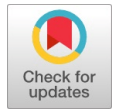


# Environmental Issues and Strategic Communication Planning for Tadlac Ecotourism Project, Los Banos, Laguna, Philippines

Lee Catherine E., Torres Cleofe S



**Abstract:** *Tadlac Lake, Los Baños, Laguna, has been visited by a lot of visitors recently. With the increase in the number of visitors, environmental issues confront the integrity of the Tadlac Lake Ecotourism Project (TLEP). The study was conducted to address these issues using a proper communication strategy since the master plan lacks a communication component by identifying the key elements and their communication need and resources. A descriptive method using a case study was used to answer the research problem and objectives. Focus Group Discussions and Key Informant Interviews were used for gathering data wherein representatives of different stakeholders were categorized into three namely: government agencies, civil society groups, and private business served as the respondents of the study. Based on the findings, environmental issues in TLEP affect the land, water, waste, biodiversity and environmental pollution. Further, stakeholders indicated that they want to know about ecotourism, benefits and drawbacks and the projects of the government related to it. The information sources preferred by the stakeholders are barangay consultations, brochures, flyers, and leaflets, while the most accessible way for information sharing is face-to-face interaction. A communication strategy with key elements was also proposed based on all the results of this study.*

**Keywords:** *Communication Plan, Ecotourism, Environmental Issues, Tadlac Lake*

## I. INTRODUCTION

### Background and Rationale of the Study

#### 1.1 Ecotourism in the Philippines

“Ecotourism is a form of tourism” [1]. In the Philippines, different tourism campaigns have been launched, and the latest is “Experience the Philippines” in 2017, which aims to make tourists feel at home. The National Economic Development Authority (NEDA) Assistant Regional Director Efren Carreon [2] said “the national government believes that ecotourism plays a very important role in the development of the country.” Ecotourism shows great potential in the country. Data shows that in 2010, \$2.25 billion was generated by tourism in the country [3].

Now, each region has different ecotourism sites varying from land to water that offer different experiences to the ecotourists. Ecotourism still needs to be studied in the country since most of the data from the Department of Tourism focuses on tourism in general. The increasing call for sustainable development in tourism prompted the Philippine government to address this issue. Thus, on 17 June 1999, Former President Joseph Ejercito Estrada signed Executive Order 111 “Establishing Guidelines for Ecotourism Development in the Philippines” [4]. It contains, among other provisions, the development and promotion of sustainable tourism, development and promotion of ecotourism focusing on the protection of the environment, ensuring the management and conservation of the environment and natural resources and cultural heritage and establishment of an integrating system to manage ecotourism development in the country.

Ecotourism has positive impacts, but it does not mean that it is spared from different issues. Bricker (n.d.) pointed out that one concern in ecotourism is the safety of the tourists since most of the areas promoted are remote areas. Another issue cited was the source of financing [5]. Some ideas find it difficult to have financing since the return on investment is not as big as mass tourism, because carrying capacity is being considered, thus fewer people visiting the area. Further, the Environmental Guidelines for the USAID Latin America and Caribbean Bureau [6] stated that some potential environmental impacts are soil erosion due to construction of facilities and passing through of vehicles, deterioration of water resources and quality due to increase of waste and lack of septic tanks, deforestation, loss of habitat of flora and fauna, changes in animal behavior due to human interference, pollution from litter and use of oil and displacement of locals from their community to give way to development.

#### 1.2 The Tadlac Lake Ecotourism Project

Even before the formulation of the Tadlac Lake Ecotourism Project, Barangay Tadlac is experiencing a problem with the lake due to the influx of people and spread of pollution, thus changing the physical appearance of the lake and resulting in to decline in fish catch in the 1960s [7]. Aside from that, when fish cage operations were opened to address livelihood problems in 1991, the maximum number of cages set in the area was violated, resulting in immense pollution and fish kill, causing an estimated loss of Php 4 Million [7].

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To save the Lake, the LLDA and Tadlac community joined forces to save the lake, and fortunately, it gradually recovered [7]. Tadlac Lake Ecotourism Project was conceived in 2000 by the Sangguniang Barangay and Ugnayan sa Los Banos with the help of LLDA and the Los Banos LGU. However, the plan is still not implemented at the time of this study due to the changes in administration and priorities [7]. In 2007, LLDA commissioned Urbis Philippines Inc. to prepare the Tadlac Lake Masterplan, which includes the impact assessment of the project and the mitigating measures. Activities to be put in the area were also included. After a decade, the plan is still not implemented.

Currently, the Tadlac community has opened up to tourists when Laresio Lakeside Resort developed its facilities around the lake, while other resorts are seen to follow. While there is a misconception that the TLEP is Laresio Lakeside Resort since it initiated the development of structures for ecotourism activities in the area, Laresio will be a part of the TLEP development in Barangay Tadlac.

### **1.3 Communication in Environmental Management**

Communication is often overlooked as a part of the environmental management system. But as cited by Sobnosky [8] communication is necessary to bring together the various elements so that the environmental management system would function well. Communication has a huge role in supporting sustainable tourism development and managing its multiple dimensions [9]. It was further noted that through communication, stakeholders can exchange opinions and arrive at an agreement. Effective communication can be a way to connect product and market since the communication process can help build awareness and persuade stakeholders to take responsibility to participate in the decision-making process, adopt environmentally, socially and economically sustainable behaviors and practices.

In terms of coordination, communication can help bring different stakeholders together because it can build good relationship and trust. Identifying the stakeholders who will benefit from the plan will improve the effectiveness of the communication and stakeholder engagement. Also, through communication, exchange of relevant information, sharing knowledge about issues and opportunities, proper planning and a consensus about the best possible resolution can be arrived at.

For communication to be effective, communication planning should be done. Communication methods that result in behavior change do not just happen; they require systematic study and design that are all part of planning. "Communication planning is a participatory and socially inclusive process" that considers the views and active involvement of the stakeholders to "determine the design and contents of the communication activities based on the actual needs, opportunities and constraints of stakeholders" [10]. "The identification of predisposing, enabling and reinforcing factors to knowledge acquisition and behavior change should guide communication processes" [11]. Involving the stakeholders in planning motivates them to participate to initiate change [10].

Currently, since the TLEP Masterplan is not yet implemented, there are no identified communication materials specific to ecotourism in the area. Laresio Lakeside

Resort, a resort offering different activities for tourists, is the only one that has visible communication material using social media and brochures. Based on the Information, Education and Communication (IEC) and Social Development Program (SDP) of EPRMP conducted by Del Rosario, et.al [12] the program only recommended different media that can be used for IEC, such as social media, flyers, posters and conducting public consultations. The content of the materials that will be addressed the identified issues was not elaborated. Knowledge and knowledge gaps of the target audience were also not identified.

This study aimed to identify the environmental issues as perceived by stakeholders and how these may be addressed by a strategic communication plan. Specifically, it mapped out the relevant stakeholders of the TLEP and their perceptions of the environmental issues in TLEP. It also analyzed their communication needs and communication resources about addressing the environmental issues, in which key elements for the proposed communication strategy that will help address the identified environmental issues were drawn.

Identifying the environmental issues in TLEP will help the stakeholders address the problems properly. Ecotourism, which involves human activities, may interrupt the natural balance of the system, causing environmental problems on land, air, water and biodiversity and also to humans. It is important to understand environmental issues in TLEP because these problems may bring risks not just to humans but also to the environment itself. Knowing how stakeholders perceive these issues will help in coming up with an appropriate communication plan that will make them understand more TLEP as well as the problems to be address. People are dependent on their immediate environment for their food, livelihood and other needs, and their misinterpretations of the problems will lead to eventual sufferings. Communication with stakeholders will help them realize their roles in the problem, determine and identify the gaps in their knowledge, as well as identify the key elements to be included in the strategic communication plan; and with these, a communication needs assessment should be done. A communication needs assessment can be an instrument to identify which is an effective tool to disseminate information to find which is an appropriate intervention towards behavior change of the stakeholders. The study focused on the identification of the key elements and components of a strategic communication plan specific to the Tadlac Lake Ecotourism Project and therefore did not formulate the full-blown plan. The assessment covered the communication needs vis-à-vis available resources of the local communities of Tadlac needed for the formulation of an effective communication plan for the TLEP. For the data collection, the researcher used purposive sampling and conducted Focus Group Discussions (FGD) and Key Informant Interviews (KII) with the selected stakeholders' representatives, thus biases in the respondents' responses were not controlled during the data gathering. The results of this case study will be designed and analyzed particular to the needs and situation of Tadlac. The conclusions and recommendations might not apply to other settings.

## II. FRAMEWORKS OF THE STUDY

### 2.1 Theoretical Framework

Program theory by Rogers, et al. [13] was used to guide the study. This theory is popular for evaluation studies as it is used to guide the evaluation process by clearly stating the underlying assumptions about how programs are expected to work and can be developed before, during and after implementation [13]. It provides a picture of what needs to happen and how, and includes work from needs assessment to intervention design, from implementation to outcomes evaluation, and from policy formulation to policy execution.

A program theory can be a very useful way of bringing together existing evidence about a project, such as the Tadlac Lake Ecotourism Project, as it can help clarify where there is agreement and disagreement about how the program is understood to work, and where there are gaps in the current inputs or resources.

The program theory is depicted by the Input-Process-Output-Outcome/Impact model (Figure 1). The study, however, focused more on the status of the INPUT and the PROCESS and how these may be enhanced to bring about the desired output, and subsequently, the outcome or impact of the intervention or project.

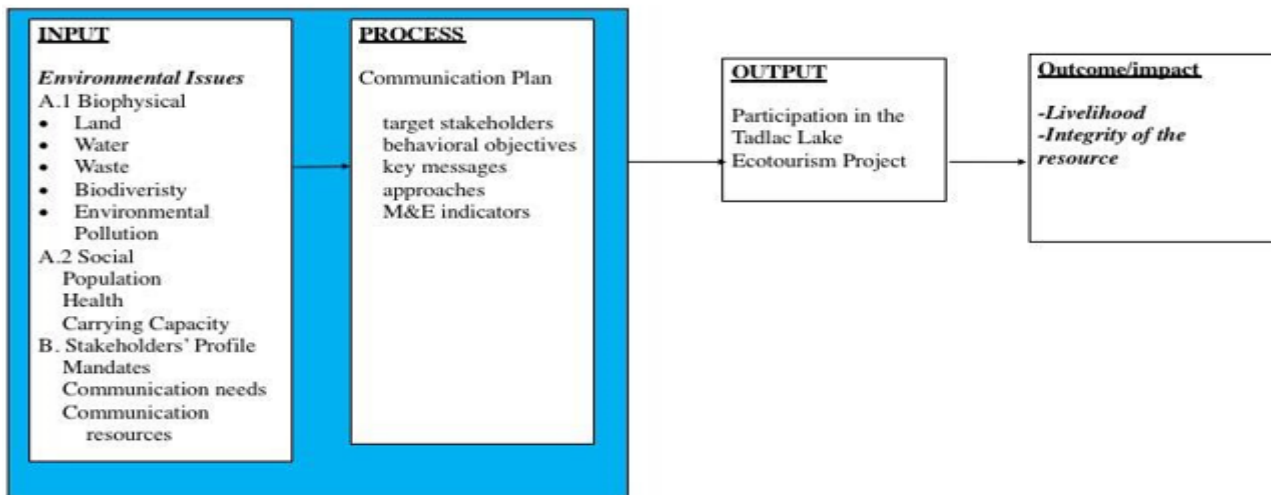


Figure 1. Theoretical Framework

### 2.2 Conceptual Framework

Following the theoretical framework above, the conceptual framework identifies the more specific concepts that were studied and their corresponding variables and indicators (Figure 2). This baseline study focused only on the Input and Process indicated within the blue box.

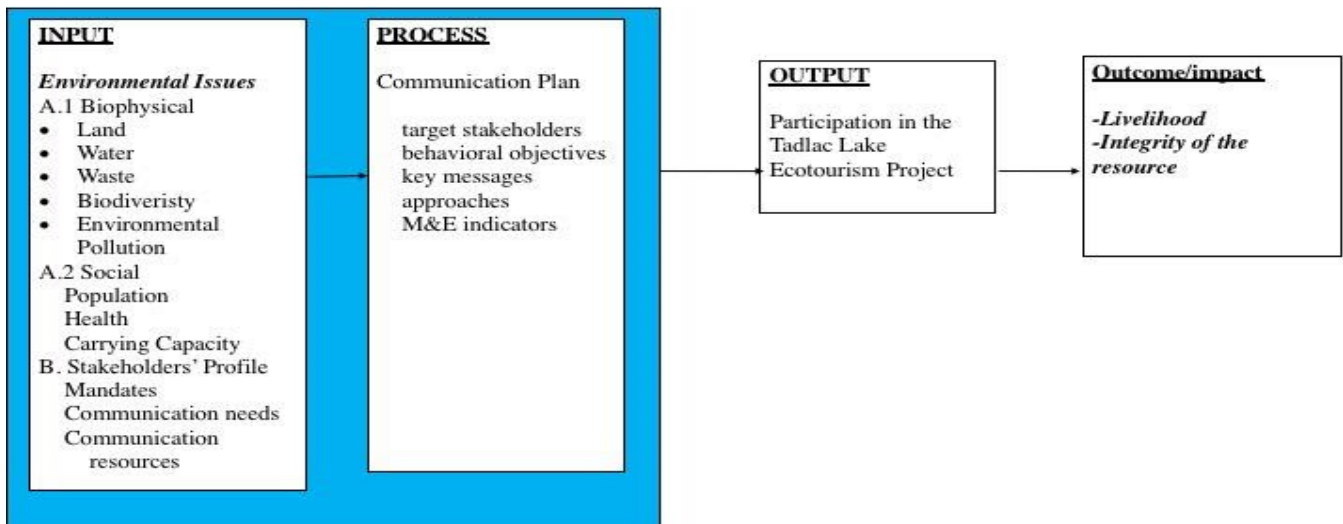


Figure 2. Conceptual Framework of the Study

## III. METHODOLOGY

### 3.1 Research Design

A case study, a form of descriptive study, was used to answer the research problem and objectives. A case study is an “approach to research that facilitates exploration of a phenomenon within its context using a variety of data

sources” [14]. A case study aims to understand the behavioral conditions through the perspective of the actors and to provide holistic and in-depth explanations of the problems [15].



Also, as cited by Zainal [15] from Yin [16], case study “explore and investigate contemporary real-life phenomenon through detailed contextual analysis of a limited number of events or conditions and their relationships”.

### 3.2 Respondents of the Study

Based on the Asian Development Bank’s (ADB) guide to stakeholder participation [17], stakeholders may be categorized into three main groups: government agencies that are responsible for the administration of Tadlac Lake, civil society groups composed of the residents of Barangay Tadlac, non-government organizations and professional organizations, and private sector, comprised of businesses. This will also be used to categorize the respondents in the study.

### 3.3 Sampling Procedure

Purposive or judgmental sampling was used because the study solicited responses from pre-identified stakeholder groups. They were purposively sought out, as they were the stakeholders identified earlier.

### 3.4 Methods and Instruments for Data Gathering

The study used qualitative methods for data gathering, namely focus group discussions (FGD) and key informant interviews (KII). Previous report about the Tadlac Lake Ecotourism Masterplan was also used due to the baseline data it contained and for comparison purposes. Participants were selected through the nomination of the selected groups of stakeholders. A moderator asked questions, and an assistant moderator assisted in documenting. Before the start, demographic information such as age and gender and other information relevant to the study were collected, and an introduction, explanation of purpose and rules were also be done. During the FGD proper, ten questions were asked in Filipino, and the answers were recorded using an audio device and note-taking by the assistant moderator. Consent forms were also distributed to the participants. KII is an

in-depth interview of the people selected because of their knowledge. It is appropriate in the study because, in the case of TLEP, KII is useful in all phases of a project and at the same time can show why stakeholders oppose or support the project. It is useful in understanding attitudes and behaviors of stakeholders and provide how and why an event is occurring [18]. After preparing the interview schedule, 25 interviewees were selected from the identified stakeholder groups. Interviews were conducted in Filipino and recorded using an audio device, as well as taking notes. Further, previous reports were used to supplement the findings.

### 3.5 Data Analysis

For the FGD, answers to key questions were documented on brown papers and media players and were analyzed using a thematic approach. Transcriptions were done to obtain details and supplement those written on brown papers. For KII, interview notes were summarized, and transcriptions of the recorded responses were done. Again, data were analyzed by constructing typologies. Some narratives were also included to enrich the data analysis and discussion. Synthesized results were also presented using information mapping.

## IV. RESULTS AND DISCUSSION

The environmental issues confronting TLEP as perceived by the community members were as follows: 1) waste generation and waste management; 2) water pollution and other water-related problems; 3) overcrowding in the area or overpopulation and space due to movement of people; 4) space or carrying capacity; and 5) flooding. Another problem that would lead to environmental problems is the issuance of permits to the businesses. Authorities perceived that the improper issuance of permit and zoning could lead to the proliferation of unwanted resort businesses that could eventually damage the environment. The summary is shown in [Table 1](#).

**Table 1. Environmental Issues as Perceived by the Stakeholders**

Issues	Government Agencies	Civil Societies	Private
Water Pollution / Quality	x	x	x
Ecotourism	x	x	x
Permit	x	x	x
Overpopulation/Overcrowding/Security	x	x	
Waste Management	x	x	
Buffer Zone	x	x	
Space		x	x
Diseases/Health and Sanitation		x	
Flooding		x	
Fishkill		x	
Biodiversity		x	
Carrying Capacity	x		x

In TLEP, the project implementors are the Local government unit of Los Baños, Barangay Tadlac Council and the LLDA because they are the ones in control of the laws and executing the existing laws related to the environment. The primary stakeholders are the residents and private businesses in Barangay Tadlac, since they will be the beneficiaries of the ecotourism program and are the ones who will play a major role. The secondary stakeholders will be the civil society groups who will serve as support to the primary stakeholders. Stakeholders as well as their roles in the IEC Plan for TLEP were identified as shown in [Table 2](#).

**Table 2. Target Stakeholders and Their Roles in the IEC Plan for TLEP**

Stakeholder	Role
A. Implementor – (LGU, Barangay, LLDA)	<ul style="list-style-type: none"> <li>Execute the implementation of the law and IEC planning in the Tadlac Lake Ecotourism Project</li> <li>Provide support to the community</li> <li>Protect support to the welfare of the community</li> </ul>
B. Primary Stakeholders <ul style="list-style-type: none"> <li>Residents (Community Members)</li> <li>Private Businesses</li> </ul>	<ul style="list-style-type: none"> <li>Comply with rules and regulations about the environment</li> <li>Secure environmental permits</li> <li>Advocate for the protection and conservation of Tadlac Lake</li> <li>Help the community by providing jobs to the locals</li> </ul>
C. Secondary Stakeholders <ul style="list-style-type: none"> <li>Civil Society Groups</li> </ul>	<ul style="list-style-type: none"> <li>Advocate for the protection and conservation of Tadlac Lake</li> <li>Educate community members and spread knowledge and information about ecotourism (benefits, possible threats, etc.)</li> <li>Act as watchdogs for illegal activities and abuses in the lake</li> </ul>

## V. CONCLUSIONS AND RECOMMENDATIONS

For the communication plan, key messages and which medium to be used will be included. Based on the data gathered, community members said that they want to learn what ecotourism is since most of them were not really aware of the concept and how it works. Also, based on the responses, efforts with regard to IEC need to be intensified. Information was disseminated to them through the barangay officials' announcement. When asked where they want to gather information, some said that the barangay should hold more consultations. Aside from that, brochures, flyers and leaflets as well and posters were cited as preferred channels. When asked what the most accessible way for them for information sharing, "word-of-mouth" or face-to-face interaction was reported. Currently, no comprehensive IEC plan for the ecotourism program of Barangay Tadlac has been formulated. Stakeholders are "people or small groups with the power to respond to, negotiate with, and change the strategic future of the organization" [19]. Proposed elements of the communication strategies are summarized in [Tables 3, 4, and 5](#) as shown in the results of FGD and KII.

**Table 3. Proposed Elements of the Communication Strategy for LLDA**

Stakeholder	Objective	Key Message	Media/ Channel	Communication Approach
LLDA and Barangay Officials	<ul style="list-style-type: none"> <li>Execute the implementation of the law and the IEC plan in the Tadlac Lake Ecotourism Project</li> <li>Explain the concept of ecotourism to the community and the importance of Tadlac Lake as a resource</li> <li>Understand the long-term drawback of ecotourism and how it can be mitigated</li> </ul>	<ul style="list-style-type: none"> <li>Opportunities and threats that may affect TLEP and the community</li> <li>Concept of ecotourism</li> <li>Profile of Tadlac Lake (geographical, physical, biological, socio-economic, vulnerability, biodiversity)</li> </ul>	<ul style="list-style-type: none"> <li>Seminar</li> <li>Posters</li> <li>Community Gatherings</li> <li>Videos</li> <li>Trainings</li> </ul>	<ul style="list-style-type: none"> <li>Participatory Communication</li> <li>Communication Meetings</li> <li>IEC</li> <li>Social Mobilization</li> </ul>

**Table 4. Proposed Element of Communication Strategy for CSOs**

Stakeholder	Objective	Key Message	Media/Channel	Communication Approach
CSOs	<ul style="list-style-type: none"> <li>Understand the concept of Ecotourism and the importance of Tadlac Lake as a resource</li> <li>Advocate for the protection and conservation of Tadlac Lake</li> <li>Educate community members and spread knowledge and information about ecotourism (benefits, possible threats, etc.)</li> <li>Comply with rules and regulations about the environment</li> <li>Act as watchdogs for illegal activities and abuses in the lake</li> </ul>	<ul style="list-style-type: none"> <li>Concept of Ecotourism and importance of Tadlac Lake as a resource</li> <li>Environmental issues, problems and threats</li> <li>Possible benefits and threats that may arise with the project</li> <li>Protection and conservation of the environment</li> <li>Threats to Tadlac Lake</li> </ul>	<ul style="list-style-type: none"> <li>Seminars</li> <li>Trainings</li> <li>Manuals</li> <li>Infographs</li> <li>Videos</li> <li>Posters</li> <li>Community Gatherings</li> </ul>	<ul style="list-style-type: none"> <li>Participatory Communication</li> <li>Communication Meetings</li> <li>IEC</li> <li>Social Mobilization</li> </ul>

Table 5. Proposed Element of Communication Strategy for Private Business

Stakeholder	Objective	Key Message	Media/Channel	Communication Approach
Private Business	<ul style="list-style-type: none"> <li>Understand the concept of Ecotourism and the importance of Tadlac Lake as a resource</li> <li>Identify the possible environmental issues, problems with development</li> <li>Enumerate the benefits of the community from ecotourism</li> <li>Comply with rules and regulations about the environment</li> </ul>	<ul style="list-style-type: none"> <li>Concept of Ecotourism and importance of Tadlac Lake as a resource</li> <li>Environmental issues, problems and threats</li> <li>Benefits of ecotourism Protection and conservation of the environment</li> </ul>	<ul style="list-style-type: none"> <li>Seminars</li> <li>Trainings</li> <li>Manuals</li> <li>Infographs</li> <li>Videos</li> <li>Posters</li> </ul>	<ul style="list-style-type: none"> <li>Information, Education and Communication</li> <li>Social Mobilization</li> <li>Social Marketing</li> </ul>

## 5.2. Recommendations

### 1. For TLEP Implementors

It is recommended that the Tadlac Lake Ecotourism Masterplan, which is more than 10 years old, be revised since it is already outdated. Other than that, the implementation of the Information, Education, and Communication plan is advised so that stakeholders will have a full grasp of ecotourism as a concept and the possible threats and benefits that will come with it. The Laguna Lake Development Authority, as an agency that is in charge of Tadlac Lake, should implement strictly the law to monitor the status of the resources and work hand in hand with the LGU, since some environmental issues, as said by the LGU, can only be addressed with the go signal of LLDA. To ensure that the lake will not be commercialized, permits should be applied for first through the proper agencies before operation.

### 2. For Environmental Communication Planners

It is advised that environmental planners should formulate a clear, documented strategic communication plan specific to TLEP based on the baseline data.

### 3. For future study

The following are the areas of study that can be focused on in the future:

1. Water Quality of Tadlac Lake and its effects on the community;
2. Economic Valuation of Tadlac Lake;
3. Implementation of the IEC of TLEP; and
4. Carrying capacity and the environmental messages studies.

## DECLARATION

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Ethical Approval and Consent to Participate	No, the article does not require ethical approval and consent to participate with evidence.
Availability of Data and Material/ Data Access Statement	Dara is relevant and available upon request to the author.
Authors Contributions	The main author is Lee Catherine E, who conducted the study under the guidance of the co-author Torres Cleofe S.

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