and the subsequent development of CBT in the area.

5. Discussion

Socio-ecological resilience is the capacity to persist, adapt, or transform in the face of change. Since a small group of indigenous families decided to settle in a patch of the Lacandon Jungle in about the 1940s, Nahá's SES has undergone essential adjustments. The greatest shock for that SES was undeniably the land reforms in the 1970s, which led to its settlement and the community's integration into a monetary economy. The second regime shift was its transformation into a flora and fauna protection area in 1998. As will be contended in the following section, however, this second transformation was not externally driven as had been the previous shift. It was the result of collective action, the objective of which was to reverse an external shock. "When faced with adversity, resilient communities develop the material, physical, sociopolitical, sociocultural, and psychological resources to cope" [66] (p. 404). CBT development in Nahá was one of the outcomes of this process.

5.1. External Drivers, Internal Variables

In order to gain a better understanding of the adaptive cycle [62] in Nahá, it is crucial to analyze the external pressures to which this small community is currently being subjected. Although Nahá has remained fairly isolated in the jungle interior, other ethnic groups have gradually settled in the surrounding area. According to the latest Mexican population census, there are approximately 120 settlements, mostly of Tzeltal origin, within a radius of 15 km. The majority are small hamlets, but 17 communities have much higher populations and growth rates than Nahá. For example, versus Nahá's 198 inhabitants in 2010, these 17 communities numbered 13,203, thus Lacandon Maya accounted for less than 1% of the total population in a 15 km radius. In Nahá, the average birth rate was 2.1 children per woman, versus 3.2 in Tzeltal settlements, for which reason this asymmetry will only get steadily worse. Figure 4, with Nahá in the center, provides a visual testimony of this risk of encroachment.



Figure 4. Nahá and the neighboring communities in a radius of 15 km.

In a comprehensive analysis, Calleros-Rodriguez [113] has scoured state and federal agrarian archives in search of official and informal complaints about inter-communal conflicts in the area during the 1970s, 1980s, and 1990s. Such complaints have to do with the agricultural use of CZL communal lands by neighboring farmers and also violent threats of armed invasion. In the 1990s, when the Zapatistas were in the area, these conflicts intensified. Over the years, the small communities of Nahá and Metzabok have requested the Governor of Chiapas, and even Mexico's president, for help against invasions, thus showing the capacity of these small communities to reach out to higher levels of governance. In the mid-1990s, with the assistance of an environmental NGO (Conservation International), they called for all their lands to be converted into protected areas, achieving their objective in 1998.

The good thing about Nahá people is that they're very passive, so they avoid having conflicts with other communities; they prefer the legal path. They go to the Government and request support to be able to settle such issues. (Personal interview with M.G. 2018)

5.2. Regime Shift—Community Resilience

From the traditional economic perspective, external officials are assumed to have the capacity to establish and impose rules governing individuals in specific situations, to maximize common welfare, and to prevent those using vital resources, on which their survival depends, from dilapidating them [84]. The creation of natural protected areas all around the globe is grounded in these economic and political theories. "The creation of NPA (Natural Protected Areas) through government decrees has been the privileged way for Mexican environmental policy to protect the important sites for the conservation of the country's biodiversity" [114] (p. 60). However, managing CPRs through top-down strategies to regulate the use and protection of vulnerable ecosystems often has directly adverse effects on the human system, as regulations prevent local communities from accessing the environmental resources on which their survival depends [78]. This was the case with the creation of the Montes Azules Biosphere Reserve and other protected areas in the CZL, causing discontent among local communards and ethnic confrontation between groups [114–116].

However, in the case of Nahá and Metzabok, it followed a bottom-up strategy, insofar as it was the locals themselves who asked the federal government to convert their lands into protected areas.

There's always been a great deal of friction between Nahá people because of envy, like when a business is successful. But when it comes to more external problems, they really come together. That's the good thing about Nahá. (Personal interview with M.G. 2018)

The regime shift has forced the community to adapt many of its traditional practices, which are governed by a series of rules and regulations. Even though the Lacandon now have a written language, putting things down in writing is not one of their traditions and, accordingly, collective agreements that do not need to be submitted to higher authorities are oral. Some of the rules are a mere application of government legislation, while others are aimed at improving the use of CPRs. For instance, they are no longer allowed to fell trees, not even for building houses. Before they needed to seek permission from the local authorities, but now it is completely forbidden. Hunting is also strictly regulated, transforming some traditional dietary patterns. For example, the howler monkey was a traditional Lacandon delicacy, but since the community became a protected area, these monkeys have ceased to be hunted and their population has subsequently recovered.

Thanks to these rules and regulations, the jungle recovered many ecological services. Nonetheless, the community members needed new ways of sustaining their livelihoods. The Mexican government was also attempting to find sustainable alternatives to generate income in the newly created protected areas. CBT emerged as an original and exciting form of sustainable development for impoverished indigenous areas [117]. Due to the close relationship between Nahá communards and Mexican officials, the Government Office of Indigenous Affairs (INI), now called the National Commission for the Development of Indigenous Peoples (CDI), proposed the development of a CBT project in Nahá [118].

5.3. The Adaptive Cycle of CBT

In the year 2000, a working group was formed at the community level to request public funding for developing the first CBT project in Nahá. Although some households in the community already offered accommodation to travelers and scientists and most families produced handicrafts for the tourism hubs of Palenque and San Cristobal, this initiative was the first communal tourism enterprise. The initial intention was to create a project managed by the entire community so that its revenues would benefit all of its members. In 2001, the cooperative Canan K'ax S.C. de R.L. was formed with 58 partners representing every household. Except for the elders, all the communards participated in the enterprise. With economic support from the CDI (the then INI), the communards were paid to build three basic lodges and a restaurant in 2003. The lodges were built with local materials and adapted to the local environmental conditions. NGOs, such as Na Bolom, offered technical support and capacity building programs. The SES was in its 'growth' or 'exploitation' phase of the adaptive cycle; the community was excited, there was enough energy to work together, the learning curve was

steep, and the project progressed smoothly. The group felt satisfied and proud, feelings that were enhanced with the arrival of the first tourists.

Yet, the CBT promise was not fulfilled swiftly enough for some and the project started to lose momentum. There were differences of opinion and internal tensions began to mount. The lodges required constant work and further investment was soon required to improve their facilities. A section of the management group considered that revenues and subsidies should be re-invested while others wanted to share out the money. Meanwhile, the community had managed to secure other sources of funding, including reforestation projects and payments for environmental services (PES), which distracted the attention of some of the communards from the CBT project. The SES was entering the 'conservation' phase.

As the tensions between the partners increased, the project lost stability. The rotational shift work system failed as some families did not do enough, which had a negative impact on the services provided at the lodges. As already observed, the lodges' facilities deteriorated, thus endangering the project's survival. The SES was suffering from an identity crisis, the relationships between the actors changed, and the system finally collapsed. Some partners decided to abandon the project, and the SES went into a regime shift.

A group of 11 partners continued with the project, and the 'reorganization' phase began. Learning from their own experience, and from other projects, the group implemented a process of 'creative destruction' incorporating several innovations. The new vision entailed a more professional approach. They started by forming a new partnership, but this time, instead of being formed exclusively by communards, they gave an equal share of rights in the new cooperative to all of the partners' wives. This change in the partnership's gender makeup was vital to attract new funding as the Mexican government had established gender requirements for all public-funded projects [119]. Although the use of subterfuges to circumvent this requirement was a matter of course elsewhere, the Nahá CBT project took women's participation very seriously from the start. Indeed, one of the women who joined the partnership after the collapse of the previous system was appointed as the manager of the Ecotourism Center of Nahá. Other partners or family members also begun to work at the center, complying with the new professional approach and making themselves accountable. The new partnership even managed to obtain new funding that was used to renovate and expand the facilities, giving the complex a new and sophisticated look. In 2011, the 'new' Nahá Ecolodge reopened its doors, creating "new forms of entrepreneurial activity" [5] (p. 282).

Since then, Nahá Ecolodge has become a complex adaptive system that manages changes, learning, and adapting to new circumstances without losing its new identity. On the other hand, the former partners who had abandoned the project found themselves in "a less productive and less organized system" [60] (p. 394). In light of Nahá Ecolodge's success, they implemented different adaptive strategies, from trying to re-enter the partnership to demanding that the profits be shared with the community. The ecolodge partners turned them down on both accounts. As a result, they created a new cooperative, secured funding for another CBT development project, and built a new lodge, Pachá. This cooperative is now following the same path and making the same mistakes, allowing the system to learn. Other businesses, new shops, and two restaurants have since opened in Nahá, forming a new CBT panarchy [5].

5.4. Symbolic Dimension—The Lacandon as Guardians of the Jungle

Throughout the 1970s, 1980s, and 1990s, political approaches to environmental issues in Mexico became more sustainable. However that may be, "the Mexican government's conservation policy in the region since the 1970s has been contradictory, to say the least, and most conspicuously expressed through the creation of protected areas on top of the existing agrarian settlement pattern" [120] (p. 619). In the process of transforming the Lacandon Jungle into a much-needed lung for the country, the Government formed an alliance with the Lacandon ethnic minority. After years of close

relations with governmental bodies, environmental programs, and capacity courses, the Lacandon have internalized the political-environmental discourse, combining it with their traditional views.

In the rich Lacandon worldview, the community has always been at one with the jungle since time immemorial. Their myths, rainforest usage, dispersed habitat, and limited demography have allowed the Hach Winik to maintain a close and undemanding relationship with the environment.

The Nahá founder and charismatic spiritual leader Chank'in Viejo also played an essential role in shaping the image of the Lacandon as environmental guardians. He decried the indiscriminate felling of trees and some of his sayings have become key motifs in Lacandon narratives, and nowadays also on social media.

Hachakyum, God of the gods, created the heavens and the jungles. In the sky, he sowed the stars and, in the jungle, he planted the great trees. The roots of all things are holding hands. When they cut down a tree in the jungle, a star falls from the sky. [121] (art. 20)

According to Lacandon cosmology, the end of people will come about when the environmental balance is broken. In 1994, after an invasion by El Jardín neighbors, Chank'in Viejo declared in a public hearing, "The trees are our life, they ask for the rain to come. The mahogany and rubber trees are our life, they have life, when the trees are gone, we will die."

Meanwhile, the rest of the ethnic groups, the usurpers, are portrayed as the main environmental threat to that environmental balance because they fell trees and clear the jungle for cattle ranching. Ethnicity has become a critical factor in the process—while the Lacandon are portrayed as an exemplary community, the others are denied access to resources and are also blamed for the rapid deforestation. Official documents, as well as academic papers, reinforce this idea.

The essential difference between the systems of the cattleman and the Lacandon farmer, however, is that the Lacandon is concerned with forest regeneration and long-term fertility; the cattleman is concerned only with finding new forest areas to cut, burn, and seed in forage grasses. [122] (p. 27)

In recent years, their cultural capital, including their characteristic appearance (simple white tunics and long hair), has secured the Lacandon plenty of attention in the media and on the international stage. As a result, they have been more successful in getting their demands and views across to the political powers than their more culturally assimilated neighbors. Trench [110] (p. 50) considers that media images have a huge public impact and that the "repetition of an event, stance, or approach, sometimes poorly supported by serious research, can have a cumulative effect in forging public opinion". The Lacandon are now perceived, and see themselves, as the guardians of the jungle, a role which has become their principal tourist attraction.

5.5. A Proposed Model for the CBT Adaptive Cycle

The results of this case study may help to develop a conceptual model of the factors characterizing CBT systems at each stage of Holling's loop. The proposed model and its characteristics are shown in Figure 5.

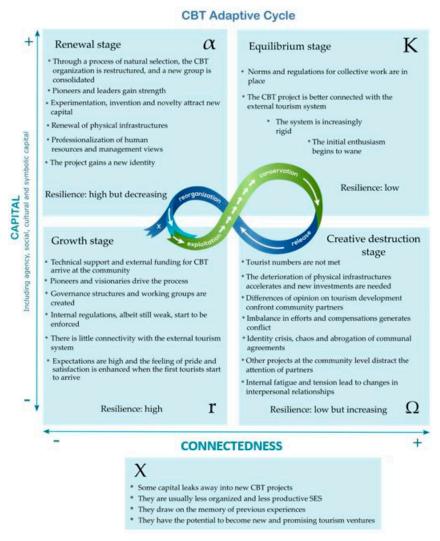


Figure 5. Proposed model for the community-based tourism (CBT) adaptive cycle.

6. Conclusions

The sustainability concept has been applied to almost every sector and field for more than 30 years now. However, different arguments have been deployed to challenge it. The mere notion of 'sustainable tourism development' has given rise to debates on whether or not it is an oxymoron [57,123,124], as "sustainable is often used to describe something that is enduring, even a steady state, whereas development, in its various forms, always implies a change from an existing state to one that is supposedly better" [123] (p. 390). To overcome the concept's limitations, there is a clear trend among tourism scholars to link sustainable outcomes to the resilience thinking framework [8,123,125,126].

This paper has contributed to deepen our understanding of sustainability through community resilience in indigenous tourism contexts. In particular, it provides a case study of socio-ecological resilience in CBT, as "local knowledge is required in order to make it fully operational in all its complexity" [9] (p. 665). To this end, it has inquired into the space and time dimensions inherent to the analysis of natural systems, as well as a third dimension, that is, "the symbolic construction of meaning" [102] (p. 119), the key to understanding the complexity of human environments.

The Nahá SES illustrates a "complex adaptive system with all that this implies in terms of feedback, non-linearity, emergence, chaotic behaviour, uncertainty and the capacity for self-transformation and learning" [57] (p. 43). The land reforms and the mass immigration of other ethnic groups has placed the Nahá SES in a vulnerable position. However, the multilevel governance system of Nahá, its capacity to bridge to external actors, and maintain constant internal communication has led, through a process

of self-regulation, to a shift in the system, thus highlighting the community's resilience. This also underscores the importance of the cultural capital, shared resources, assets, values, and networks that communities leverage to address common issues and to gain collective advantages [127].

The adaptive cycle has proved to be a useful tool for analyzing CBT ventures, as it helps understand the difficult beginnings and internal discrepancies of many CBT projects. The Nahá ecotourism project has gone through a full adaptive cycle, enhancing its learning ability, experience, and memory, which helps the system to be more resilient. It is also interesting to note how the third dimension of analysis, the cultural capital, including ethnicity and sense of place, has been essential in the Nahá SES. The symbolic construction of environmental narratives has helped the group to consolidate its position as a tourist destination. As guardians of the Lacandon Jungle, they have benefited from a positive public image that has oiled the wheels of their tourism ventures. All in all, our case study has highlighted the role and agency of indigenous communities in fostering resilience and in working towards a better, more sustainable future.

The adaptive cycle, first developed by Holling, is a tool that allows for a better understanding of the processes of destruction and reorganization, as well as the mechanisms that drive and allow for renewal in SESs. Although stories of failure abound in the literature on CBT, studies focusing on the reorganization processes that foster resilience are few and far between. The Nahá case study illustrates some elements common to many CBT projects. A model for the adaptive cycle applied to CBT, which could contribute to understand factors influencing the sustainability and resilience of local tourism projects, is proposed in Figure 5. The critical factors characterizing each one of the four stages described in this study inform the model. However, much more research needs to be conducted before this model could be used for analytical or practical purposes. A comparative analysis of CBT case studies, based on long-term and longitudinal ethnographic research, would prove very useful for improving, refining, and validating it.

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