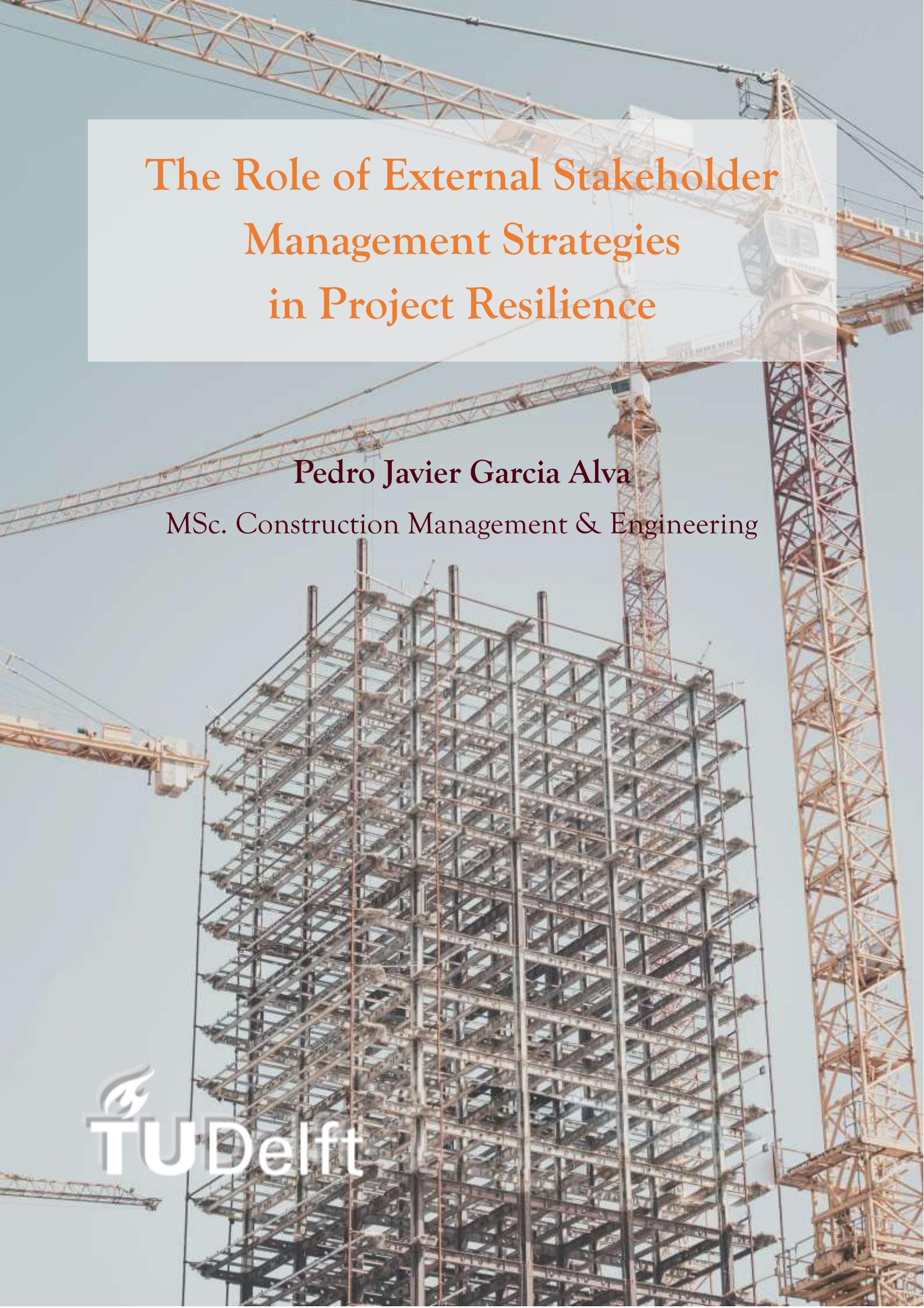


# The Role of External Stakeholder Management Strategies in Project Resilience

**Pedro Javier Garcia Alva**

MSc. Construction Management & Engineering

TU Delft

“All change is not growth, as all movement is not forward”

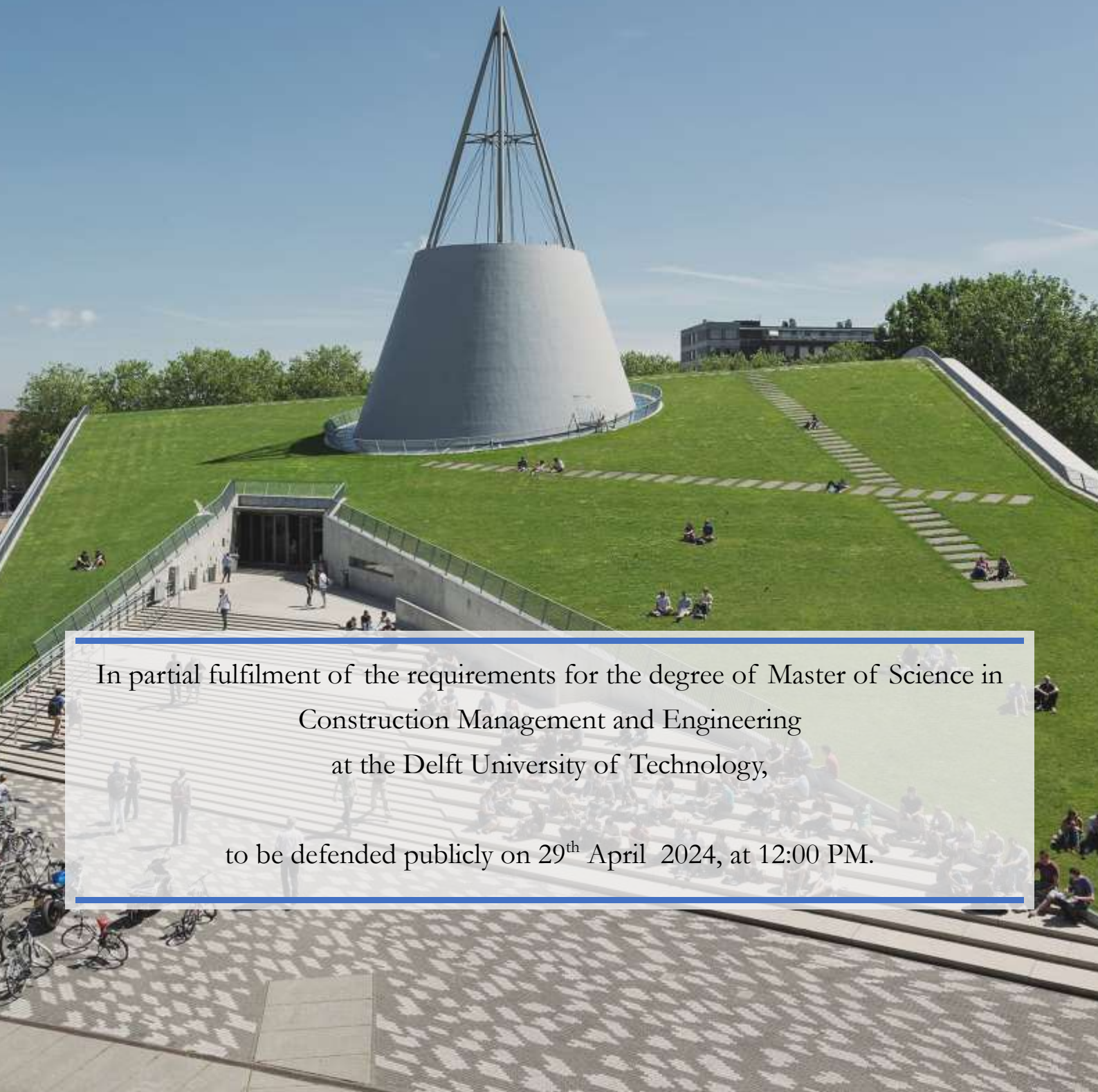
— Ellen Glasgow

# Master Thesis

## The Role of External Stakeholder Management Strategies in Project Resilience

by

Pedro Javier Garcia Alva



In partial fulfilment of the requirements for the degree of Master of Science in Construction Management and Engineering
at the Delft University of Technology,

to be defended publicly on 29th April 2024, at 12:00 PM.

# Colophon

## Research

| | |
|---|---|
| *Research Title* | The Role of External Stakeholder Management Strategies in Project Resilience. |
| *Document Type* | Graduation Thesis |
| *Date* | 29th of April 2024 |
| *Author* | Pedro Javier Garcia Alva |
| *University* | Delft University of Technology |
| *Faculty* | Civil Engineering and Geosciences (CiTG)<br>Architecture and the Built Environment (ABE)<br>Technology, Policy and Management (TPM) |
| *Master Track* | Construction Management and Engineering |
| *Degree* | Master of Science |

## Graduation Committee

| | |
|---|---|
| *Chairman* | Prof. dr. ir. P.W. Chan<br>Faculty of Architecture and the Built Environment, TU Delft |
| *First Supervisor* | Dr.ir. Johan Ninan<br>Faculty of Civil Engineering and Geosciences, TU Delft |
| *Second Supervisor* | ir. Hans Ramler<br>Faculty of Civil Engineering and Geosciences, TU Delft |

Delft University of Technology
Faculty of Civil Engineering and Geosciences
Stevinweg 1
2628 CN, Delft
The Netherlands

***Repository Version***

# Abstract

This thesis investigates the role of external stakeholder management in fostering resilience within infrastructure projects, focusing on the complexities arising from interactions between stakeholders and project organizations. The research problem centres on how different stakeholder management strategies affect project resilience, especially in challenging environments.

To address this problem, a qualitative single-case study methodology was used, examining the "Tunel Diamante" project in Acapulco, Mexico. This approach allowed for an in-depth exploration of 26 events involving external stakeholders, such as government entities and landowners, to determine how their influence strategies and the project's responses affect project resilience.

From the analysis, the thesis identified three primary traditional influence strategies employed by external stakeholders: 'progress obstruction,' 'protest,' and 'demand for compromise.' Additionally, it introduced two innovative categories: 'collateral events' and 'proactive mitigation.' These latter strategies indicate a broader and more nuanced understanding of stakeholder influence.

The project adopted four response strategies: resourcefulness, dialogue and negotiation, coercive negotiation, and ignoring. These influenced the type of resilience, from absorptive to adaptive and transformative. Resourcefulness, characterised by adaptability, was linked to all types of resilience, while dialogue and negotiation generally led to absorptive resilience. Coercive negotiation had mixed results, raising ethical concerns.

The findings suggest that stakeholder management strategies can significantly impact project resilience but may involve trade-offs and ethical considerations. This thesis contributes to the discourse on resilience in project management and offers practical insights into how external stakeholder management strategies shape resilience. It concludes that proactive and ethical stakeholder management is crucial for achieving sustainable project resilience, emphasising the importance of engaging stakeholders early and addressing their concerns constructively.

***Keywords***: External stakeholder management, project resilience, infrastructure projects

# Acknowledgements

This thesis marks the culmination of my Master's degree program at Delft University of Technology, a journey that has been both rewarding and challenging. Reflecting on this path, I realize that I could not have reached this point without the invaluable support of many. Although the journey was often solitary, it was made possible by the guidance and encouragement of numerous people.

First, I want to express my deepest gratitude to my graduation committee, whose mentorship has been instrumental in my success. Paul, thank you for your unique perspective and for the challenging-provoking questions that pushed me to think critically. Thanks, Hans, for sharing your extensive practical experience, offering a grounded perspective, and providing fair criticism and constructive feedback. A special thanks to Johan, whose continuous supervision and guidance provided the clarity and pragmatic direction I needed to navigate this complex process.

I extend heartfelt thanks to my family in Mexico, whose long-distance encouragement has always been a source of strength. My deepest gratitude goes to my parents, who motivated me to study from a young age and whose support has been fundamental to my achievement.

To my friends, both in Mexico and here in the Netherlands, thank you for your companionship along this process. In particular to my good friends of the 'thesis mental support group' for their company making the journey less lonely.

To Mariana, for your unwavering support and companionship, for listening, learning with me, explaining things to me, and standing by me through both the good and bad days. Thank you for walking alongside me on this journey. And to Pek, her unconditional love and for bringing structure to my days when I needed it.

# Contents

# List of Tables

# List of Figures

# List of Abbreviations

| Abbreviation | Definition |
|---|---|
| APM | Association for Project Management |
| CSR | Corporate Social Responsibility |
| CONAGUA | National Water Commission (Authority) of Mexico |
| PEMEX | State-owned Oil&Gas company of Mexico |
| PM | Project Management |
| PMI | Project Management Institute |
| PROFEPA | Federal Attorney for Environmental Protection of Mexico |
| PO | Project Organisation |
| SA | Stakeholder Analysis |
| SE | Stakeholder Engagement |
| SNA | Social Network Analysis |
| SRI | Stanford Research Institute |
| SM | Stakeholder Management |
| UK | United Kingdom |
| UN | United Nations |
| UNOPS | United Nations Office for Project Services |
| USA | United States of America |
| VUCA | Volatility, Uncertainty, Complexity, and Ambiguity |

# GLOSSARY

| Term | Definition |
|---|---|
| Absorptive Resilience | Absorptive resilience is characterized by a system's ability to resist disturbances and maintain its existing structure and function. This form of resilience is primarily reactive, dealing with low uniqueness disturbances that can typically be anticipated through risk assessments and contingency planning |
| Adaptive Resilience | Adaptive resilience extends beyond recovery to incorporate adjustments and modifications that allow the system to continue functioning amidst disturbances. It responds to 'known unknowns' and enables the system to adjust and navigate within thresholds without fundamentally altering its essence. |
| Adaptive Capacity (Resilience) | Adaptive capacity or Adaptability, refers to a system's ability to respond to changes, recover from disturbances, and adjust to new conditions. |
| Amparo | AMPARO is a judicial or legal action to protect an individual or individuals from the acts or omissions of the authorities that violate the human rights and guarantees protected by the Mexican Constitution (Mexicanlaws S.A. de C.V., n.d.). |
| Continuity of Essence | A component of resilience that emphasises the capacity of a subject—whether an individual, organisation, or system—to change while still maintaining its core identity or essence throughout the process. Despite evolution or transformation triggered by internal or external adversities, the subject remains recognisable to itself or an external observer as the same entity (Frigotto et al., 2022). |
| Civil Protection Agency | Its purpose is to protect people's physical integrity in disasters caused by natural or human agents, reducing or eliminating human loss, material goods destruction, and environmental damage. |
| Ejido/Ejidatario | A tract of land held in common by the inhabitants of a Mexican village and farmed cooperatively or individually. And Ejidatario is a member of an ejido (Merriam-Webster, n.d.-a). |
| External Stakeholder | External stakeholders are those who influence or are influenced by the project, but are not normally engaged in transactions with the project and may not be essential to the survival of the |

| | |
|---|---|
| | project (Chinyio & Olomolaiye, 2010). |
| National Government | Refers to the National level or Federal government of Mexico |
| Project Organisation (PO) | In the context of the research the term 'project organisation' is used to imply the inter-organisational group including all relevant decision makers, like the company and its governmental sponsor. |
| Resilience | Resilience in the context of infrastructure projects refers to the capacity of a project to anticipate, resist, absorb, respond to, adapt to, and recover from disturbances emanating from the external environment of the project. |
| Stakeholder | "Individuals or groups who have an interest or some aspect of rights or ownership in the project, and can contribute to, or be impacted by, either the work or the outcomes of the project." (D. H. T. Walker et al., 2008) |
| State Government | Used to reference the government of the State of Guerrero in Mexico. |
| Transformative Resilience | Transformative resilience represents the most profound level of adaptation, where the system undergoes fundamental changes in response to high uniqueness disturbances. |

# PREFACE

Throughout this journey, I've delved into the theoretical and practical aspects of construction management and engineering projects. This thesis has been a significant learning experience, testing my 'resilience' and pushing me out of my comfort zone. It represents the culmination of a process filled with challenges, growth, and insights.

The report is the result of an iterative process, reflecting the unpredictable pace of life~ and of infrastructure projects. It underwent several revisions, not only in content but in scope, evolving to accommodate new ideas and feedback. Which is why I feel a great sense of accomplishment in completing this work. And while there's always room for improvement, I'm proud of this thesis, with all its strengths and shortcomings.

My motivation for this work lies in my roots. From a young age, I was fascinated by engineering, mesmerized by television programs about megaprojects and the engineers who solved complex technical challenges. This approach continued through my university studies, where I was trained to tackle technical problems. However, as I gained real-world experience in Mexico, I quickly learned that many project challenges aren't technical at all. They are rooted in the social and environmental complexities of the context.

Given this backdrop, I developed a keen interest in the 'external' factors that challenge projects. I've seen firsthand the importance of ensuring infrastructure projects provide genuine value and benefit for all stakeholders. However, navigating this complex environment is easier said than done. My hope is that the work I have done over the past seven months can be a modest contribution towards a better understanding of how to truly make projects resilient but also inclusive. I hope that resilience in its fullest sense will eventually represent not only the ability of a project to persist but to persist with purpose and delivering lasting value and benefit for its stakeholders.

*P.J. Garcia*

*Delft, April 2024*

# Executive Summary

## Introduction & Scope of Research

Project management's goal is to achieve success, yet achieving it relies on navigating through challenges and uncertainties. The modern project landscape is increasingly characterised by volatility, uncertainty, complexity, and ambiguity (VUCA), which present significant obstacles to traditional project management approaches.

In this complex environment, external stakeholders are central to project outcomes. When engaged appropriately, they can drive success, but they can also become sources of strong opposition, steering projects towards undesired results. The limitations of the conventional "predict and control" paradigm have led to a shift towards a more adaptable and agile mindset, known as the "prepare and commit" approach. This shift is a strategic response to the dynamic nature of project environments, where the concept of resilience has become crucial.

This study aims to explore the intersection between stakeholder management and project resilience in infrastructure projects, recognising the influence of external stakeholders. It addresses the following research question: How do different external stakeholder management strategies influence resilience in infrastructure projects operating in dynamic and challenging environments?

The research then aims to answer the question of: **how stakeholder management strategies contribute to project resilience?** Through a single-case study methodology. It underscores the significance of engaging with external stakeholders and acknowledges their impact on infrastructure project implementation, offering a fresh perspective on infrastructure project management.

## Methods

The research employs a qualitative single-case study methodology, focusing on the "Tunel Diamante" project in Acapulco, Mexico. This approach allows for an in-depth exploration of the challenges and dynamics involving external stakeholders and their impact on project resilience. The case study examines a tunnel project designed to connect the bay and major tourist areas with the new residential zones and the airport of Acapulco. Given the significant external stakeholder involvement and execution complexities, this project provides a suitable context for investigating stakeholder management and resilience.
Data collection involved semi-structured interviews with key stakeholders, including project managers, government officials, and local residents. Additionally, the study analysed public information, news articles, and project-related documents to understand the broader con-

text and gain insights into external stakeholder influence strategies, and the project responses.

The analysis cantered on 26 events related to external stakeholders, exploring their influence strategies and the responses employed by the project organization. This case study method provided a detailed understanding of the complex interactions that shape project resilience.

## Results and Discussions

The research conducted on the case study has revealed some significant findings. The study included over three hours of interviews with the main stakeholders, as well as an analysis of more than 170 news articles and other publications related to the case study. This comprehensive exploration of the case study highlighted the various influence strategies used by external stakeholders and the corresponding management strategies the project organisation employed in response.

The research identifies three traditional influence strategies employed by external stakeholders. Firstly, 'Demand for Compromise' reflects the leveraging of power and legitimacy by government authorities and other stakeholders to influence project operations, often leading to concessions from project management. Secondly, 'Progress Obstruction' encompasses tactics that hinder or block project progress, including strikes, blockades, and legal actions. Thirdly, 'Protest' represents a broader range of stakeholder opposition tactics, from public demonstrations to coalition-building. In addition to these traditional strategies, the study introduces two innovative categories. 'Collateral Events' emerge as a significant addition to existing frameworks, emphasizing the importance of considering the indirect outcomes or repercussions of other stakeholder actions. The study also emphasises the importance of 'Proactive Mitigation' as a strategy to prevent potential conflicts from escalating into significant challenges.

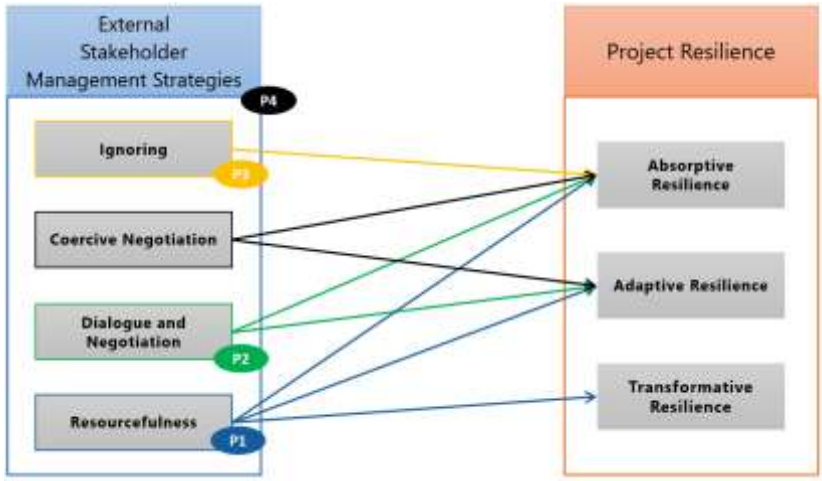
The research has identified four management strategies that organizations use to respond to the external stakeholders' actions, in turn these strategies influenced the type of resilience achieved in the project, from absorptive to adaptive and transformative:

- Resourcefulness: This strategy is characterized by adaptability, allowing project management to reallocate resources and adjust construction methods. It can support all types of resilience—absorptive, adaptive, and transformative—depending on the situation's demands.
- Dialogue and Negotiation: This strategy involves engaging with stakeholders to address concerns and resolve conflicts. It is generally associated with absorptive resilience when used proactively but can lead to adaptive resilience when addressing escalated conflicts.

- Ignoring: This strategy involves disregarding certain stakeholder actions when their claims lack sufficient legitimacy. It can lead to absorptive resilience, allowing the project to continue with minimal changes.
- Coercive Negotiation: This strategy involves exerting pressure or force to influence stakeholder actions. While it can achieve resilience, it carries ethical risks and may have long-term negative consequences.

Given the findings, and to answer the research question, a series of propositions were derived.

- **Proposition 1 (P1)**: Resourcefulness as a response strategy exhibits a high degree of adaptability. It can support all types of resilience—absorptive, adaptive, and transformative—depending on the unique demands of the situation and the nature of stakeholder interactions. The outcome in terms of resilience is contingent upon the complexity of the disturbance, the immediacy of the threat to project integrity, and the strategic objectives of the Project Organisation.
- **Proposition 2 (P2):** The deployment of 'Dialogue and Negotiation' by the Project Organisation, whether used proactively or in response to influence strategies like 'Protest' or 'Progress Obstruction', typically promotes absorptive resilience, thereby aiming to contain emerging situations and preserve the project's trajectory. Conversely, when this strategy is reactive to already escalated conflicts, it prompts adaptive resilience, necessitating the integration of changes to effectively manage and resolve the conflict.
- **Proposition 3 (P3):** Ignoring strategies are likely to be employed when the stakeholder's influence threatens project progress, and the claim lacks enough legitimacy to be instrumentally ignored without leading to conflict escalation. This usually leads to absorptive resilience, as the project continues without significant changes.
- **Proposition 4 (P4):** Stakeholder management practices—whether proactive or reactive—should be bound to normative principles, prioritising ethical management strategies, and fostering purposeful negotiations.



## Recommendations for Practice and Future Research

Based on the findings, the following recommendations are proposed for practitioners in infrastructure project management. First, prioritise proactive dialogue and negotiation with external stakeholders. Early engagement can prevent escalation and foster absorptive resilience, allowing projects to maintain their trajectory without significant disruptions.

Avoid coercive negotiation tactics, as they can lead to adverse outcomes, such as ethical risks and prolonged conflicts. Promote a normative approach to stakeholder management to ensure that ethical practices underpin project decisions. This strategy helps to cultivate a supportive project environment and reduces the likelihood of coercive practices, resulting in a more resilient project.

Project managers should cultivate flexibility and adaptability in their strategies, recognising that stakeholder influence can often lead to unforeseen project adjustments. However, excessive adaptation should be avoided as it may result in undesirable compromises that affect project success. Lastly, resourcefulness should be encouraged, but with careful consideration of the project's goals and available resources. While it can lead to various resilience outcomes, it requires significant resources and can introduce unforeseen challenges.

Future research should further explore the relationship between stakeholder management strategies and project resilience in a broader context. Exploring the influence of internal stakeholders on project resilience, along with inter-organisational dynamics, can offer valuable insights into the factors that contribute to or hinder project success. Additionally, examining the role of various contract types and organisational structures in shaping project resilience is warranted.

Finally, expanding the study to include a larger dataset and more diverse case studies would help validate the proposed framework, allowing for greater generalizability and applicability across a wider range of infrastructure projects.

# Reading Guide

**The thesis is divided into 6 chapters.**

**Chapter 1** introduces the research and its foundational backdrop. It also articulates the research problem, outlines the research objectives, defines the scope, and presents the main research question along with its sub question.

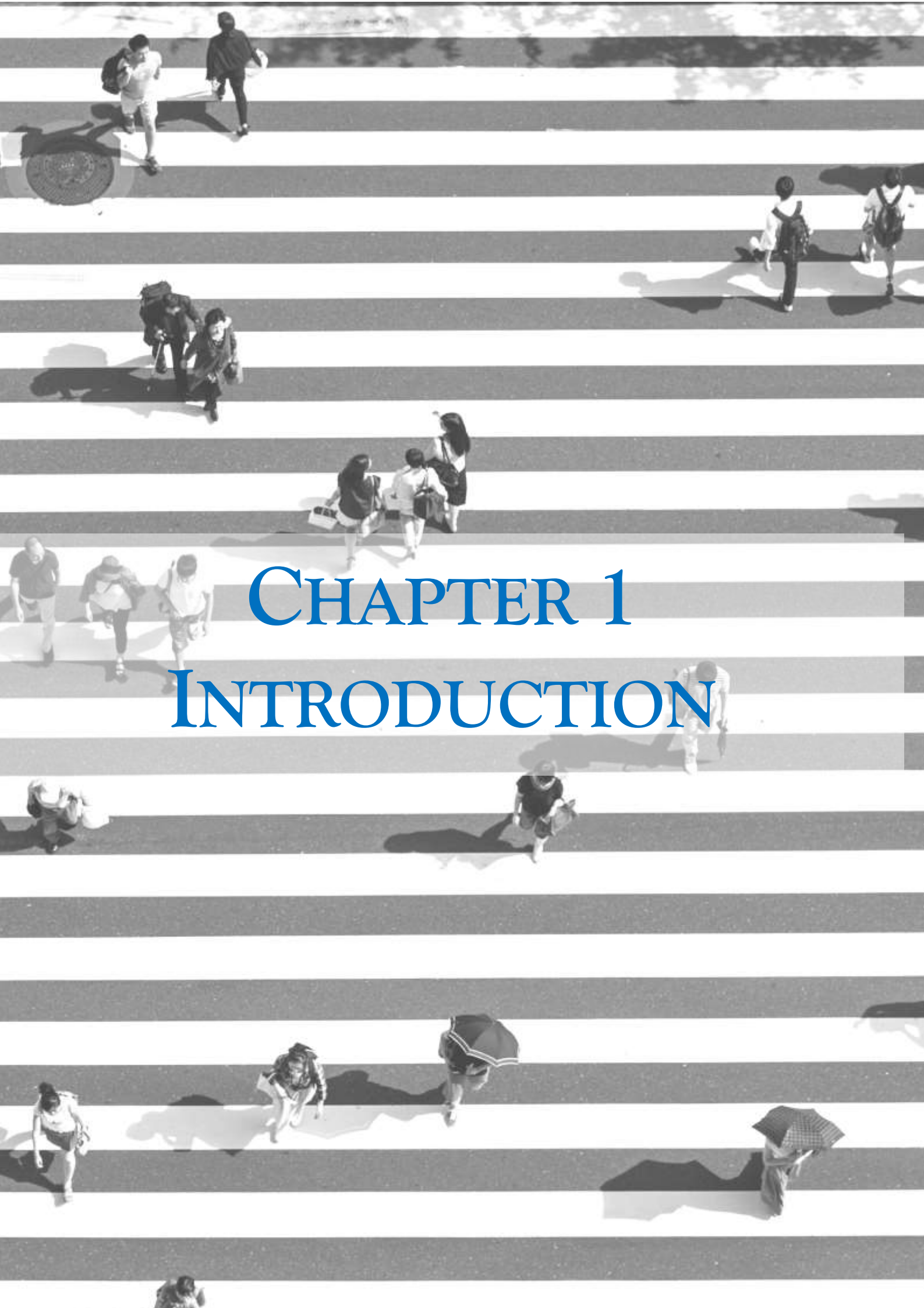
**Chapter 2** describes the research methods employed to address the research questions.

**Chapter 3** is divided into three main sections. The first explores the theoretical underpinnings of the research, tracing the evolution of the stakeholder concept and its impact on stakeholder management practices. The following section within the reviews the literature centred in stakeholder management as a process, its methods and its challenges, and the las section reviews the concept of resilience, including its foundations and its relation to infrastructure projects.

**Chapter 4** presents the empirical findings derived from the analysis of the case study of a Mexican infrastructure project.

**Chapter 5** encompasses the synthesis of insights and interpretations, fostering a robust discussion.

Lastly, **Chapter 6** culminates the thesis with the conclusion, answering the sub questions, presenting implications, limitations and potential avenues for future research.



# Chapter 1
# Introduction

# 1 | Introduction

This chapter aims to set the stage for this research by establishing the theoretical and practical context that anchors the research. It starts with a brief research background, followed by a problem definition and statement. Then it addresses the scope of the research and lays down the research objective and research questions.

## 1.1 Research Background

Infrastructure serves as the foundation of local and national economies and plays an essential role in their economic growth and development. Consequently, infrastructure assets and projects are more than just physical structures like roads and buildings; they are enablers of change. As UNOPS (2023) highlighted, infrastructure is an interconnected system that forms the backbone of a functioning society, affecting every aspect of human life as it provides essential utilities that fuel economic activities. The impact of infrastructure projects ranges from education and job opportunities to economic growth and public safety. Furthermore, the role of infrastructure has expanded beyond economic development to sustainability efforts, as it is critical to achieving 92% of the Sustainable Development Goals (Thacker et al., 2018).
Despite the significant importance of infrastructure projects in the global context, it is essential to confront the less favourable reality often associated with these types of projects. Infrastructure projects are often planning disasters due to public resistance, their lack of transparency and accountability, corruption, cost overruns, delays, environmental affectations, and underperforming assets that fail to deliver their intended benefits (Di Maddaloni & Davis, 2017; Flyvbjerg et al., 2003; Locatelli et al., 2017). Moreover, such failures remain prevalent despite technological advancements, a growing body of knowledge, and increased project management expertise. Although statistics on the issue may vary, a study by Flyvbjerg and Gardner (2023) examining over 16,000 projects revealed that 91.5% went over budget, schedule, or both. Their analysis suggests that only 0.5% of projects are delivered on budget, on time, and within benefits.

Managing construction projects is complex due to the uncertain and dynamic environment in which construction projects are usually executed. These challenges are exacerbated by the global rise in volatility, uncertainty, complexity, and ambiguity (VUCA) (Naderpajouh et al., 2020). To navigate these complexities, researchers have explored various angles. Historically, since the origins of project management as a discipline in the 1950s, the focus has been on the 'control' paradigm. This approach is now considered ‘traditional project management’. Academics argue that traditional project management is a mechanistic approach unsuited to the continuous adjustments required to address the dynamic context (Cuppen et al., 2016). Since the early 2000s,

there has been a notable shift towards more flexible, dynamic, and adaptable approaches to address current challenges.

Consequently, there has been increased interest in the 'people' aspect of projects. This includes networks, stakeholders, institutions, collaboration methods and approaches, as well as sustainability in its broader form. This has resulted in a move away from conventional management methods centred on the "predict and control" approach towards a more agile and flexible mindset that prioritises "prepare and commit" (Bakker & de Klejin, 2018).

## 1.2 Problem Definition

Project management's primary objective is to achieve project success, a concept subject to diverse interpretations and influenced by various factors. While there is ongoing debate surrounding the precise definition of success, effective stakeholder management is widely acknowledged as a critical component of project management activities and a key determinant of project success. This is reflected and confirmed by the extensive academic work dedicated to understanding the essential role of stakeholders and how to manage them (Aaltonen, 2010; El-Gohary et al., 2006; Jergeas et al., 2000; Newcombe, 2003; Olander & Landin, 2008).

However, one crucial yet often overlooked aspect of construction project stakeholder management is external stakeholder management. As external stakeholder complexity increases, the project performance decreases (Bosch-Rekveldt et al., 2011). Walker et al. (2008) emphasise the importance of external stakeholders' cooperation and support for project success.

Despite extensive scholarly attention to stakeholder management, several critical issues remain understudied. For instance, managing the complex network of stakeholders in megaprojects and PPPs (Amadi et al., 2018; Castelblanco et al., 2022), the dynamic nature of stakeholder relationships that change with the project lifecycle (Aaltonen & Kujala, 2010; Teo & Loosemore, 2017; Xue et al., 2020), the recognition and engagement of local communities and other external stakeholders (Derakhshan et al., 2019; Di Maddaloni & Sabini, 2022), and in the context of the construction industry, external stakeholder management has not received sufficient attention theoretically and practically (Oppong et al., 2019).

## 1.3 Problem Statement

The dynamic nature of external stakeholder management in infrastructure projects presents a critical challenge that demands an alternative approach, as current practices and theories in stakeholder management fall short of the volatile, uncertain, complex, and ambiguous external environment in which projects are.

## 1.4 Research Scope

Infrastructure projects are inherently complex, characterised by intricate networks, relationships, and interrelated processes. Many factors influence the success or failure of projects, resulting in various perspectives from which they can be examined. Figure 1 presents a simplified project environment with its key players and interconnections. Central to this research is the dynamic relationship between the project organisation (PO) and its external stakeholders, highlighted in red.

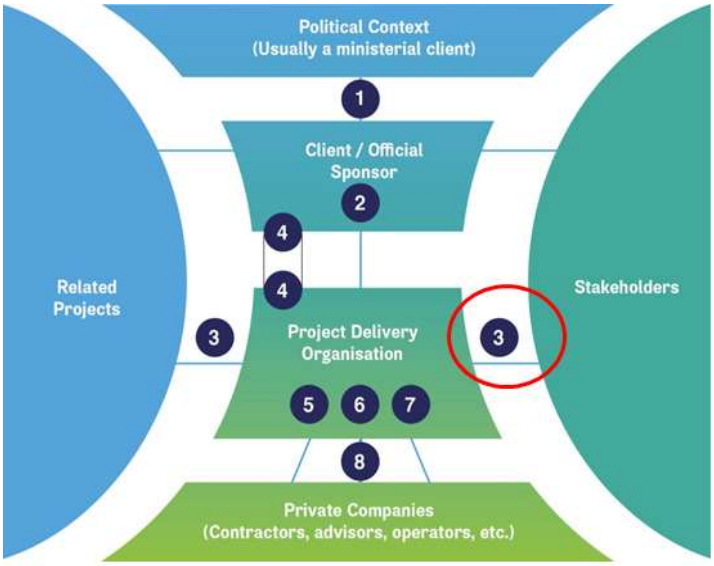



**Figure 1:** Project Environment
*Source: Adapted from (NETLIPSE, n.d.)*

This study further narrows its focus to external stakeholders, recognising their critical but often overlooked influence on project outcomes (T. H. D. Nguyen et al., 2019), and the strategies employed to manage their relationship. Additionally, it adopts a process perspective on stakeholder management, meaning the sequential and interrelated steps of stakeholder analysis, engagement, and management strategies.

Resilience research, traditionally explored from an organizational standpoint, has recently been extended to the project domain (Naderpajouh et al., 2020). This research contributes to this emerging discourse by examining resilience at the project level, specifically through the lens of the project organisation (PO). It seeks to understand how external stakeholder management strategies contribute to or detract from project resilience within the unique context of infrastructure projects.

Based on the research scope, the following initial conceptual frameworks is proposed, highlighting the specific scope of the research.

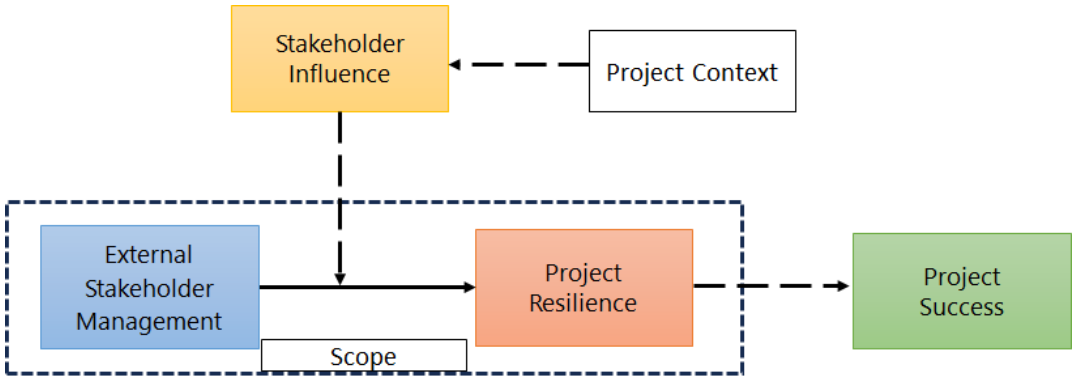



**Figure 2:** Initial Conceptual Framework

## 1.5 Research Objective

Having considered the research background and problem definition, the purpose of this study is to:

---

*"To provide insights and recommendations for improving external stakeholder management strategies in infrastructure projects, contributing to resilience in infrastructure projects"*

---

## 1.6 Research Questions

Based on the problem statement, and to achieve the research objective, the following main research question was formulated:

---

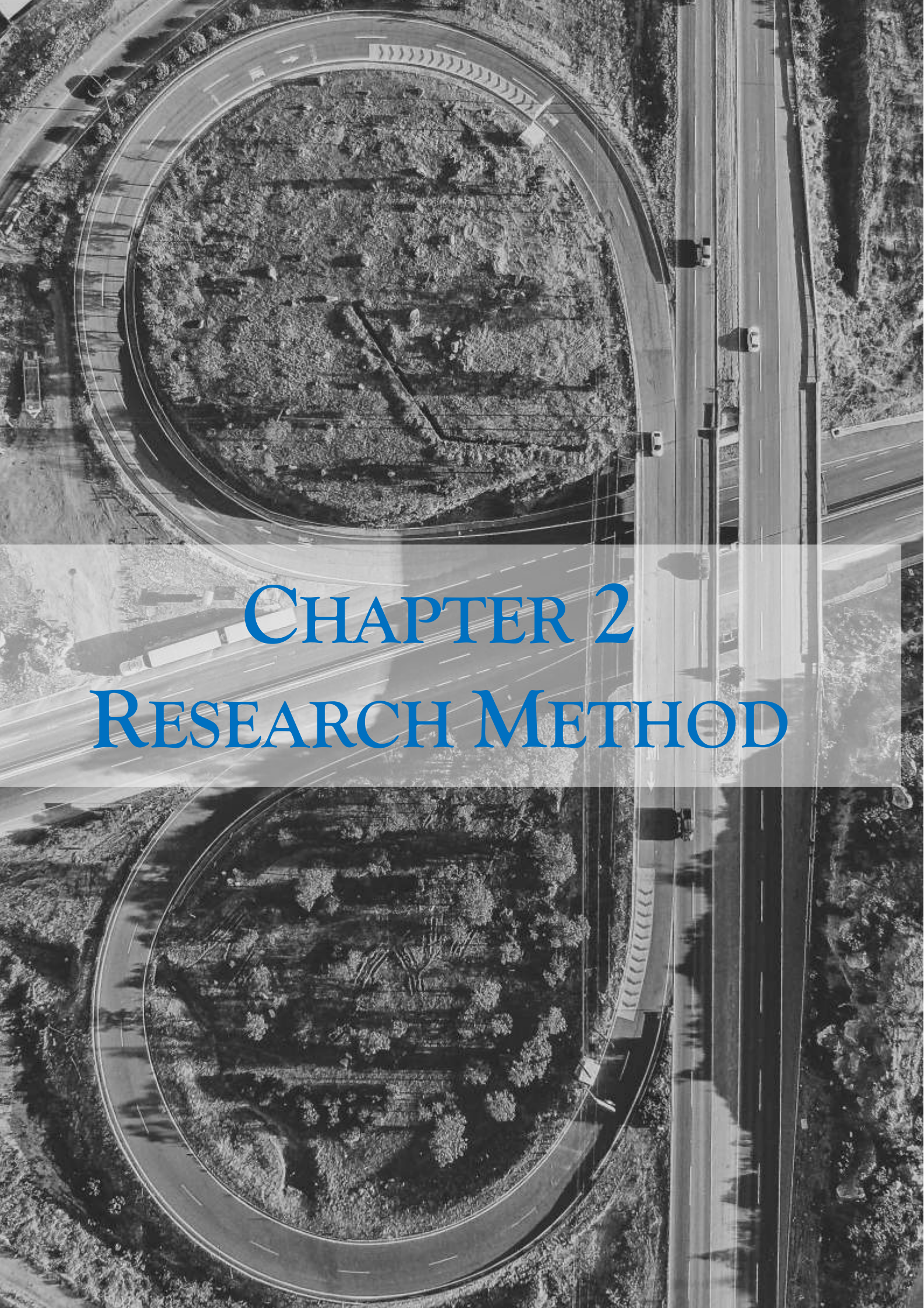
*"How can external stakeholder management strategies contribute to resilience in infrastructure projects?"*

---

A series of sub-questions were formulated to comprehensively address all aspects of the main research question:

### Sub-Research Questions:

1. What is the current state of knowledge regarding the challenges and strategies of external stakeholder management, and project resilience within the infrastructure domain?
2. What events did the case study face related to external stakeholders, and how did the project respond to them?
3. How can stakeholder management strategies enhance resilience in infrastructure projects?



# CHAPTER 2
# RESEARCH METHOD

# 2 | Research Method

This chapter outlines the methodological approach undertaken in this research, structured to facilitate an in-depth analysis of stakeholder management and project resilience within infrastructure projects. The chapter is based on the 'research onion' framework (Saunders et al., 2023) in Figure 3. Thus, beginning with Section 2.1, we introduce the qualitative research methodology that underpins our study, setting the foundation for the investigative journey ahead. Section 2.2 elaborates on the research design and is followed by the case study introduction in Section 2.3. Section 2.4 then details the data collection methods. Section 2.5, which describes the steps taken to ensure research quality in terms of validity and reliability. Lastly, Section 2.6 delves into the data analysis techniques employed to interpret this data for the research.

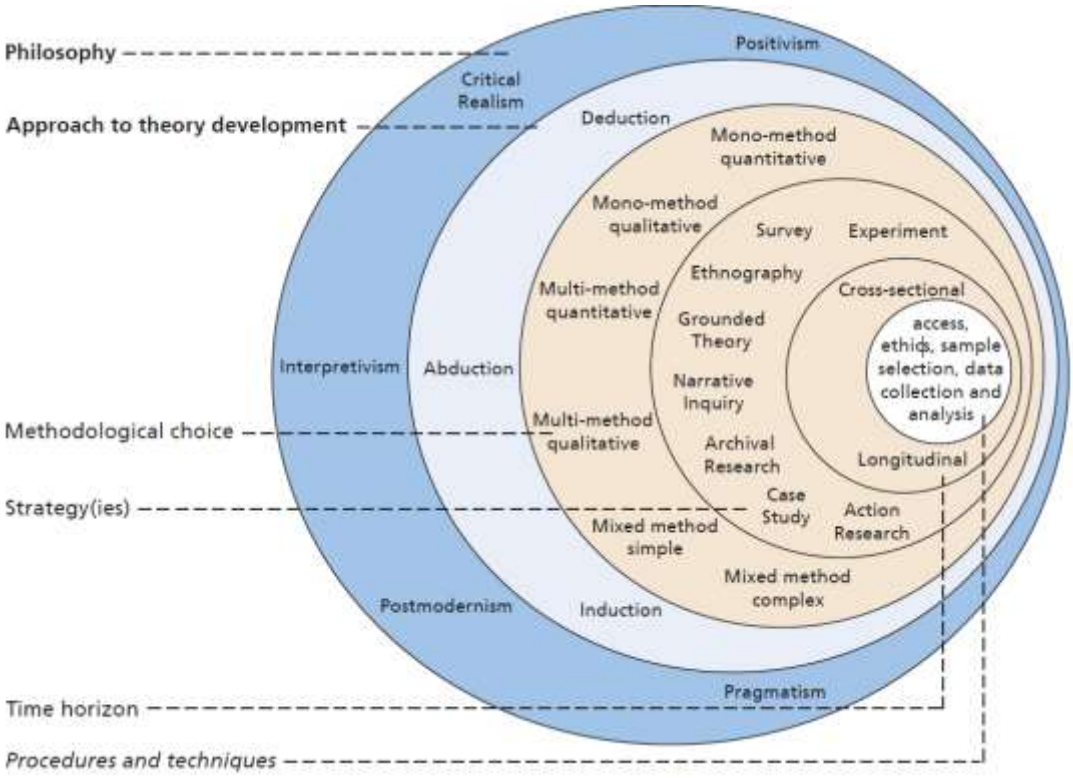



**Figure 3:** Research Onion
*Source: (Saunders et al., 2023)*

## 2.1 Research Methodology

### 2.1.1 Research Philosophy

The research philosophy, also referred to in literature as paradigms or worldviews (Creswell & Creswell, 2018; Yin, 2016), is the "*basic set of beliefs that guide action*" (Creswell & Creswell, 2018, p. 44), or, in this case, research. In other words, the choice of a worldview will likely influence the choice of qualitative or quantitative methods, the design of your study, and your approach to data analysis. As a result, the research philosophy, or worldview, is the first layer of the research onion framework (Figure 3) and influences the subsequent layers.

Despite scholarly debate on worldviews, Saunders et al. (2023) recognise five major worldviews: positivism (or postpositivist), critical realism, interpretivism (or constructivism), postmodernism, and pragmatism. To differentiate between them, researchers propose ontological or epistemological positions that distinguish the worldview description and assumptions.

Ontology examines the nature of reality. It questions whether reality is external and objective, a single universal truth, or if multiple realities exist that are socially constructed and continuously evolving. Epistemology, on the other hand, refers to assumptions about what constitutes acceptable, valid, and legitimate knowledge, as well as how we can communicate that knowledge to others. It examines whether knowledge comes from observable facts and numbers in a scientific manner or through subjective interpretations and meanings attributed by individuals influenced by specific contexts and cultural perspectives (Saunders et al., 2023).

This study aligns primarily with two principal perspectives. First is the constructivist or interpretive worldview. This worldview's ontology assumes that there is no universal reality; rather, reality depends on the background, context, and circumstances people experience. Therefore, from an epistemological perspective, reality must be interpreted. So, as Creswell and Creswell (2018, p. 46) mention, in constructivist research, the aim is to make sense of—or interpret—the meaning of other worlds and contexts.

This worldview is a typical approach to qualitative research. This study aligns with constructivism as it aims to explore, understand, and create theory from the complex and subjective relationship between external stakeholders and a project organisation.

The pragmatic worldview is the second philosophy that the study aligns with. Pragmatism, from an ontological perspective, accepts that reality becomes apparent as a consequence of experiences and practices. From an epistemological standpoint, knowledge acquisition is driven by problem-solving and is validated through its applicability and the effectiveness of its outcomes in real-world contexts. Pragmatic research starts with a real-world problem, which shapes the research and aims to contribute practical solutions that inform future practices (Creswell & Creswell, 2018; Saunders et al., 2023).

The pragmatic worldview supports the use of multiple research methods, including mixed methods or purely qualitative approaches, depending on the specific requirements of the research problem. It also acknowledges the validity of incorporating different worldviews to understand complex issues (Saunders et al., 2023). This study adopts a pragmatic approach, as the research objective seeks to provide recommendations to practice for real-world challenges, such as the ones described in §1.1.

### 2.1.2 Research Approach

Moving onto the second layer of the onion framework (Figure 3). According to Saunders et al. (2023), there are two main approaches to theory development: abductive and inductive. Deductive reasoning begins with a theory and, through the research process—traditionally quantitative—tests a series of hypotheses to logically reach a conclusion that verifies or falsifies the theory. Alternatively, inductive reasoning aims to explore a knowledge gap and provide (untested) conclusions supported by observations, traditionally from a qualitative approach, aiming to build or generate theory.

This research aligns with an inductive approach, as the research philosophy, is qualitative in nature, and it aims to advance existing theory.

## 2.2 Research Design

In the previous section, we discussed the first two layers of the research onion (Figure 3). This section will examine the remaining layers: methodological choice, research strategy, and time horizon. These elements collectively form the 'research design', which guides the journey from the research question to the final analysis and conclusions.

Yin (2018, p. 60) describes a research design as the logical plan for "*getting from here to there*". Similarly, Saunders et al. (2023) describe the research design as the 'journey' that the research follows to meet the research objective and answer the research question. They note that the main research question guides the research design and indicates whether the purpose of the study is exploratory, descriptive, explanatory, evaluative, or a combination of these. This research is descriptive in nature as it aims to illustrate the influence of stakeholder management on resilience through a case study.

The research design defines the structure of a study (Yin, 2016). Figure 4 presents the research design of the present research. For explanatory purposes, it is divided into three main parts, each with a distinct role in achieving the research objectives.

**Part I** (Figure 4) focuses on building the theoretical foundation through an in-depth critical literature review. Different types of literature reviews are acknowledged, including argumentative, integrative, historical, methodological, systematic, and theoretical (Saunders et al., 2023). The

Literature Review chapter combines systematic and integrative reviews to address the first sub-research question. Systematic reviews are methodical, involving a rigorous and predefined strategy for identifying, evaluating, and synthesising research relevant to a well-defined research question. This approach enables a conclusive summary of existing knowledge. In contrast, integrative reviews aim to provide a comprehensive overview that either proposes new theoretical frameworks and perspectives for empirical testing or identifies areas lacking clarity and definition in current research (Saunders et al., 2023). The Literature Review adopts a thematic structure based on the key theoretical elements central to the research: stakeholder theory, stakeholder management, and resilience. This thematic structure allows for a focused discussion on each main component. By blending these methods, the Literature Review chapter aims to offer an overview of the current knowledge and the possible gaps in the research and, specifically, addresses the first research question.

**Part II** (Figure 4) helps define the third and fourth layers of the research onion (Figure 3), focusing on methodological choice and research strategy. This part of the study explains the approach selected for this research, which was influenced by the pragmatist philosophy. The focus on exploring real-world problems led to choose for a qualitative case study. This strategy is ideal for exploring contemporary phenomena in their natural context, allowing for deep empirical insights and theoretical development (Yin, 2018).

Yin (2018) distinguishes four types of case study designs, single or multiple case studies, with each further classified as holistic (a single unit of analysis) or embedded (multiple units of analysis). The chosen design for this research is a holistic single-case study, selected based on the research's objectives and data availability. This approach is well-suited for this research because it provides rich empirical insights and facilitates theoretical development directly from practice, making it an integral part of our strategy to understand and interpret complex interactions and outcomes.

Finally, **Part III** (Figure 4) synthesises the findings from theoretical exploration and practical investigation. This synthesis not only draws conclusions from the case study but also integrates these findings with the theoretical perspectives reviewed earlier. This approach ensures a comprehensive understanding of the research topic, allowing for well-founded conclusions and practical recommendations that emerge from a confluence of theory and empirical evidence.

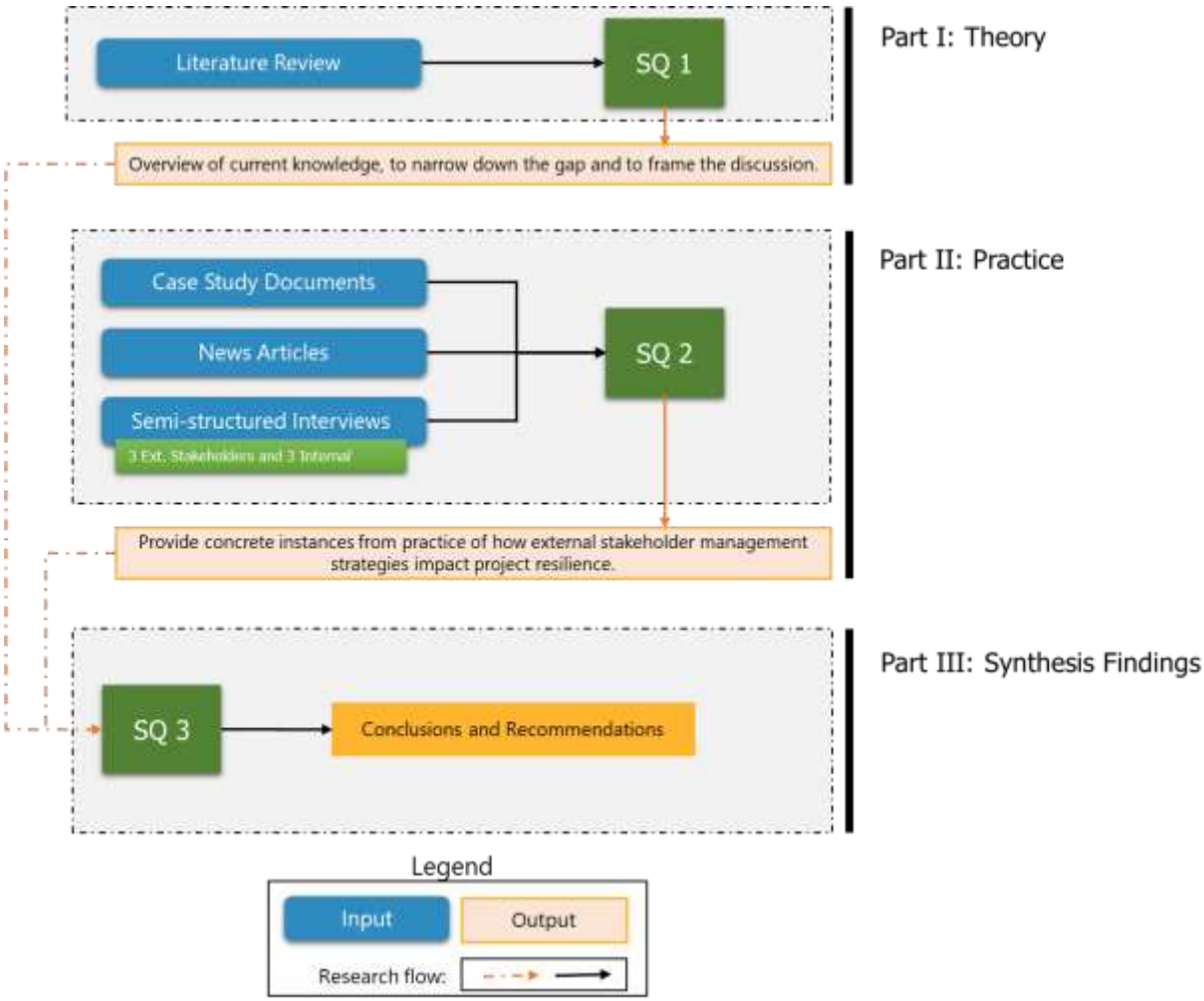



**Figure 4:** Research Design
*Source: Authors own*

While valuable, the case study approach has inherent limitations. Verschuren et al. (2010) point out that single-case studies often face external validity and generalizability challenges as they rely on a single instance to draw broader conclusions. To overcome this limitation, Verschuren et al. (2010) underscore the importance of triangulation throughout the research process as it helps reduce the risks associated with depending on a single source by incorporating multiple perspectives, providing a more robust examination of the case.

Yin (2018) notes that before discrediting single-case studies, we should acknowledge that they are analogous to single experiments, which are appropriate designs under certain conditions. For instance, if the goal is to understand the circumstances and conditions of an everyday situation, single-case studies can provide valuable insights into the social processes related to a particular theoretical interest. This aligns with the purpose of the present research, as augmented in the Problem Definition (§ 1.2) , about the concern of dealing with increased external complexities in infrastructure projects, in particular from external stakeholders.

The current study aligns with the concept of 'multi-method qualitative study' (layer four Figure 3), which Saunders et al. (2023) explain as a case study that involves multiple qualitative data col-

lection procedures. This method offers a way to counteract some limitations of single-case studies. These procedures and sources are described later in the Data Collection section (§ 2.4).

The fifth and last 'layer' (Figure 3) considered in part of the research design is the Time Horizon. The time horizon specifies the number of time points for data collection, with two existing options: cross-sectional or longitudinal. Saunders et al. (2023) describe longitudinal studies as 'diaries' with multiple data collection points. Alternatively, cross-sectional studies, like the present research, are a 'snapshot' at a specific point in time.

Before continuing to the data collection and data analysis sections of this chapter, case study is presented in the following section.

## 2.3 Case Study Description

Following the decision to adopt a qualitative approach through a case study, this section provides an overview of the selected case study, including its background, context, and the key factors that make it relevant for the research. The description aims to offer a comprehensive understanding of the case study's scope, its historical and geographical context, and the main events that have shaped its current state.

### 2.3.1 Project Context

The "Tunel Diamante" project is situated in Acapulco, a Mexican city and port in the State of Guerrero on the Pacific Coast, 379 km from Mexico City. It is the largest city in the State, constituting the only metropolitan area and home to 779,556 inhabitants (data from 2020). Historically, its importance as a port surged during the colonial period of Mexico in the 1500s, evolving into a strategic harbour of New Spain over the Pacific Ocean. From its port, expeditions were launched, and commercial routes were established with the East, such as the 'La Nao de China' trade route (Enciclopedia Guerrerense, 2020). Over time, Acapulco's economy transitioned from commercial port into a resort city, becoming a leading tourist destination in Guerrero and Mexico. The city's tourist appeal stems from its strategic location and tropical weather, with an annual average temperature of 24.7°C, ensuring its popularity, particularly during colder months. Its proximity to Mexico City makes it an ideal place for vacation homes and resorts, attracting diverse domestic and international visitors from the United States, Canada, and Europe

Its tourist boom began in the 1950s, and during the following two decades, it consolidated as a touristic hotspot of international stature; this period then coined the name "the golden age of Acapulco". The rapid expansion from the 1950s to the 1990s shaped the city's infrastructure and layout, leading to the division into three main zones: Traditional Acapulco, Golden Acapulco, and Acapulco Diamante (see Figure 5). This division reflects Acapulco's ongoing reinvention to

remain competitive in the tourism industry, although it also resulted in significant infrastructure deficits, particularly in road systems due to its mountainous terrain.

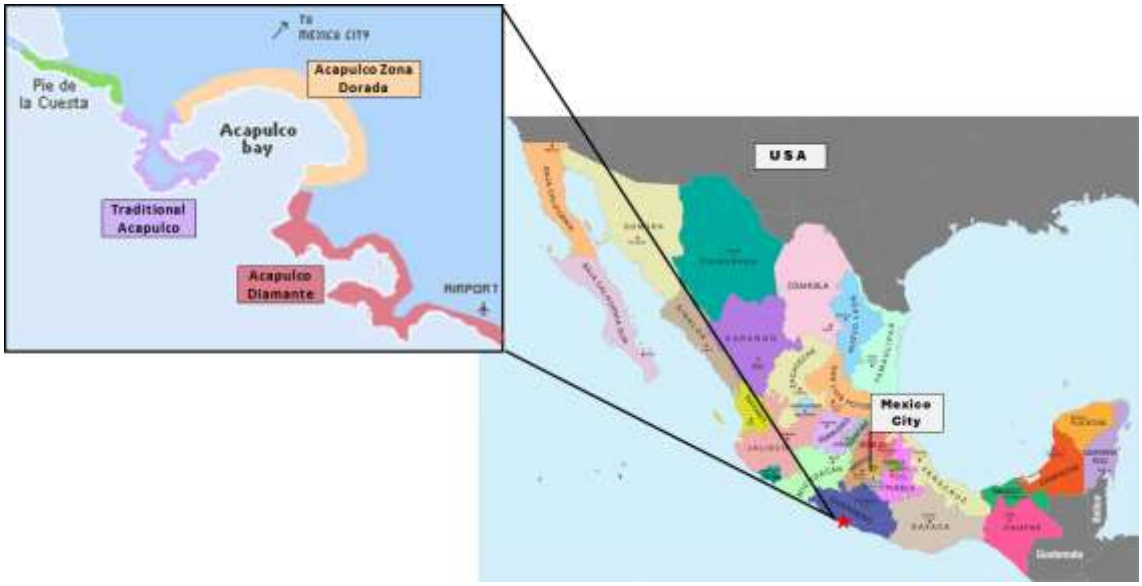



**Figure 5:** Location of Acapulco
*Source: Authors own*

In 1993, the Federal Highway 95D or "Autopista del Sol" (Sun highway) was completed, shortening the travel time from Mexico City to Acapulco to only a little over 3 hours; this represented a reduction of more than half of what it previously took to travel between these cities. Although Acapulco's growth had stabilised by this time, the completion of this highway symbolised a favourable outlook for the 21st century. However, starting in 2006, Acapulco and Guerrero experienced a spike in insecurity, significantly impacting the region's economy. The rise in crime rates led the US and Canadian governments to issue travel advisories, deterring international tourists, who previously made up 80% of Acapulco's foreign visitors (Autonomous University of Guerrero, 2014). Guerrero is one of the most impoverished states in Mexico, so the decline in tourism, and particularly international tourism, has been a heavy blow to Guerrero and Acapulco, causing an economic crisis and the loss of the state's tourist image and unemployment (Muñoz & Nechar, 2021)

Acapulco has also faced the challenges of hurricanes over the years, causing damage to its infrastructure further complicating its recovery. Hurricane "Pauline" in 1997 resulted in over 1.6 million casualties, while the 2013 hydrometeorological events "Ingrid" and "Manuel" caused substantial damage and was closely related to the case study (see Figure 8). Most recently, in October 2023, category five hurricane "Otis" caused catastrophic destruction, damaging about 80% of tourist infrastructure, with estimated economic losses of 10-15 billion USD (UN-OCHA, 2023).

### 2.3.2 The Project

The "Tunel Diamante" project emerged against this backdrop of rapid urbanization and infrastructure challenges. It was envisioned mainly to address two objectives. Firstly, it serves as an alternative route to connect the older part of Acapulco with the newer Acapulco Diamante and the airport (see Figure 6), providing a more efficient route while bypassing the old 'scenic route'. This road, called "Escénica de Acapulco," is a 12 km-long winding road built in the 1940s, notorious for significant traffic congestion and its unsafe design, which is not up to standard for a road with so much congestion. The project was initially named 'Alternate scenic route' from this older road, later changed to Macrotunel or Tunel Diamante.

Secondly, the project also intended to serve as a new version of Acapulco, aiding the local economy with employment and as a testament to a modern city with state-of-the-art infrastructure. The geographical layout of Acapulco made a tunnel a logical choice, a concept reinforced by the earlier "Maxitunel" project. This existing tunnel, also crossing the same mountain range, provides direct access from Mexico City to the old part of Acapulco, reinforcing the potential benefits of the new tunnel project.


**Figure 6:** Project Location
*Source: Adapted from (OpenStreetMap, n.d.) annotations by author*

As mentioned earlier, the State of Guerrero is one of the most impoverished states in Mexico, which is why the project was only financially viable with external resources. Therefore, the government of Guerrero – who are the sponsors of the project- started planning to execute the project as a public-private partnership (PPP), and also request support from the national infrastructure bank, or Banobras (or Fonadin). As it can be viewed in the project's timeline (see Figure 8) the Federal subsidy was approved in 2010, although it was not until 2011, with a starting (term) state government that the official tender process started.

The Tunnel Diamante project was presented as a Build, Finance, Maintain, and Operate (BFMO) contract. The original scope considered a Tunnel with an A3 section (3 lanes) of 3.3 km and an A4 (four lanes) road section of 2.4 km section. The tunnel would cross a mountain at an average depth of 250m and connect the Brisamar Junction (in the bay of Acapulco) with the Cayaco Junction (on the Diamante side). Then, the road would connect the Cayaco junction with the Diamante junction, located at the intersection with the federal highway 95D that connects with Mexico City. A relevant technical element is that this is the longest transportation tunnel built in Mexico; the second longest is the 'Maxitunel', which serves a similar purpose and is located in Acapulco.

The tender was awarded in 2012 and contemplated an operation of 30 years.Construction began in 2013 with a completion date set for 2016. However, various technical, financial, political, and environmental challenges caused significant delays and cost overruns. Consequently, only the tunnel was completed late in 2017, with the viaduct remaining unfinished. This partial completion has strained the project finances, with revenues falling short of projections. Moreover, local, and national governments have shown limited interest in resolving the project's issues, leaving the project in a challenging state.

### 2.3.3 Relevance as a Case Study

The project presents a relevant opportunity for analysis for several reasons. For instance, on a more general level, it is an interesting case study as the project is located in a semi-urbanised environment, which allows the analysis and findings to be easily compared and generalised with projects in similar environments. This is most relevant in our current reality, where infrastructure projects will increasingly be brownfields.

Zoom in to the research. As mentioned, the case study is partially completed, and only the tunnel is operational. The road segment was not built (see Figure 6). This outcome can be attributed, in part, to opposition from various external stakeholders, including governmental organisations and landowners. This variety of stakeholder dynamics provides a rich context for exploring external stakeholder management. From a resilience perspective, the project can be argued as 'resilient' to the challenges it faced because, despite adversity, it is partially completed. So, considering the complex and dynamic setting of the project, it proved an ideal case for examining the relationship between the external stakeholders and project resilience.
Another relevant factor not to be underestimated is the availability of information, as the researcher was able to contact several key stakeholders, both internal and external, which would not have been possible otherwise and under other circumstances.

Figure 7 presents the key stakeholder involved in the project of the case study. Some of these were implicated in the events encountered by the project. These are presented in the Results chapter.

Removed for confidentiality

**Figure 7:** Case study key stakeholders.
*Source: Authors own*

Removed for confidentiality

**Figure 8:** Project Timeline

## 2.4 Data Collection

Data can be differentiated into two kinds: primary and secondary. According to Saunders et al. (2023), primary data is first-hand evidence or raw data collected specifically for research, while secondary data is data collected initially for some other purpose but can be analysed to provide additional or different knowledge, interpretations, or conclusions relevant to the research project. According to this distinction, for this research semi-structured interviews would be considered primary, while case study documents, news articles, and other public information fall into the secondary data category.

An important consideration for the data collection is the unit of analysis. According to Yin (2018), the data collection unit, sometimes referred to as the *focal unit* or *unit of analysis*, is the unit of study in qualitative research. In this case, the unit of analysis is events in which an issue involving external stakeholders occurred within the case study. This approach guides the data collection method using the three sources of inquiry: case study documents, interviews, and publicly available information (see Figure 4).

The combination of several sources of data not only allows for a richer data set for the analysis, but is a crucial aspect to achieve data triangulation (Verschuren et al., 2010). Yin (2018) explains that data triangulation leads to convergence, where the triangulation of sources leads to the same findings. This convergence is a vital step in ensuring the validity of our study. As Yin further states, "*By developing convergent evidence, data triangulation helps to strengthen the construct validity of [the] case study. The multiple sources of evidence essentially provide multiple measures of the same phenomenon"* (2018, p. 128).

It is essential to make a clarification based on the above discussion. Primary and secondary data, as discussed by Saunders et al. (2023), refer to the source of the information, not its importance. In this research, where the unit of analysis is based on events or instances, the terms 'main source' and 'supporting source' were used internally to indicate the source of origin for the data (main source) and additional sources used to achieve convergence through data triangulation (supporting source). The approach led to news articles being the predominant 'main source', with interviews providing substantial additional information. From a 'supporting source' perspective, the interviews and case study documents played a significant role in enriching the data and strengthening the validity of the research through triangulation.

### Filtering Data

To ensure that the data used in the study was reliable, valid, and suited to the research questions and objectives, a four-step filtering process was implemented. This approach was applied and is particularly relevant for secondary data sources (i.e., publicly available documents, case study documents) (Saunders et al., 2023); however, it served as a guide across all the research, including the literature review process.

Figure 9 presents the overview of this 4-step filtration process. The first step, 'identifying,' involved mapping all potential data sources, including research papers, news articles, and other publications, and quickly scanning each to assess credibility and relevance. The second step, 'evaluation,' was a quick scan of the information, sources with irrelevant content, unreliable information, or redundancy were discarded at this point. The next step, eligibility, involved a more in-depth assessment to determine if the data was suitable for the research. This phase ensured that the data would contribute meaningfully to the analysis. Once the suitable data were identified, the final step involved incorporating the chosen information into the analysis.


*Figure 9: Data Gathering Process*

## 2.4.1 Semi-structure interviews

Semi-structured interviews are a type of non-standardised interview for data collection where the researcher asks a set of pre-determined open-ended questions following a specific theme. In this case, it aligning with a thematic format of semi-structured interviews (Saunders et al., 2023, p. 443).

For this research, a total of six interviews were conducted. Three with internal stakeholders and three with external stakeholders related to the case study. The details of these interviews are presented in Table 1 and Table 2.

**Table 1**: Details of Participants

| No. | Code | Type | Organisation | Role | Involvement with the Project |
|---|---|---|---|---|---|
| 1 | PM1 | Internal Stakeholder | Contractor | Project Manager | From the start of Operation Phase |
| 2 | PM2 | Internal Stakeholder | Contractor | General Manager | During Construction + Operation Phase |
| 3 | CPM1 | Internal Stakeholder | Contractor | Construction Manager | During Construction |
| 4 | EA-1 | External Stakeholder | National Environmental Authority | (former)Official | During Construction |
| 5 | WA-1 | External Stakeholder | National Water Authority | (former)Regional Director | During Construction |
| 6 | NH-1 | External Stakeholder | Neighbour | NA | During Construction + Operation Phase |

It is important to acknowledge that initially, the ambition of the research was to conduct 10 interviews, eight of which were pre-arranged, with the expectation that a snowball sampling method would help identify the remaining two participants. This method involves asking initial respondents to refer additional interviewees. However, despite sending out multiple invitations to potential participants, due to time constraints and a lack of responses to these invitations, only six interviews were ultimately conducted, as detailed in Table 2.

While the lower number of participants was an unexpected situation, it did not compromise the quality or quantity of data available for analysis. The semi-structured interviews and other data collection methods focused on providing the necessary information to address the practical component of the research (**Part II** Figure 4), tied to the question, "What events did the case study face related to external stakeholder, and how did the project respond to them?" The goal was to ensure that at least 10 events were thoroughly documented to allow for comprehensive analysis. While the interviews played a significant role as both a main source and a supporting source, news articles were the primary source for the events. Also, the dataset derived from these sources was robust enough to cover more than the intended 10 events. Although additional interview data could have offered further triangulation, it would have been challenging to incorporate, given the research's time constraints. Thus, the initial interviews and secondary data sources provided ample material for analysis without affecting the study's validity.

**Table 2:** Detail of Interviews

| Code | Type | Date of Interview | Duration |
|---|---|---|---|
| PM1 | Internal Stakeholder | 08/02/2024 | 15 minutes |
| PM2 | Internal Stakeholder | 08/02/2024 | 21 minutes |
| CPM1 | Internal Stakeholder | 10/02/2024 | 1 hour 29 minutes |
| EA-1 | External Stakeholder | 15/02/2024 | 30 minutes |
| WA-1 | External Stakeholder | 14/02/2024 | 18 minutes |
| NH-1 | External Stakeholder | 20/02/2024 | 25 minutes |
| | | **Total** | **3 hours and 18 minutes** |

#### Interview Protocol

The interview protocol and corresponding questions were formulated based on specific objectives derived from the research topics. An initial conceptual framework, focusing on external stakeholder management and project resilience, guided the development of the interview questions (see Figure 2). Also, a pre-analysis of project-related documents and news articles provided background knowledge, contributing to a better understanding of the case study and assisting in structuring the questions. This also enabled better follow-up questions. Due to the case study's location in Mexico, the interviews were conducted via Microsoft Teams.

Yin (2016) further suggests that the interview protocol should be viewed as a mental framework rather than a rigid script. This approach allows for semi-structured interviews, enabling a natural flow of conversation while still maintaining the discussion within a defined framework. The semi-structured format prevents the conversation from veering off-topic without imposing a strict line of questioning. The interview protocol for the interviews is presented in Appendix | A (p. 123).

### 2.4.2 Media and Public Documents

Media, is an increasingly relevant source of data in noteworthy projects, such as large or controversial infrastructure projects, such as the case study, as it provide a high density of information (Verschuren et al., 2010). We can distinguish between printed media, such as newspapers, magazines, articles, etc, and electronic media, such as radio, TV, or the internet.
For this research, as the media was the source with the highest density of information, it proved to be a valuable source of data triangulation with the other sources of data.

To collect the media data, the starting point was Google's search engine. The selections of the data process involved four main steps discussed earlier to evaluate sources (see Figure 9) to ensure the information found was relevant and valuable. The research used targeted queries like "Tunel Diamante," "Macrotúnel Acapulco," and "Escenica Alterna Acapulco." These keywords were combined with terms relevant to the study, such as "Land Acquisition," "Social Issues," "Environmental Issues," and "Permits." This approach ensured a broad but focused search for relevant information.

To further expand the data pool, the research also explored official government platforms and databases, seeking press releases, statements, presentations, videos, and other related information. Notable sites searched included Mexico's Federal Attorney's Office for Environmental Protection (PROFEPA) archival articles, the National News Agency (NOTIMEX), the archives of the National Water Commission (CONAGUA), and other state and municipal websites. The search also expanded to websites of the National government and the National transparency portal. Table 3 presents the overview of the data gathered from the government sites.

**Table 3:** Overview of Government information collected.

| About | Organisation | Number |
|---|---|---|
| Project Description | BANOBRAS | 1 |
| Blog Post | | 2 |
| Financial agreement | | 1 |
| Press Release | PROFEPA | 3 |
| Environmental statement | | 3 |
| Press Release about Hurricane | CENAPRED | 1 |
| Tariff proposal | National Senate | 1 |
| Press Release - Inauguration | Presidential office | 2 |
| Project Description - for tender | State Government | 1 |
| | **Total** | **15** |

To gather the news articles, the search extended beyond Google to specific news outlet websites. To reduce bias and expand the search, both local and national news organisations were consulted. Among the most significant outlets consulted are Excelsior, La Jornada, Reforma, El Universal, Heraldo de Mexico, and Proceso. Furthermore, industry guilds and construction associations were reviewed for articles related to the project.

Table 4 presents the news articles found, and the news articles used. The difference between 'collected' and 'used', lies that several of the 'collected' were disregarded as either repetitive or they did not add value in comparison to other articles. Table 5 presents the articles found from professional associations in Mexico.

**Table 4:** Detail of News Articles

| News Organization | Level/Type | Articles Collected | Articles Used |
|---|---|---|---|
| Agencia Cotino Noticias | Local | 1 | 1 |
| AGUA | NGO | 1 | 1 |
| ANewsMX | Regional - Newscast | 1 | 1 |
| Agencia Red Noticias | Regional - Digital | 1 | 1 |
| Digital Guerrero | Regional - Digital | 1 | 1 |
| El Economista | National | 4 | 4 |
| El Financiero | National | 5 | 5 |
| El Sol de Acapulco | Regional | 7 | 6 |
| El Sur | Regional | 132 | 113 |
| El Universal | National | 3 | 2 |
| Expansion | National | 1 | 1 |
| La Jornada | National | 4 | 4 |
| Milenio | National | 10 | 10 |
| Noticieros Televisa Guerrero | Regional | 18 | 11 |
| Reforma | National | 7 | 6 |
| Sin embargo | Online | 1 | 1 |
| Other | Other | 7 | 0 |
| | **Total** | **204** | **168** |

| | Used |
|---|---|
| **News Articles** | 150 |
| **Online News** | 5 |
| **Videos** | 13 |

| National | | Local | |
|---|---|---|---|
| Found | Used | Found | Used |
| 34 | 32 | 170 | 136 |

**Table 5:** Detail of magazines and publications from Professional Associations

| Magazines | Level/Type | Articles Used |
|---|---|---|
| Obras Magazine by Expansion | National | 2 |
| Mexican Association of Road Engineering (AMIVTAC) | Engineering Association | 1 |
| College of Civil Engineers of Mexico | Engineering Association | 1 |
| Mexican Institute of Cement and Concrete (IMCYC) | Engineering Association | 1 |
| Mexican Association of Tunnel Engineering and Underground Works (AMITOS) | Engineering Association | 3 |
| | **Total** | **8** |

### 2.4.3 Case-study documents

The research used private case-study related documents, some of the most relevant including tender documents, concession agreement, and financial documents. Other publicly available documents particular of the case study were used, such as financial statements and reports. These documents in combination with the news articles also enables data triangulation. In particular, they were useful to give background information to the events. Furthermore, internal documents allowed to understand better the position of the project organisation towards a series of issues.

Ultimately, all the documents gather provided for the full data to be analysed for the research. Table 6 presents an overview of all this data and its sources.

**Table 6:** Overview of Data Collected

| | Data Source | Quantity | Additional Details |
|---|---|---|---|
| Primary Data | Semi-structured Interviews | 6 | 3 hours, 18 minutes |
| Secondary Data | *Project Documents* | | |
| | Textual documents | 11 | Pages: 2,891 |
| | Spreadsheets | 5 | Sheets: 31 |
| | Presentations | 5 | Slides: 44 |
| | *Public Information* | | |
| | Financial Statements | 5 | Pages: 467 |
| | News Articles | 168 | National level: 32 |
| | | | Local/Regional: 136 |
| | Government publications | 15 | Online documents, reports |
| | Publications from Civil Engineering/ Construction Industry Associations | 8 | 25 pages |

### 2.4.4 Data Plan and Ethical Considerations

Yin (2018) highlights that research involving human participants requires special ethical considerations. These considerations, which include confidentiality, anonymity, safety, data protection, and management, are particularly important. Given that this research involved human participants through interviews, the project received approval from the University's Human Research Ethics Committee (HREC), number 3868 on the 27-March-2024. As part of this HREC process, a Data Management Plan (DMP) was developed to ensure compliance with ethical standards. A data management plan describes the steps taken to ensure that raw and process research data will be collected, organised, and stored ensuring ethical and legal considerations (Saunders et al., 2023). For this research, the main objective of the DMP was to ensure that sensitive and confidential

information was protecting. Additionally, an informed consent form was created and approved as part of the process. This can be found part of the Interview Protocol in Appendix A.

## 2.5 Quality of research design

According to Yin (2018), there are four test to judge the quality of a research design These are construct validity, internal validity, external validity, and reliability.

### 2.5.1 Construct Validity

According to Yin, construct validity involves "identifying correct operational measure for the concepts being studies"(2018, p. 42). He suggests that construct validity in a case study can be achieved through various tactics during data collection, such as using multiple sources of evidence and establishing a chain of evidence.

In this research, the two main concepts are external stakeholders, and in particular, external stakeholder management strategies, and resilience. In accordance with Yin (2018), definitions and operationalization of these concepts are derived from relevant published studies, as detailed in the Literature Review section.

Regarding multiple sources of evidence, this research collected data from a variety of sources, including case study documents (both public and private), media documents such as news articles, and conducted six interviews. To establish a chain of evidence, as presented in the previous section, the report includes tables that describe the types, numbers, and sources of the documents used (see for instance Table 6), the information about the interviewees (Table 1 and Table 2). Although the interview transcripts are not included for ethical and confidentiality reasons, Appendix A contains the interview protocol and questions. Moreover, the Results section (Chapter 5) presents quotes from the interviews, reinforcing the chain of evidence.

### 2.5.2 External validity

External validity, sometimes called transferability or generalisability, is the degree to which research findings can be applied to other contexts (Saunders et al., 2023). For single case studies, such as this case, Yin (2018) suggests that using theory can enhance external validity. He proposes that research findings should be grounded in theory or theoretical propositions derived from the research question and study type—whether it's descriptive, exploratory, or explanatory. In this research, the conceptual framework serves as the starting point for increasing external validity (see Figure 2).

Additionally, as Verschuren et al. (2010) emphasize the importance of data triangulation in enhancing external validity and generalisability. This method involves using multiple sources of evidence to confirm the findings, ensuring they are not biased by a single source.

### 2.5.3 Reliability

Reliability in research is about demonstrating that the research methods can be repeated or reproduced reaching to the same results. Its goal is to minimize errors and biases. To achieve reliability, Yin (2018) suggests three approaches: developing a case study (or interview) protocol, creating a case study database, and establishing a chain of evidence.

In this study, the conceptual framework guided the questions used in the interview protocol (Appendix A). This framework also shaped the results and discussion sections, culminating in the final findings framework (see Figure 28: Final Framework). The chain of evidence was achieved by listing the sources of documents used, such as the media articles presented in Appendix B. This approach helps ensure that the study's methodology can be repeated, yielding consistent results.

## 2.6 Data Analysis

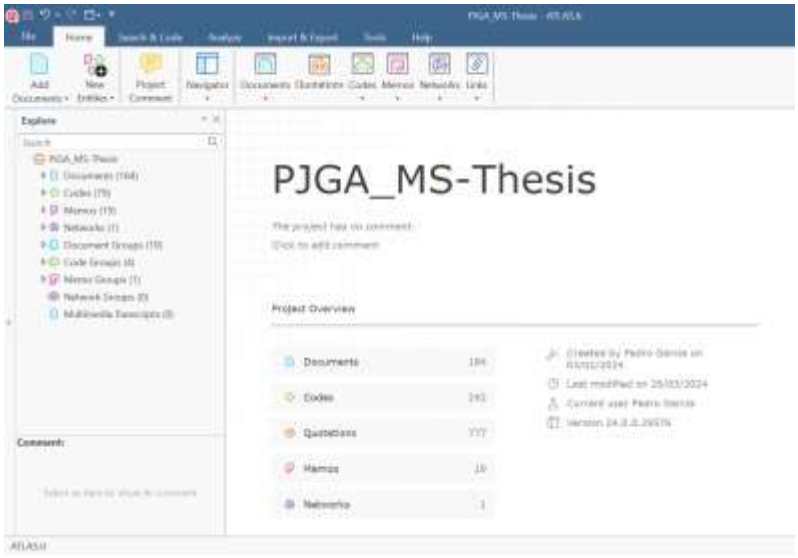



***Figure 10:*** *Atlas.ti platform*

This research used a systematic approach to conduct the data analysis, ensuring thoroughness and accuracy in interpreting the gathered information. The research employed ATLAS.ti software due to the availability of a licence and the ability to integrate and analyse numerous documents within a single environment. In addition to its traditional coding functionality, ATLAS.ti offered advanced tools such as query searches for specific words and synonyms, regex searches, and the provision of precise graphical representations of the data. Given the need to translate news articles and interview transcripts, an implicit pre-analysis phase was incorporated, naturally transitioning into the open coding process. An initial set of codes was developed, drawing inspiration from dramaturgical coding techniques. This included categorizations such as participant objectives (OBJ), conflicts (CON), tactics (TAC), attitudes (ATT), emotions (EMO), and subtexts (SUB) (Miles et al., 2014).

The analysed data was used to populate a table structured according to the conceptual framework of the research, with the left side covering background information about each event and the right side corresponding to the framework's structure. The following figure illustrates the data sources for each cell. For example, purple indicates that most of the primary information for a 'unit of analysis' or event comes from news articles or interviews, with additional support from case study documents and interviews. Any gaps in the table were filled through inductive reasoning based on

the available background information. This final step was conducted during the Discussion section.

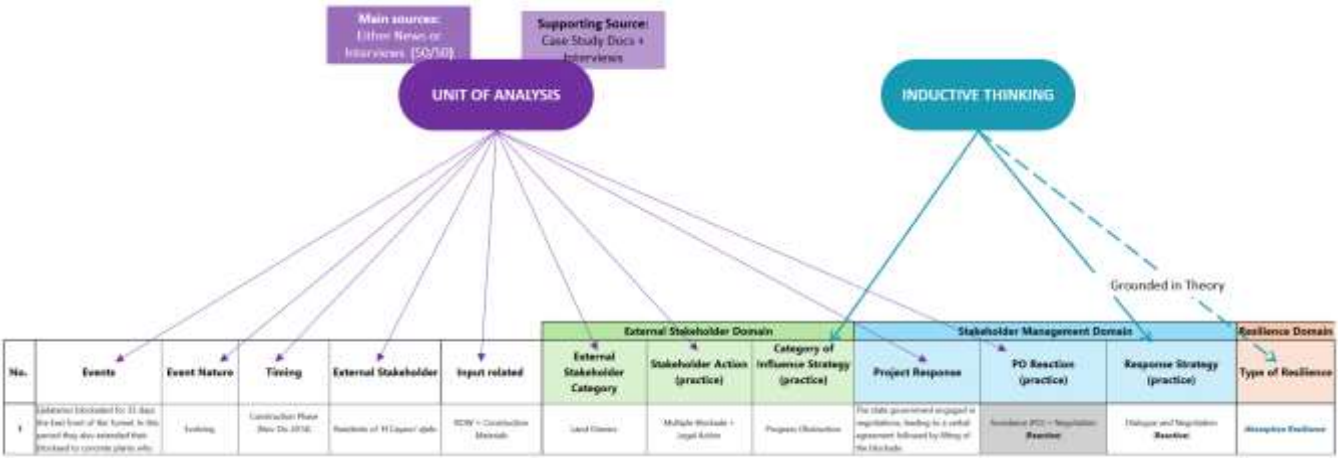
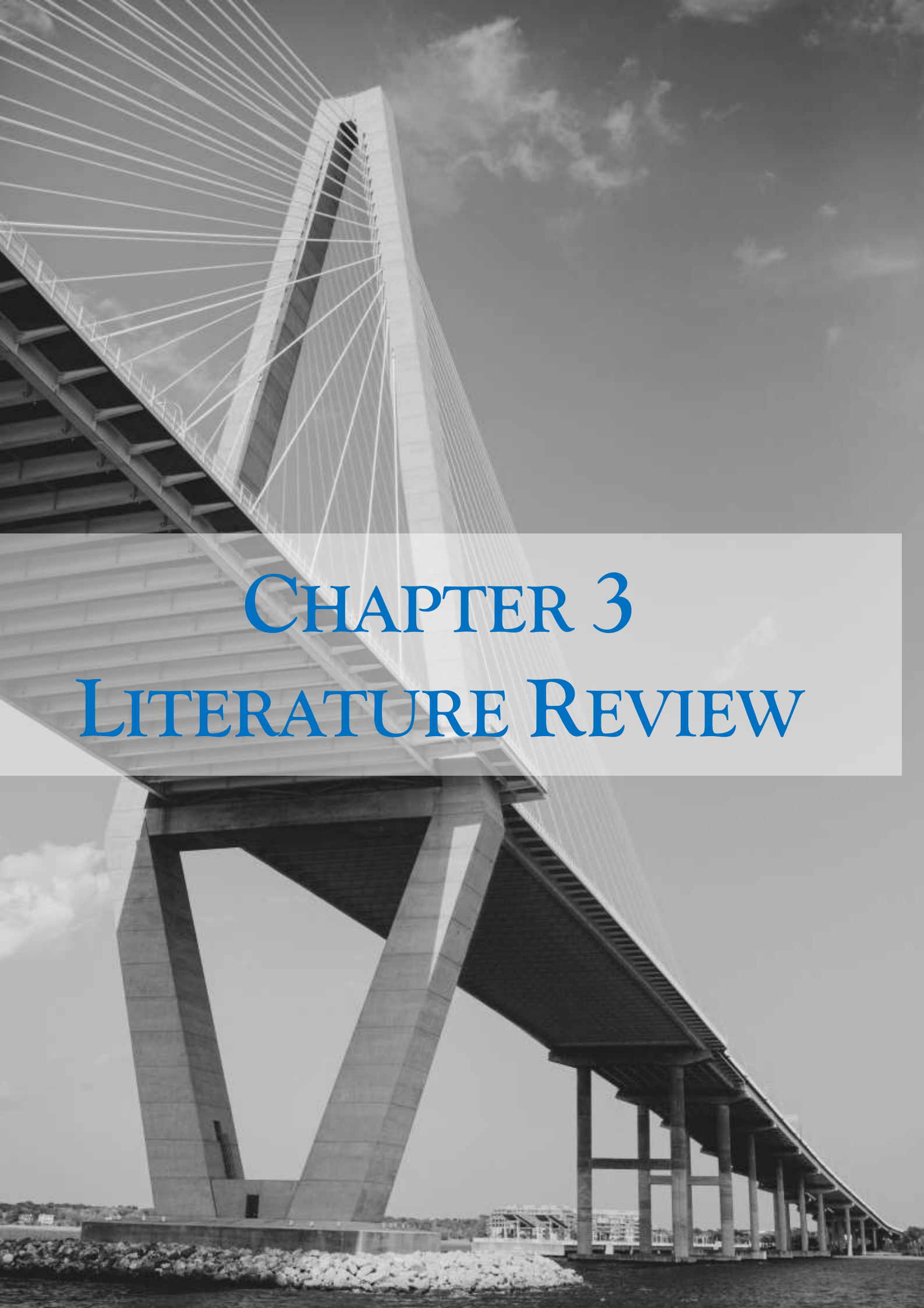



**Figure 11:** Use of data



# Chapter 3
# Literature Review

# 3 | Literature Review

While stakeholder management (SM) is an integral part of contemporary construction and project management, its foundations stem from strategic management theory (Eskerod et al., 2015). As such, stakeholder management as a process is rooted in stakeholder theory (Pedrini & Ferri, 2019); therefore, to better understand stakeholder management and the growing trends in this research field, we must – at least to an extent – explore the broader context proceeding from stakeholder theory.

## 3.1 Stakeholder Theory

Stakeholder Theory advocates for a shift from the traditional shareholder-centric business model to a more inclusive, stakeholder-oriented approach. R. Edward Freeman's seminal work, "Strategic Management: A Stakeholder Approach" (1984), is recognised by many as the foundation for contemporary stakeholder theory and stakeholder management practices (Chinyio & Olomolaiye, 2010), Written as a practical guide for managers and students of strategic management (Freeman et al., 2018), the book fundamentally transformed strategic management and organisational behaviour. It advocates for a shift from the firm's dominant production and managerial views to a stakeholder perspective (Eskerod et al., 2015). This means that organisations make strategic decisions based on a thorough understanding of the relationships between the organisation, its stakeholders, and their characteristics (Eskerod, 2020).

### 3.1.1 Theoretical Foundations and Origins

Although Freeman is recognised for shaping contemporary stakeholder thinking, he credits earlier scholars for laying the groundwork upon which he built his ideas. Freeman (1984) initially traced the stakeholder concept to a 1963 Stanford Research Institute (SRI) internal memo. However, the true origins of the term 'stakeholder' remain a historical debate within the literature. Some suggest the term's origins might be Scandinavian, particularly from Rhenman's 1964 work (Eskerod et al., 2015). Freeman et al. (2010) concede that the exact origins of the concept might remain unknown but are likely to be older than initially suggested.

Despite the ambiguity surrounding its origins, the SRI's contributions are acknowledged for setting the stage for the development of stakeholder theory. Following the SRI's work, various scholars across four disciplines—corporate strategy, system theory, corporate social responsibility, and organisational theory—were instrumental in shaping the framework that would lead to Freeman's seminal work (Freeman et al., 2010).

According to Freeman (2010), stakeholder theory responds to the transformation of the current business and management landscape, where there is little stability and certainty, addressing three fundamental and interconnected issues:

1. **The problem of value creation and trade.** Understanding and managing a business (creating value) in the turbulent world of the twenty-first century.
2. **The problem of the ethics of capitalism**. Thinking about questions of ethics, responsibility, and sustainability with the usual economic view of capitalism.
3. **The problem of managerial mindset**. Focused on reshaping the managerial mindset and guides what should be taught to future.

Freeman's work, since the publication of his landmark book in 1984, has persistently questioned the traditional economic paradigm, which he argues is based on a shareholder-centric approach. This approach emphasises maximising shareholder value, often prioritising short-term gains at the expense of long-term organisational health. Instead, he proposes the stakeholder view of the firm, arguing that running a successful business involves recognising the relevance of all its stakeholders and the importance of creating value for them (only some of which is financial), not just for shareholders (Freeman et al., 2018).

Freeman et al. (2010) argue that stakeholder theory should not be viewed as a traditional theory, but rather as a genre within management theory or a framework. Despite initial resistance in the strategic management domain, the theory has now gained considerable acceptance in strategic management and various fields such as public administration, law, marketing, operations, healthcare, accounting, and finance. However, the theory's exploitation has led to diverse interpretations and applications, sparking considerable debate and criticism.

Several attempts have been made by researchers to clarify and reach consensus on the conceptual ambiguity in the stakeholder domain. Perhaps one of the most influential in this regard is Donaldson and Preston's taxonomy of stakeholder theory. Their 1995 landmark article responded to the extensive discussions surrounding stakeholder perspectives. Donaldson and Preston (1995) pointed out the wide variation in interpreting stakeholder theory's main concepts among scholars and research fields, which often led to contradictory evidence and arguments. They aimed to clarify this ambiguity with two key contributions.

First, they introduced a stakeholder model of the corporation that moved away from traditional and instrumental views, which see stakeholders as providers of resources or holders of 'inputs' to the organization. In contrast, their model considers a two-way relationship between the stakeholders and the firm, emphasizing that stakeholders should be viewed as valuable in themselves, not as a means to an end. Donaldson & Preston's (1995) second significant contribution was the stakeholder theory typology, categorising it into three types: (1) descriptive theory, (2) normative theory, and (3) instrumental theory. The relevance of their typology lies in their argu-

ment that stakeholder theory's three approaches are interconnected and mutually supportive, forming a nested paradigm illustrated in Figure 12.

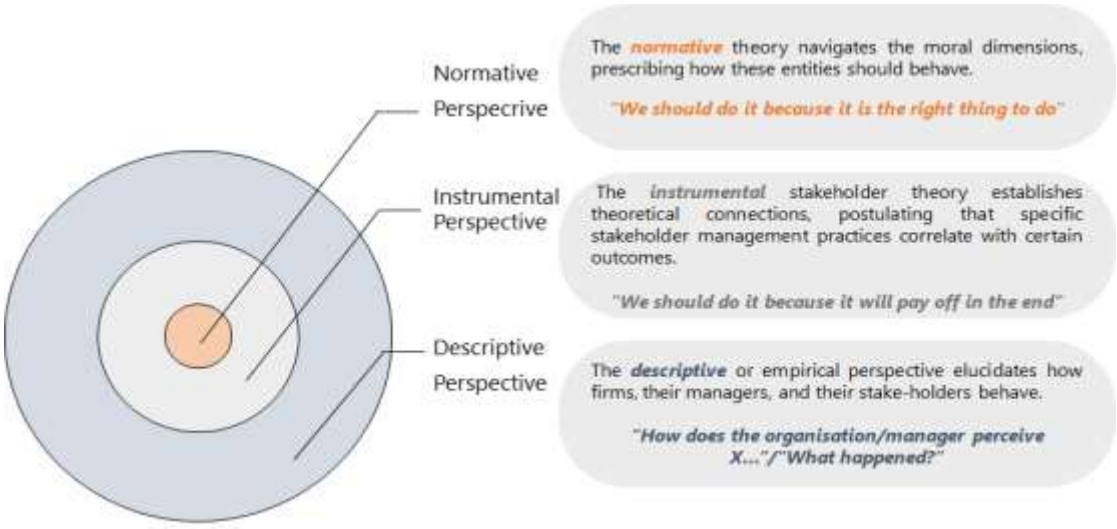



**Figure 12**: Nested Paradigms of Stakeholder Theory
*Source: Scheme adapted from (Donaldson & Preston, 1995, p. 74), Text adapted from (Amaeshi, 2010)*

Another attempt to advance stakeholder theory is Mitchell et al.'s (1997) concept and framework of stakeholder salience to address the question of Freeman's (1984) principle of "Who or What Really Counts". They base their framework on three core assumptions. Firstly, managers should prioritize attention to the most important stakeholders ("Who or What") for achieving organizational goals. Secondly, stakeholder salience is subjective and depends on managerial perception. Lastly, stakeholders' determination and salience are grounded in possessing specific attributes.

In other words, the main idea of their framework is to systematically evaluate a stakeholder's actual and potential position. This way managers can identify and respond to stakeholders more effectively (Eskerod, 2020). According to their model, stakeholders are categorized into eight classes based on the presence of none, one, two, or all three salience attributes—power, legitimacy, and urgency—each affecting their classification as 'latent,' 'expectant,' or 'definitive' (see Figure 13).

It is important to note that Mitchell et al.'s (1997) model is not exhaustive. Stakeholders' attributes are a powerful tool for stakeholder analysis and identification; therefore, over time, researchers have identified more attributes to better understand stakeholder

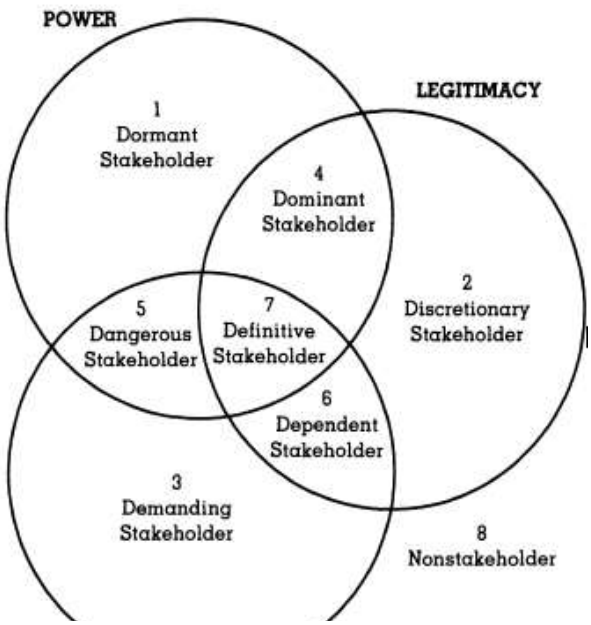



**Figure 13:** Stakeholder Typology and Salience Attributes
*Source: (Mitchell et al., 1997, p. 874)*

behaviours. These include *attitude* (Supportive or Negative), *contribution, criticality, impact, influence, interest, knowledge, and time sensitivity*. *Proximity* (Bourne, 2005), for instance, has been recognized for its practical relevance in various studies outside of Mitchell et al.'s original framework (N. H. Nguyen et al., 2009; R. J. Yang, Shen, Ho, et al., 2009; R. J. Yang et al., 2014), indicating its practical importance. Furthermore, other frameworks have been proposed to address some criticism attributed to Mitchell et al.'s model (see, for instance, Bahadorestani et al. (2019)). One criticism is the perceived static nature of the framework. It fails to capture stakeholder dynamics as attribute levels often vary over time through the development of construction projects (R. J. Yang, Shen, & Ho, 2009).

There is a debate among scholars about the most critical attribute. In their study, Yang et al. (2014), conclude that 'power' is the most significant attribute in strategic decision-making. They note that their findings contradict Agle et al.'s statements (1999), as they considered urgency to be the best predictor of salience. On the other hand, Olander (2007) notes that 'power' is the main attribute to affect a project's decision-making, but he also argues that from a moral standpoint, 'legitimacy' is a more important attribute since legitimate stakeholders are risk-bearers, and if the proper attention is not given to them, they can gain power and become a threat.

**Table 7:** Power, Legitimacy, and Urgency stakeholder attributes description

| *Attribute* | *Description* | *Source* |
|---|---|---|
| **Power** | The stakeholder's ability to impact the firm. This can be done by controlling resources (physical, material, financial or social), creating dependencies, and supporting the interests of some group members or groups over others. | Bahadorestani et al. (2019); Mitchell et al. (1997); Yang et al. (2014) |
| **Legitimacy** | The validity of the stakeholder's connection with the firm. It is also referred to as the perception or assumption that the actions of an entity are desirable, proper, or appropriate within a social constructed system of norms, values, beliefs, and definitions; hence, it is a '*legitimate*' claim. | Bahadorestani et al. (2019); Mitchell et al. (1997) |
| **Urgency** | The degree to which stakeholder claims call for immediate attention. Due to its short-term economic and the long-term sustainable impacts on the project. | Mitchell et al. (1997); Yang et al. (2014) |
| Proximity | Distance between the stakeholder and the project works and activities from each other or Active involvement and participation | Bahadorestani et al. (2019) |

To conclude, Mitchell et al.'s (1997) framework remains widely recognised (Holloway & Bryde, 2016) and is a valuable alternative for categorising and managing stakeholders. However, their most significant contribution might not be the framework itself but the broader idea of stakeholder salience. Their work has served as the foundation for future studies related to managing stakeholder dynamics and behaviours (e.g., (Aaltonen et al., 2008, 2015; Aaltonen & Kujala, 2010; R. J. Yang et al., 2014). Whether applied through attributes proposed by Mitchell et al. or others tailored to specific projects, the salience concept remains fundamental to enabling stakeholder management activities such as identification, understanding, and analysis, which are critical for project success.

### 3.1.2 Stakeholder Concept and Definitions

Stakeholder management approaches have been and continue to develop around two related fields: the definition of stakeholder concepts, and the classification of stakeholders into specific categories (Signori, 2017). These fields are addressed in the following subsections.

#### Stakeholder Concept

The term *'stakeholder'* has become an integral part of management theory and practice since Freeman's seminal work (Mitchell et al., 1997) gaining recognition and prompting further research and development of stakeholder theory (Bryson, 2004). Not long after Freeman's work, the stakeholder concept was extended to the project domain. Cleland (1986) is often credited with the term "project stakeholder management" (Aaltonen et al., 2008).

Stakeholder definitions are commonly classified as either broad or narrow (Chinyio & Olomolaiye, 2010). Broad definitions will favour including virtually anyone who can affect or is affected by the project, including, for instance, living entities such as plants and animals and non-living beings like the environment and future generations (Eskerod, 2020). Scholars often criticize these broad definitions, arguing that they carry the risk of rendering the concept of a stakeholder meaningless by classifying everyone as one (Amaechi, 2010; Leung & Olomolaiye, 2010; Mitchell et al., 1997; Olander, 2007). In contrast, narrow definitions may limit stakeholders to those with only economic or contractual relationships, thereby excluding those who can positively or negatively impact a project or organisation but lack an economic relationship.

Table 8 presents two classical examples of broad and narrow definitions. Freeman's (1984) definition is one of the most popular. However, his interpretation is criticised for being too broad and not specifying the stake, relationship, or legitimacy of the stakeholder's claim based on their position within the organisation (Aaltonen, 2010). On the other hand, Stanford's definition, is viewed as narrow, which might lead to exclude relevant groups (Olander, 2007).

**Table 8**: Stakeholder concept definition examples

| Broad Definition (Freeman, 1984) | Narrow Definition (SRI) |
|---|---|
| "*any group or individual who can influence or is influenced by the organisation's objectives*" (1984, p. 46) | *"stakeholders are those without whose support the organisation would cease to exist"* |

Source: (Freeman, 1984)

While Freeman's (1984) stakeholder definition is widely used, there are hundreds of other definitions, yet the literature lacks a formal definition (Chinyio & Olomolaiye, 2010; Olander, 2007). This diversity in definitions has led to multiple interpretations of the concept and contributed to the lack of agreement in the field, as Eskerod (2020) points out. Walker et al. (2008) underscored the need for a formal definition to address the confusion on the topic. They further note that different perceptions and positions toward stakeholders, particularly at the project level, influence the lack of consensus on a universal stakeholder definition.

Freeman et al. (2010) noted that the evolving definitions reflect attempts by academics to address specific theoretical challenges by using the 'stakeholder' construct. However, they caution against overly broad or vague descriptions of the stakeholder concept, as it might further contribute to the lack of consensus and understanding in the field.

While no universally accepted definition exists, this thesis adopts the definition proposed by Walker et al. (2008), who defined them as *"Individuals or groups who have an interest or some aspect of rights or ownership in the project, and can contribute to, or be impacted by, either the work or the outcomes of the project."*

## Stakeholder Classifications

The idea of exhaustively identifying stakeholder types allows managers to distinguish and address diverse sets of entities, reflecting the essence of stakeholder theory—emphasising the interests and well-being of those capable of influencing or obstructing the organisation and project (Signori, 2017). Furthermore, stakeholder classifications become imperative considering the inherent constraints organisations and managers face. They must allocate limited resources effectively (Huemann et al., 2016).

Literature outlines several methods for categorising stakeholders based on: 1) their level of involvement in the project; 2) their relationship with the project; 3) their claims or expectations from the project; 4) their role within the project; 5) their engagement in the management process; and 6) their predictability of their actions (Aaltonen, 2010; N. H. Nguyen et al., 2009).

The construction industry notably applies this classification approach, traditionally distinguishing stakeholders as either internal (or primary) or external (or secondary) based on their legal or contractual ties to the project. Internal stakeholders are members of the project coalition, pro-

vide finance, or have a legal or contractual relationship with the project. External stakeholders are individuals or organizations that influence or are influenced by the project but are usually not involved in transactions with the project and may not be essential to the project's survival (Leung & Olomolaiye, 2010, pp. 75–77).

In this context, Figure 14 presents a schematic overview of the potential stakeholders in a construction project, distinguishing between internal and external stakeholders.


**Figure 14**: Potential Stakeholders for Construction Projects
*Source: Adapted from (Olander & Atkin, 2010)*

It is important to acknowledge that other classifications of stakeholders exist in the literature. For instance, based on a comprehensive review of stakeholder literature, Aaltonen (2010) noted distinctions based on their claims, roles (e.g., upstream to external stakeholders), and predictability of behaviour (from explicit to unknown). Similarly, Achterkamp and Vos's (2008) review finds categorisations of stakeholders by their impact (those who can affect or be affected), potential for cooperation or threat, relationship type (fiduciary or non-fiduciary), involvement level (primary or secondary), and engagement (voluntary to passively involved).

Furthermore, it is important to note that, as with the definition of stakeholder, scholars are engaged in a conceptual debate about the division between primary and secondary stakeholders, particularly when discussing government authorities (Aaltonen, 2010). Traditional stakeholder theory often considers them primary or internal stakeholders due to their legal authority. Conversely, some contend that their lack of direct involvement in the project qualifies them as secondary or external stakeholders.

In this study, we adhere to the distinction between internal and external stakeholders. This division is reinforced by Olander's (2007) critique of alternative classifications, such as influencers

versus stakeholders, which he found to have certain limitations. For instance, despite its potential to significantly affect project activities, the media would not be considered a stakeholder under the claimant versus influencer model.

### 3.1.3 Theoretical Implications, Limitations, and Future Trends

#### Multilevel Perspective

A relevant notion often overlooked when discussing stakeholder theory and stakeholder management is the issue of multilevel perspectives, which affects the perceptions of stakeholder influence. Amaeshi (2010) notes that most stakeholder research has predominantly focused on the micro-level, which includes managerial and organisational perspectives. He suggests that the dominant managerial and instrumental approaches to stakeholder practices have limited research development at the broader meso (industry) and macro (national) levels. He cites critics of the manager-centric approach who warn that it can lead to opportunistic behaviours, with managers potentially prioritising organisational and shareholder interests for personal gain. This perspective aligns with Aaltonen & Kujala (2010), who argue that the existing overly managerialist focus often neglects the stakeholder's viewpoint.

Conversely, the organizational perspective broadens the scope to include social and contextual implications for stakeholder issues. This perspective fosters a deeper interest in Corporate Social responsibility (CSR) and corporate governance practices. Recent studies highlight the significance of these broader levels, recognising that ethical and normative considerations can vary significantly across different countries and cultures (Winch, 2017, p. 348) . Amaeshi (2010) observes that traditional stakeholder theory often overlooks the intricate and interdependent nature of stakeholder salience, which is shaped by social, cultural, and institutional factors. Rowlinson et al. (2010) corroborate this, identifying 'culture-specific' dynamics in stakeholder reactions to various issues through their findings from two case studies in Hong Kong. They emphasise, *"Tradition, custom, and practice, politics, and culture have a major influence on how stakeholder management is undertaken (...)."* (Rowlinson et al., 2010, p. 260). Moreover, they argue that unlike the US or the UK, Hong Kong's values may act as a barrier to stakeholder involvement and empowerment.

#### Ethics, CSR, and Sustainability

The ethical dimension of stakeholder theory differentiates strategic management from ethical management, where the latter prioritizes fair treatment and legitimacy for all stakeholders, irrespective of their power or influence (Eskerod, 2020). This becomes relevant when we consider that projects require contributions from individuals and organisations to achieve their objectives. As a result, their success will be heavily reliant on numerous negotiations between the project organization and its stakeholders. Consequently, decisions regarding *how* to address stakeholders' interests will fall upon ethical considerations.

Eskerod & Jepsen (2013) provide an overview of relevant ethical considerations project managers will likely face. They point out that projects, being temporary organizations, pose a challenge in prioritizing short-term benefits over the long-term needs of stakeholders. Conflicting interests between the organization and stakeholders, or among different stakeholders, may also present challenges. Additionally, balancing the desire for short-term gains with the need to lay the groundwork for sustained positive outcomes can be difficult. Ultimately, the authors argue that *"the ethically correct way to manage stakeholders is to facilitate your project to ensure that ideally, all project stakeholders will benefit from the project"* (2013, p. 73).

Due to its ethical, social, and economic underpinnings, the stakeholder idea has become a 'tenet' of corporate social responsibility (Chinyio & Olomolaiye, 2010). In this context, Freeman et al. (2010) argue that CSR should not be treated as an external variable to corporate strategy, as is usually the case in profit-driven CSR. This approach is similar to the instrumental stakeholder theory perspective, in which CSR is just a 'means' for an organization. Instead, they suggest a holistic CSR approach integrated into the corporate strategy. This approach calls for organisations to redefine their strategies, prioritising value creation over the traditional business-as-usual approach followed by profit distribution.

Stakeholder theory has become central to sustainable development. Huemann et al. (2016) contend that effectively addressing the triple bottom line—financial, social, and environmental—requires companies to have robust stakeholder relationships and implement stakeholder-oriented initiatives.

More recently, Di Maddaloni and Sabini (2022) have acknowledged sustainable project management as one of the ten schools of thought in project management. They underscore the normative underpinnings of social sustainability, emphasising that project managers must consider the interests of all stakeholders, including future generation(Huemann et al., 2016). In other words, a sustainable approach to stakeholder management not only fulfils the expectations and interests of current stakeholders but also contemplates the long-term effects on future stakeholders.

Notably, the sustainable development approach emphasises' stakeholder engagement' as a priority, in contrast to CSR, which emphasises 'stakeholder management.' Researchers contend that the value-based nature of sustainable development is one of the guiding principles that drive the need for a management *for* stakeholders approach (Di Maddaloni & Sabini, 2022; Eskerod & Huemann, 2013; Huemann et al., 2016), as it promotes values such as participation of all stakeholders, fairness, and transparency.

The concept has become more important within projects, and there is a global request to consider sustainable development. However, there is still limited development of principles within the project management domain (Huemann et al., 2016).

## Future directions and Theory Limitations

Freeman (2018) admitted that stakeholder theory has faced much criticism and debate since its origins. Perhaps one of the most significant limitations is that there is not a "single" theory with clear relationships among concepts, agreed-upon mechanisms, and distinct boundaries. This characterization has led some scholars to argue that it is not strictly a management theory but a framework for making management decisions. The reality is that the stakeholder domain remains polarised, with limited consensus (Eskerod, 2020, p. 15)

Orts and Strudler (2009) argue that stakeholder theory has become a ‘vampire’ in the field, feeding on any idea that crosses its paths and growing expansively. They argue that critics have pointed out that stakeholder theory lacks a useful framework to address business and ethical issues, as it is surrounded by ambiguity and vague concepts like 'stakeholder'. Furthermore, it relies on flawed premises, such as the notion of balancing objectives with stakeholders, which has been labelled "an impossible managerial quest” due to conflicting interests, subjectivity, and the resource-intensive process.

Towards the future, the New Stakeholder Theory (NST) concept is emerging prominently in contemporary stakeholder and strategic management research. The term NST refers to work that addresses critical gaps in current stakeholder theory (i.e., it is not a formal theory) and future trends (value creation, ethics, sustainability) in understanding and managing stakeholder relationships in complex project environments. It is still in the early phases of becoming a formal theory. However, it provides an interesting outlook for advancing stakeholder engagement and management activities, making them more implicit in organisations' strategies and facilitating value co-creation between a firm and its stakeholders.

## 3.2 Stakeholder Management

Stakeholder management is about relationships between an organisation and its stakeholders (Chinyio & Olomolaiye, 2010). SM can be seen as a single activity, thereby managing a stakeholder. However, this thesis uses the alternative perspective, which views SM as a process. This process can be generalised as a series of steps an organisation should (or must) take to organise, monitor, and improve its relationship with its stakeholders. Some critical activities within the SM process are identifying, assessing, understanding, and building stakeholder relationships. To guide this process, various models and frameworks have been proposed in the literature. For instance, Karlsen (2002) outlines a six-step process involving planning, identifying, analysing, communicating, acting, and following up, while Walker et al. (2008) propose a five-step process: identify, prioritise, visualise, engage, and monitor the effectiveness of communications. Additionally, Cleeland (1986) suggests a four-step approach comprising identification, classification, analysis, and strategy development. However, it is essential to reflect that perhaps the most important thing is not the number of steps in the SM process, but the activities that make up each step.

For instance, Figure 15 presents Cleland and Ireland's (2002) proposal, which considers five general steps of the SM process: planning, organising, motivating, directing, and controlling. Alongside these steps, they also identified seven underlying activities. According to Cleland and Ireland (2002, p. 174), the stakeholder management process (SM) *"consists of executing the management functions of planning, organizing, motivating, directing, and controlling the resources used to cope with external stakeholders' strategies"*. They further emphasized that these management functions are (or should be) interconnected and iterative to address the emergence or departure of stakeholders throughout the project's life cycle.


**Figure 15:** Project Stakeholder Management Process

Source: (Cleland & Ireland, 2002)

In this study, we adopt a general four-step process comprising stakeholder analysis, strategy development and implementation, stakeholder engagement, and monitoring and evaluation. Each step is briefly described in the following sections.

### 3.2.1 Stakeholder Analysis

Stakeholder analysis is a crucial and initial step in the stakeholder management process. It involved identifying stakeholders, their interests, power, resources, and perspectives (Cuppen et al., 2016). The process can be broken into three main activities: stakeholder identification, prioritization, and assessment.

Stakeholder identification involves delineating project boundaries and identifying those entities within these boundaries who can influence or be affected by the project (Eskerod & Jepsen, 2013). It is a crucial step in SM (Cuppen et al., 2016; R. J. Yang, Shen, & Ho, 2009), and it helps organisations and managers allocate their limited resources effectively (Huemann et al., 2016). Earlier it was presented some ways in which stakeholder can be classified (i.e., internal or external), however they can also be classified based on their attributes and categories, such as those proposed by Mitchell et al. (1997), or by their position in the stakeholder vested-interest impact index (e.g. subjects, players, crow, context-setters) (Olander, 2007).

Stakeholder prioritisation entails weighing the relative importance of stakeholders, taking into account their attitude towards the project as well as their goals and objectives. Visual tools are commonly employed to facilitate this process. Some commonly used techniques include the power-predictability matrix and power-interest matrix (Newcombe, 2003), Bourne's (2005) Stakeholder Circle, potential graph (Eskerod & Jepsen, 2013), stakeholder-issue diagrams (Bryson, 2004), 3D power-interest-attitude grids (Murray-Webster & Simon, 2006), stakeholder impact index, and vested interest-impact indexes.

Stakeholder assessment involves understanding each stakeholder's potential, motivations, and requirements to contribute to or oppose the project's success. According to Eskerod & Jepsen (2013), a crucial aspect of the assessment is to identify each stakeholder's direct or indirect power to help or harm the project as well as their inclination to do so. Moreover, they emphasize that the stakeholders are the primary source of the information required for the assessment. Therefore, they suggest proactively engaging stakeholders early in the project, which could be done through workshops or interviews.

### 3.2.2 Stakeholder Engagement

Stakeholder Engagement (SE), "refers to the aims, practices, and impacts of involving stakeholders and stakeholder relationships in organizational activities and decision-making process" (Sachs & Kujala, 2021, pp. 3–4).

The notion of SE is closely related to the stakeholder analysis process, in some cases, they could be done simultaneously (R. J. Yang, Shen, Bourne, et al., 2011). Researchers highlight the significance of SE as equally important as stakeholder analysis, and deeming it a critical activity for project success (Cuppen et al., 2016; R. J. Yang, Shen, Bourne, et al., 2011). Moreover, best practices suggest that involving stakeholders at an early stage improves the likelihood of favourable project outcomes.

Stakeholder engagement is a process with two main levels: involvement and participation. Involvement is about improving stakeholders' understanding through consultation and information, whereas participation refers to a higher degree of engagement, in which stakeholders are actively involved to enable them to voice their opinions, stay informed, and in-fluence the decision-making process. Ultimately, engaging stakeholders, regardless of the level, aims to avoid or reduce conflict (Moura & Teixeira, 2010; T. S. Nguyen, 2019).

Elaborating on these concepts, Figure 16 distinguishes between communication (similar to involvement) and engagement (similar to participation). Worsley (2020) suggests that communication actions should primarily target internal stakeholders. Conversely, engagement strategies, while including internal stakeholders, emphasise reaching out to external stakeholders. However, as the number of stakeholders involved clearly increases, the engagement activities become more complex.

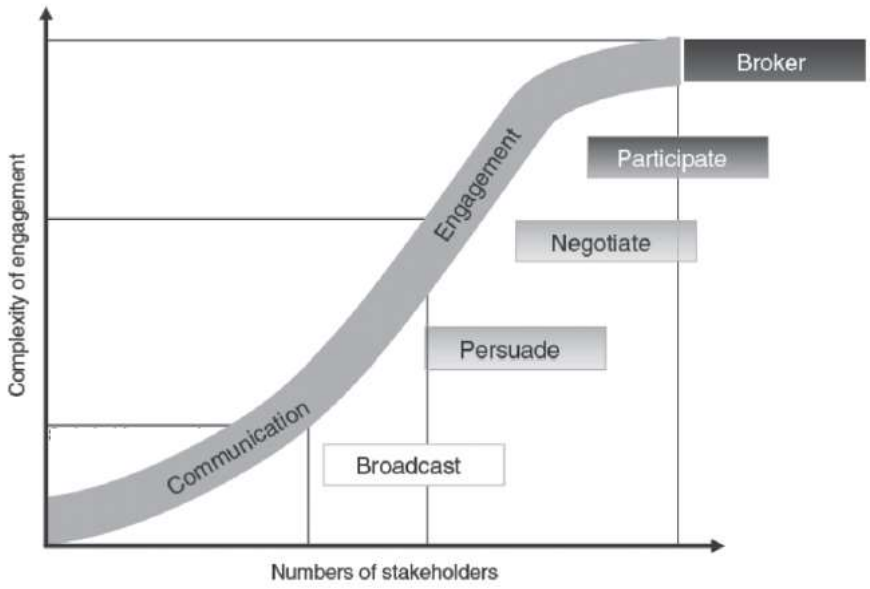



*Figure 16: Communication vs Engagement*
*Source: (Worsley, 2020)*

**Table 9** presents a more detail description of traditional actions involved at the different levels of engagement. It also shows that traditionally, higher levels of involvement will be targeted to fewer people, conversely, mor informative actions like a newsletter, are aimed at reaching more people, but are considered the lowest in the spectrum of involvement.

**Table 9:** Stakeholder Engagement Strategies

| | Type of Relation | Description | Stakeholders influence in decision | Actions | When to use | |
|---|---|---|---|---|---|---|
| LEAST | **Giving Information** | Stakeholders are informed about the project | None | -Press realse, TV<br>- Newsletter | Information not controversial/trust | MORE |
| Level of involvement | **Gathering information** | Stakeholders provide information to help decisions,<br>but don't participate | Very Little | -Questionnaries<br>- Interviews<br>- Surveys | Reliance on the use of information | Number of People |
| | **Consultation** | Stakeholders are consulted but don't participate in<br>decisions | Limited | -Written comments<br>- Interactive meetings | Stakeholders trust in decision-making process | |
| | **Participation** | Decision-making process is shared with some specific stakeholders | Can influence specific subject or issue | -Workshops<br>- Topic groups<br>- Round table meeting | Willingness and ability to accept influence of outcome | |
| | **Bounder Dialogue** | Decision-making process is shared with some specific stakeholders | Stakeholders fully involved with some pre-set constrains | -The above processes in a pre-planned and coherent way, eventually facilitated by mediators | All solutions are possible, within prefixed parameters | |
| MOST | **Open dialogue** | Decisions is taken together | Stakeholders fully involved in decisions | | Wider and complex problems, with open outcomes | FEWER |

*Source: Adapted from (Moura & Teixeira, 2010)*

It is important to acknowledge, that in recent years the terms "Stakeholder Engagement" and "Stakeholder Management" have increasingly been used interchangeably in the context of stakeholder management (e.g.., Bourne, (2009); Molwus, (2014)). In some cases, "Engagement" has even replaced "Management." This shift reflects a foundational change in ethical and normative views, suggesting that stakeholders should not (and cannot) be "managed." As a result, "engage" is becoming a preferred term. Guidelines from prominent associations like the PMBOK and the APM Body of Knowledge reflect this change. For instance, the 7th edition of the PMBOK replaced its section on "project stakeholder management" with "stakeholder engagement." The APM Body of Knowledge's 7th edition similarly challenges traditional "managing" of stakeholders, instead, it suggests "*the need to think instead about how we understand, engage and influence stakeholders*" (Association for Project Management, 2019, p. 105). Thus, their view goes against stakeholder management, which aligns with the normative approach to stakeholder management, emphasizing legitimacy and refined interactions with stakeholders. Therefore, other uses of the term 'stakeholder engagement' in literature refer to the management *for* stakeholders' approach.

### 3.2.3 Management Approaches

Stakeholder literature is divided into two main and contraposing approaches to managing project stakeholders: '*management of stakeholders*' and '*management for stakeholders*' (Eskerod & Huemann, 2013). More recently, a third conceptualization has also emerged: *management with stakeholders* (Signori, 2017).

#### Management *of* Stakeholders

The *management of stakeholders'* approach, rooted in classic stakeholder theory, prioritises stakeholders based on their perceived significance, resource contribution, or potential threat to the

project (Oppong et al., 2019). Huemann et al. (2016) explain that it features two predominant strands: resource-based and issue-based views of stakeholder management. The resource-based view perceives stakeholders as holders of resources beneficial to the project, treating them as a means to an end. Therefore, managers will prioritise stakeholders based on their significance to project success. In this paradigm, the central task of an organisation is to exert influence over stakeholders to maximise its benefits. Conversely, the issue-based understanding provides a more nuanced perspective, taking into account the stakeholder-project relationship based on a given issue(Huemann et al., 2016). In this approach, when there is a conflict of interest, managers will apply trade-offs based on prioritisation (Di Maddaloni & Sabini, 2022).

This method represents a textbook definition of an instrumental approach, treating stakeholders as a means to an end rather than entities with intrinsic value. Di Maddaloni and Sabini (2022) further add that the approach is rooted in a neo-classical view of the firm that prioritises maximising shareholder value, often through manipulation and anticipation. Scholars have criticized this approach for its lack of an ethical approach to stakeholders and its narrow focus on project and organizational benefits at the expense of other stakeholders (Huemann et al., 2016). Therefore, as Nguyen et al. (2019) note, researchers have increasingly called for a shift towards a management-*for*-stakeholders approach. However, they also observe that literature on project stakeholder management has focused on this instrumental approach, often ignoring those impacted by the project's delivery.

### Management *for* Stakeholders

The *management for stakeholders*, also sometimes referred to in literature as *Stakeholder Engagement*, represents a normative approach to stakeholder management. It stems from Freeman's later work, contending that classic stakeholder theory inherently rests on normative principles to uphold moral rights. He argues that managers should look beyond the interests and benefits of their organisation and its shareholders (Freeman et al., 2010).

According to Huemann et al. (2016), in contrast to the management *of* stakeholders, this approach operates on the premise that all stakeholders possess equal value. Consequently, it advocates for equal attention to all stakeholders, regardless of their potential to contribute positively or negatively to the project. It is characterised by the underlying assumption that when conflict between two or more stakeholders erupts, management will look for win-win situations as much as possible, aiming to minimise adverse effects for each stakeholder. This approach seeks to promote fairness, justice, and transparency by considering the interests of multiple stakeholders in a sustainable and ethical manner. Consequently, as was highlighted previously, this novel approach has been linked with sustainable development, CRS, and ethical considerations.

Nevertheless, the approach for stakeholders has also been criticized by researchers for two main reasons. Firstly, as it assumes a broad stakeholder interpretation, it might lead management to suffer from a lack of focus on the most critical stakeholders. Secondly, striving for a win-win approach to conflict resolution has also been noted to be over-ambitious, as it risks delays due to

the long-lasting search and negotiation to reach win-win situations; furthermore, it is an expensive and resource-consuming activity.

### Management with Stakeholders

Signori (2017) introduced the foundations of the novel perspective of management *with* stakeholders. She suggests that while stakeholders' distinct identities and interests are traditionally viewed as potential sources of conflict, managers can generate value by aligning these diverse interests towards a common direction, emphasizing the joint creation of value. She argues that the stakeholder perspective is evolving from a corporate-centric focus to a network-based, relational, and process-oriented approach to a company-stakeholder engagement perspective. This paradigm shift views the corporation as a product of its relationships with stakeholders, who actively participate in shaping its meaning and defining its purpose. According to this interpretation, the firm's meaning and objectives are continuously shaped through the ongoing interactions between the firm and its stakeholders.

Drawing from Signori's (2017) work and in the context of resilience, Morkan et al. (2023) recognize that stakeholder theory is now moving towards managing *with* stakeholders. In their study, they argue that the new movement within stakeholder theory views stakeholders as partners that – in the right circumstances – can crucially and positively influence the project towards success among joint interests.

**Table 10:** Stakeholder Management Frameworks in Literature

| Category | No. | Stakeholder Management process actions | Karlsen (2002) | Elias et al. (2002) | Young (2004) | Bourne and Walker (2005, 2006) | Olander (2006) | Walker et al. (2008) | Chinyio and Akintoye (2008) | Jepsen and Eskerod (2009) | Manowong & Ogunlana (2010) | Oyegoke (2010) | Henjewele et al. (2013) | Yang et al. (2011,2014) | Park et al. (2017) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stakeholder Analysis | 1 | Identification of stakeholders | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | 2 | Analysing the characteristics of stakeholders | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | | ✓ | ✓ |
| | 3 | Gathering information about stakeholders | | ✓ | ✓ | | ✓ | | | | | | | | ✓ |
| | 4 | Prioritizing stakeholders | | ✓ | | ✓ | | ✓ | | ✓ | ✓ | | ✓ | ✓ | |
| | 5 | Determining stakeholder strength and weaknesses | | | | | ✓ | | | | | | | ✓ | |
| | 6 | Analysing the influence of stakeholders | | ✓ | ✓ | | | | | | | ✓ | | ✓ | |
| | 7 | Identifying stakeholder mission | | | | | ✓ | | | ✓ | ✓ | | | ✓ | ✓ |
| | 8 | Predicting stakeholder behaviour | | ✓ | | | ✓ | | | | | | | | |
| | 9 | Visualising stakeholders | | ✓ | | ✓ | | ✓ | | | | | | | |
| Strategy Development and Implementation | 10 | Identifying stakeholder management strategies | | | ✓ | | ✓ | | ✓ | ✓ | | | | ✓ | |
| | 11 | Develop stakeholder management/engagement strategies | ✓ | | | ✓ | | ✓ | | | | | | ✓ | ✓ |
| | 12 | Implementing stakeholder management strategies | | | | | ✓ | | ✓ | | | | | ✓ | |
| Stakeholder Engagement | 13 | Communicating and sharing information with stakeholders | ✓ | | | | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | 14 | Monitoring effectiveness of communication | | | | | | ✓ | | | | ✓ | | | |
| | 15 | Establishing a stakeholder feedback mechanism | | | | | | | ✓ | | ✓ | | | | ✓ |
| | 16 | Involve Stakeholders and Build relationship | | | | | | | ✓ | | ✓ | | ✓ | | |
| | 17 | Educate and involve other entities (i.e., Gobernment) | | | | | | | | | | ✓ | | | |
| | 18 | Engage stakeholders through "frontline"&"underlying" approaches | | | | | | | ✓ | | | | | | |
| Monitoring and Evaluation | 19 | Continuously monitoring stakeholder saliency | | | | | | | ✓ | | | | | | ✓ |
| | 20 | Analyse the impact and changes in stakeholder relationships on the project | | | | | | | | | | | | ✓ | ✓ |
| | 21 | Monitor and Evaluate overall SM Strategy | ✓ | | | | | ✓ | | | | ✓ | | | ✓ |
| Framework for Construction/Infrastructure Projects (x) | | | | | | | | x | x | | x | x | x | x | x |
| Research Perspective | | Empirical | | | | | | | | | | | | | |
| | | Non-empirical | | | | | | | | | | | | | |
| | | Empirical with conceptual relationship ) | | | | | | | | | | | | | |

*Source: Based on (Jayasuriya et al., 2020; Molwus, 2014; R. J. Yang, Shen, Ho, et al., 2011)*

### 3.2.4 Construction – Project Stakeholder Management

Managing project stakeholders is crucial. This process plays a significant role in a project's success, as highlighted by various researchers (Aaltonen et al., 2008; Bourne, 2005; Bourne & Walker, 2008; Olander & Landin, 2005), and contemporary project management standards (Association for Project Management, 2019; PMI, 2021).

Drawing inspiration from Morris (2002), a project can be defined as a *"one-off, unique endeavour that follows a life cycle sequence, undertaken to accomplish a defined object"*. As Eskerod & Jepsen (2013) outline, ***projects*** are means established to generate *benefits* for a base organization. These benefits derive from ***project deliverables*** produced during the project's lifecycle. Projects also have side effects called ***project outcomes***, which can be negative, positive, or neutral and affect the stakeholders. It is essential to understand that project stakeholders can also impact the project. Effective stakeholder management involves recognizing these impacts and deciding how to categorize stakeholders. This decision determines whether stakeholders that fall under the same category should be treated as a single entity or whether subgroups or individuals should be considered (emphasis on the original).

Eskerod & Jepsen (2013) also note that stakeholders contribute to project deliverables through financial or non-financial means. They emphasize that stakeholder contributions have a cost, which can be direct or indirect in terms of effort or time. According to them, the theory assumes that stakeholders will contribute as needed if motivated to do so, making it critical to assess and understand stakeholders' motivations based on expected costs and outcomes. Therefore, project stakeholder management aims to increase the likelihood of project success by purposefully engaging with stakeholders and enabling and encouraging their contributions at the correct times and most effectively.

Construction projects present a distinct set of challenges that set them apart from other project types. Construction projects are unlike other projects, presenting a unique set of challenges that require careful consideration. According to the 'Construction Extension to the PMBOK' (PMI, 2016), these projects must navigate several factors simultaneously, including geography, site conditions, community dynamics, physical environments, existing infrastructure, and diverse stakeholder requirements. Furthermore, they require multidisciplinary teams, advanced technologies and equipment, and unique construction techniques, which result in distinctive features in contractual arrangements, financing, risk management, schedule management, sustainability practices, logistics, and compliance with evolving regulations. The need for constant adaptation to external pressures and compliance with regulations further adds to the complexities of construction projects. These and other sets of complexities may not be immediately evident at the start of a construction project. Therefore, they emphasize the need for specialized project management approaches tailored to the unique demands of the construction industry.

In their review of relevant publications, Yang et al. (2009) identified five main reasons why stakeholder management is crucial in construction projects:

1. *Complexity of construction Projects.* Given the complex nature of construction projects involving numerous processes and diverse stakeholders, effective stakeholder management becomes crucial for project success.
2. *Temporary Nature of Stakeholder Relationships.* Recognizing temporary stakeholder relationships in construction projects requires proactive and adaptive stakeholder management strategies.
3. *Varying levels of Investments and Interests.* A proactive approach to communication and engagement is crucial for project managers to address diverse stakeholder interests and needs.
4. *Clarity of Duties and Roles*. Ensuring clarity regarding duties, roles, and program requirements for each stakeholder is crucial for cohesive project execution, making effective stakeholder management a foundational aspect.
5. *Mitigation of Time Delays and Cost Overruns*. Recognizing that inadequate stakeholder management may lead to significant project challenges, including time delays and cost overruns, underscores the vital role of strategic stakeholder engagement throughout the project life cycle.

## 3.3 Challenges in External Stakeholder Management

The previous sections have presented the concept and definitions of stakeholders (§3.1.2) and why it is important to attend to them (§3.2). This section, however, concentrates on the particularities of external stakeholders, as they are the focus of the present research.

External stakeholders are those individuals or organisations that do not have a formal or legal relationship with the project organisation. Nevertheless, they can be affected by the project, and they may have the authority to decide on or influence the project; however, they may not be essential to the survival of the project (Leung & Olomolaiye, 2010; Olander, 2007; Olander & Landin, 2005). Figure 14 presented some examples of common external stakeholders in construction projects, but it is important to note that there is no definitive list of external stakeholders. Instead, the term "external stakeholder" is used to refer to stakeholders who are on the periphery of the project (Ninan et al., 2019), both literally and rhetorically.

Despite external stakeholders' lack of formal authority, Ninan and Sergeeva (2022) note that neglecting their expectations, interests, and needs can significantly influence project outcomes. Furthermore, they can generate social unrest or resistance through direct and indirect strategies (Aaltonen et al., 2008). Another way to view them in terms of salience (Mitchell et al., 1997) is that external stakeholders do not usually have formal 'power', yet they might have informal power, which, if exercised, can press powerful stakeholders to join their cause (Olander & Landin, 2008).

Chan and Oppong (2017) further discuss external stakeholders in construction projects by categorising them into three major groups. These are: governmental authorities, including agencies, commissions, judicial, legislative, and executive branches; the general public, represented through end users, environmentalists, politicians, mass media, archaeologists, social groups, and other related groups; and finally, affected local communities.

Since Freeman's seminal work in 1984, he highlighted the importance for organisations to paying attention to the 'external' challenges. He argued that the turbulent times organisations were undergoing were caused by the static nature of organisations and the unpredictable aspects of their external environments. In other words, shifts caused by emerging new groups, external events, and issues challenged the internal static nature of organisational theories and models at the time.

However, despite the recognised relevance of attending to external stakeholders, the topic has been under-researched and underapplied (Di Maddaloni & Davis, 2018). This has been the case even not long after Freema's work. As noted by Harrison and St. John (1996, p. 47), "*traditionally, the focus of management has been on internal rather than external stakeholders.*" This, they argue, was based on the assumption that external stakeholders could not be 'managed' since they were outside the boundaries of the organisation and therefore out of the reach of managerial influence.

Yet, almost 40 years later, the issue remains. Di Maddaloni and Davis (2017) note that, ironically, the work in stakeholder management that followed Freeman's work focused almost

exclusively on primary stakeholders. Similarly, Winch (2017) argues that project management literature has mainly focused on the instrumental approach, prioritising those interested rather than those affected by it. He calls for stakeholder management to adopt a holistic approach, considering the ethical and societal issues surrounding megaprojects.

From his review of 150 articles, Oppong (2020) identifies 30 (non-exhaustive) recurrent obstacles, challenges, problems, difficulties, and barriers to project stakeholder management. Table 11 presents these insights. It is worth noting that, according Oppong's (2020) findings, almost 50% of the factors that cause barriers are due to the management/engagement process.

**Table 11:** Barriers of Stakeholder Management

| No. | Barrier of Stakeholder Management | Factor |
|---|---|---|
| 1 | Negative attitude of stakeholders towards project | Project |
| 2 | Unbalanced distribution of stakeholder power and interests | Interest and Value |
| 3 | Poor perceptions of managers (e.g. seeing stakeholders as enemies ) | Management process/action |
| 4 | Distrust and challenging relationships making stakeholders hold back vital information | Engagement/Relationship |
| 5 | Ineffective communication with stakeholders | Engagement/Relationship |
| 6 | Failure to cooperate with affected and adverse stakeholders | Management process/action |
| 7 | Lack of well-functioning management strategies, methods, approach or process | Management resource |
| 8 | Project complexity and multiplicity of stakeholders | Project |
| 9 | Stakeholders obtaining support from more powerful institutions | Stakeholder factor |
| 10 | Opportunistic political actions among stakeholder groups | Stakeholder factor |
| 11 | Hidden/invisible stakeholders with unseen power and influential links | Stakeholder factor |
| 12 | Different and competing values and beliefs of stakeholders | Interest and Value |
| 13 | Negative public opinion and media coverage of project | Engagement/Relationship |
| 14 | Stakeholders having limited knowledge of project plans and objectives | Engagement/Relationship |
| 15 | Managers lacking required knowledge, skills and experience | Management resource |
| 16 | Project organisations pursuing self-interest at the expense of stakeholders | Management process/action |
| 17 | Lack of monitoring and reporting actual conditions of affected stakeholders | Management process/action |
| 18 | External stakeholder environment is non-transparent and difficult to analyse | Management process/action |
| 19 | Insufficient analysis of alternative project solutions and corresponding impacts | Management process/action |
| 20 | Managers hesitating to change predetermined proposal | Management process/action |
| 21 | Ambiguous instructions in stakeholder prioritization | Management process/action |
| 22 | Absence of comprehensive and effective stakeholder engagement process | Engagement/Relationship |
| 23 | Insufficient and unclear information at the early project stages | Project |
| 24 | Insufficient resources to manage stakeholders | Management resource |
| 25 | Highly dynamic stakeholder environment | Stakeholder factor |
| 26 | Excessive task conflicts that undermine collaboration | Project |
| 27 | Misunderstanding stakeholders' conflicting interests and concerns | Interest and Value |
| 28 | Bureaucratic and complicated permitting process | Stakeholder factor |
| 29 | Stakeholder involvement is burdensome and time-consuming | Engagement/Relationship |
| 30 | Intrinsic (local) cultural values at variance with project plans and objectives | Interest and Value |

*Source: (Oppong, 2020; Oppong et al., 2019)*

Scholars have studied the challenges of managing external stakeholders in project management from diverse perspectives. Though the existing literature provides valuable insights, the various perspectives make it challenging to identify the underlying issues. To better understand "the challenges," this section adopts a division of challenges inspired by the work of Unterhitzenberger et al. (2021). Their framework categorises challenging situations into three main sources: the struc-

tural environment, the social environment, and stakeholder characteristics. This distinction is valuable as it includes both internal and external project elements and provides a comprehensive understanding of the challenges associated with managing external stakeholders. However, to allow for a more intuitive understanding of the challenges and align with this research's purpose, the categories were renamed structural and organisational challenges, socio-political and environmental challenges, and stakeholder dynamics. The following sections further explore these challenges.

### Structural and Organisational Challenges

Structural and organisational challenges build upon Unterhitzenberger et al.'s (2021) structural environment challenges, which include the project organisation, the project objectives, and project governance.

In their comparative study, Olander and Landin (2008) found that project organisations are a crucial factor affecting the external stakeholder management process. However, organisations and projects often work around constraints in the form of goals and project objectives, like schedules and budgets. Therefore, project organisations have limited resources to enforce project and stakeholder management activities, which means that project managers cannot always address the expectations of every potential stakeholder (Di Maddaloni & Davis, 2017; Mitchell et al., 1997; Unterhitzenberger et al., 2021).

Despite several strategies for stakeholder management — as discussed later—project managers have to balance the resources and capabilities they possess to effectively address stakeholders. This showcases the essence of Mitchell et al.'s (1997) salience framework. However, Eskerod and Larsen (2018) caution against the reductionist approach, which has heavily influenced project management theory to make managing projects more effective and less complex—at least on paper. They argue that a reductionist approach to stakeholder analysis practices—their primary focus—risks excluding relevant stakeholder information that may be relevant to understanding their behaviour towards the project. Thus, they conclude that a holistic approach to stakeholder analysis is required, as it may lead to a richer understanding, enabling better stakeholder engagement. Similarly, Olander and Landin (2008) argue that the project organisation and managers should consider the required resources and competencies to create the optimal conditions to execute the project effectively.

From an individual project manager's perspective, a few specific challenges affect external stakeholder management. For instance, Olander and Landin (2008) note that in highly technical projects like construction, managers tend to see the problems from a purely technical and monetary perspective, therefore not sufficiently addressing stakeholders' concerns. Additionally, they highlight that finding trade-offs that satisfy the needs and concerns of as many stakeholders as possible is a challenge for managers, which is why they advocate for an adequate stakeholder analysis.

In their “Practical Guide to Dealing with Difficult Stakeholders," Holoway and Bryde (2016) compare what theory says about stakeholder management with the reality of managing stakeholders. They portray a challenging outlook for effectively addressing and managing people’s concerns and interests, in this case, external stakeholders. The authors claim that stakeholder management is a ‘difficult game’ in which most stakeholders do not care about the project, or they will try to undermine it, while others simply cannot be persuaded to align their interests with the projects. The authors argue that a major challenge in stakeholder management is that project and stakeholder objectives may not align, either as a group or individually. Stakeholders have their own agenda, interests, and priorities, which might also not align with the manager's agenda or timing. Moreover, stakeholders believe they behave rationally, but they get to define what “rationally means”.

Unterhitzenberger et al. (2021) also note that the multilayered concept of culture influences this dimension of challenges. For instance, they note that different subcultures can exist within organisations, in addition to the broader project or organisational cultures and national or regional cultures.

### Socio-Political and Environmental Challenges

The social, political, and environmental dimensions are perhaps the most comprehensive category of challenges presented in this work. This is because many possible external stakeholders a project can face are nested within these dimensions.

The section is mainly centred on the findings of Chan and Oppong's (2017) detailed examination of the literature on external stakeholder expectations. In their study, they adopted the term “expectations” to encompass all of the overall beliefs, benefits, concerns, design principles, demands, expected performance, goals, interests, mission, needs, project evaluation criteria, project goals, reasons, requirements, and values that external stakeholders might have.

**Table 12:** Governmental authorities' expectations

| No. | Expectation |
|---|---|
| | **GOVERNMENTAL AUTHORITIES** |
| | ***Economic Dimension*** |
| G1 | Economic benefits accruing to government and local citizens |
| G2 | Rational allocation of public resources |
| G3 | Harmonious development of different local economic activities |
| | ***Environmental Dimension*** |
| G4 | Appropriate construction waste management strategies |
| | ***Social dimension*** |
| G5 | Being functional and acceptable in terms of tariff to diversified social groups |
| G6 | Adaptability of development to the changing needs |
| G7 | Harmonization of the proposed project(s) with local natural setting |
| G8 | Proper temporary traffic management during construction |
| G9 | Safety management and urgent accident response |
| G10 | Structural safety |
| G11 | Project must showcase the identity of our city and international reputation |
| G12 | Project should abide by regulations and control |
| G13 | Tourism attractiveness of project |
| G14 | Adapt national strategic deployment smartly |

*Source: (Chan & Oppong, 2017)*

A governmental authority, as an external stakeholder, can expedite or delay construction projects to a great extent, thanks to their de facto power and legitimacy. According to Chan & Oppong's (2017) research, the expectations of government authorities and departments lie in making the projects comply with all the applicable technical, normative, and economic policies. These expectations are usually subject to change according to the context. Table 12 provides a general overview of the government's expectations.

Interest in local communities has become a 'hot' topic in literature in light of the growing sustainable development lens of management literature and the contemporary challenges construction projects face. Table 13 provides a general overview of expectations that local communities will likely have when affected by a construction project. Chan and Oppong (2017) highlight that local community groups wield significant influence and are capable of impeding progress in projects by using political and non-political actions, but most importantly, they are the least liable for their actions. Moreover, they underscore that, unlike internal stakeholders, affected communities can maintain their sway over projects even during operational phases.

**Table 13**: Local communities' expectations.

| No. | Expectation |
|---|---|
| | **AFFECTED LOCAL COMMUNITIES** |
| | ***Economic Dimension*** |
| A1 | Appropriate compensation for affected properties and relocation plan/strategy |
| A2 | Increased use of substitute local resources, e.g. materials and plants |
| A3 | Increase in local real estate and asset value |
| | ***Environmental Dimension*** |
| A4 | Conservation and preservation of land, wetland and natural resource |
| A5 | Prevention and mitigation measures against air, water, noise and light pollution |
| A6 | Prevention and mitigation against soil pollution, erosion and flooding |
| | ***Social dimension*** |
| A7 | Improvement in neighborhood quality |
| A8 | Involvement of neighbors in design and planning process |
| A9 | Project must reflect unique local characters |
| A10 | Technical design in terms of aesthetics, density, height and visual permeability |
| A11 | Ensuring the well-being of stakeholders |
| A12 | Enhancing indigenous people's spiritual connection with land |
| A13 | Creation of a safe, convenient, comfortable and legible pedestrian circulation and transport network |
| A14 | Conservation of local cultural and historical heritage |

*Source: (Chan & Oppong, 2017)*

The list of expectations is not exhaustive but provides some noteworthy implications. One significant area of concern for affected communities is the environmental impact of projects. They are likely to express dissatisfaction and concern over the short-term effects of construction activities and nuisances, and for the long-term damage to the surrounding ecosystem. In addition to environmental considerations, economic implications and potential benefits are paramount for affected communities. Even though construction projects usually benefit economic development; local communities are likely to be concerned about the specific impact on the local market, the physical impacts on neighbouring properties, and if applicable, the fair compensation of private property.

Furthermore, as Di Maddaloni and Davis (2018) note, megaprojects are often seen as a built-in recipe for producing local impact but no local benefits. According to Di Maddaloni and Davis (2017), infrastructure projects are often planned based on a national strategic agenda that prioritises economic development at the expense of local community interest or (negative) consequences. Similarly, Flyvbjerg (2014) asserts that the latter is a consequence of the decision-making processes in megaprojects, which are often influenced by factors such as technological capabilities, political motivations, economic considerations, and aesthetic preferences, which tend to prioritise the interests of stakeholders who benefit from the project, potentially at the expense of broader societal needs or concerns.

An important consideration made by Di Maddaloni and Davis (2017, 2018) is that even though literature recognises the importance of local communities as critical external stakeholders, there is a lack of consensus on a formal definition and delimitation of 'community'. A traditional perspective is based on geography or place-based communities, centred on the members' physical proximity to the project in question. However, they contend that, they contend that, given con-

temporary challenges and developments, we should view communities as constructed through interaction and identity rather than understanding them in terms of their proximity to the project. They argue that within stakeholder management, it is crucial to have a formal definition of community to better understand the performance of meeting the community's expectations.

Table 14 presents the expectations of the general public for construction projects (Chan & Oppong, 2017). This group's expectations are similar to those of local communities, but from a different perspective and proximity. As a result, we see similar issues emerging, such as concern over the environmental effects of the construction project and job creation. However, we can also identify other expectations that might be more complex than the ones from local communities. For instance, if the government funds or promotes the project, the general public will likely be more demanding of transparency and more vigilant of corruption. The public will also consider the project's long-term effects from an economic perspective, like long-term value achievement, but also from a societal perspective, expecting social equity and the well-being of future generations.

**Table 14:** General public expectations

| No. | Expectation |
|---|---|
| | **GENERAL PUBLIC** |
| | ***Economic Dimension*** |
| P1 | Value-for-money of the proposed project(s) |
| P2 | Availability of local job opportunities |
| | ***Environmental Dimension*** |
| P3 | Efficiency in terms of energy conservation |
| P4 | Ensuring environmental health and comfort |
| P5 | Preservation of natural habitat and enhancement of biodiversity |
| P6 | Green and sustainable design and construction of project |
| P7 | Interior hygiene and cleanliness of facilities |
| | ***Social dimension*** |
| P8 | Acoustical, daylight and views improvement |
| P9 | Adequate information and direction on circulation and the safe use of facilities |
| P10 | Ensuring social equity and recognizing differences in the status of stakeholders |
| P11 | Access to work and locations of multiactivities |
| P12 | Promoting community cohesion |
| P13 | Project delivery being transparent and fulfilling ethical standards |
| P14 | Incorporating accessibility intervention components in facilities |
| P15 | Security against theft, burglary and vandalism |
| P16 | Promote intergenerational equity |
| P17 | Access to and democratic sharing of project information |
| P18 | Effects on vulnerable groups, e.g. the aged, disabled, etc |
| P19 | Availability of amenities, community and welfare facilities and provision of public open space |
| P20 | Quality and level of social services in local communities |

*Source: (Chan & Oppong, 2017)*

To conclude, earlier, we discussed that one of the ethical challenges of stakeholder management in projects was that managers might prioritize short-term benefits against long-term effects (Eskerod & Jepsen, 2013). Furthermore, as we see here, the public is likely to expect long-term benefits.

A relevant actor who holds a unique position in construction projects and belongs to the general public category is the media (Olander & Landin, 2005). Olander & Landing (2008) acknowledge that the media is a powerful stakeholder that, if appropriately managed, can be an influential ally for the project by aiding in the transmission of information to the public. However, if not handled correctly, the media can be a vehicle to propagate negative information about the project from opponents. The authors recognise that it is difficult to estimate the impact of media coverage, but that it is essential to aim for open and trustworthy communication with the media.

### Stakeholder Dynamic Challenges

Earlier, it was discussed that one of the major milestones in the development of stakeholder thinking was the acknowledgement of stakeholder dynamics, particularly the pioneering work of Mitchell et al. (1997) and Rowley (1997). In recent years, most likely due to the fast-paced, globalized, and therefore dynamic environment that we live in, authors have continued to explore, on an empirical basis, the changing state of stakeholder attributes and positions towards projects (Aaltonen & Kujala, 2010; Olander, 2007; Olander & Landin, 2005).

Aaltonen et al. (2015) recognized that research aimed at project stakeholder dynamics has been studied from three perspectives: research on influence strategies, research on the contextual conditions of the project, and research on stakeholder management strategies.

Aaltonen et al. (2008, p. 511) describe influence strategies as "*versatile strategies or tactics [used by stakeholders] to influence firms and projects decision making*". A seminal study in this area is the work of Frooman (1999). From a resource dependency perspective, his research laid the foundation for future studies on stakeholder influence strategies (T. H. D. Nguyen et al., 2019). He identified four strategies stakeholders could use as 'means to achieve their objectives. Table 15 outlines the stakeholder influence strategies presented in the literature.

**Table 15:** Stakeholder Influence Strategies

| *Fromman (1999)* | *Hendry (2005)* | *Aaltonen et al. (2008)* | *T.H.D. Nguyen et al. (2019)* |
|---|---|---|---|
| Direct Withholding | Allying with other stakeholders | Direct Withholding | Direct - Input witholding |
| Indirect Withholding | Multi-stakeholder dialogues | Resource Building | Direct - Inputs compromising |
| Direct Usage | Letter-writing campains | Indirect Withdolging | Lobbying - Communication |
| Indirect Usage | Blockades | Conflic escalation | Lobbying - Direct action |
| | Boycotts | Credibility Bulding | Bolstering - Coalition building |
| | Litigation | Coalition building | Bolstering - Credibility building |
| | Lobbying Legistlators | Direct Action | |

*Source: Adapted from (Aaltonen et al., 2008; Frooman, 1999; Hendry, 2005; T. H. D. Nguyen et al., 2019)*

In 2005, Hendry's (2005) empirical study advanced Frooman's (1999) proposal and recognised seven influence strategies that stakeholders use to pressure a focal organisation. In a follow-up study, Aaltonen et al. (2008) explored the issue of influence strategies from a stakeholder salience perspective, adopting Mitchell et al.'s (1997) framework. The authors primarily focus on how stakeholders adopt different strategies to increase their perceived salience (power, legitimacy, and urgency) and, therefore, receive attention from managers.

In a recent study, Nguyen et al. (2019) separated previous research into two distinct approaches The first is a firm-oriented approach, as outlined by Hendry's (2005) (based on Frooman's (1999)) work, and the second is a stakeholder-oriented approach, based on Aaltonen et al.'s (2008) proposal. The authors acknowledge the coexistence of both approaches. Building upon this, they conducted a qualitative study using cases from Vietnam and introduced a novel strategic framework. Their framework differentiates strategic actions into three main groups, or 'generic actions': direct strategies, bolstering strategies, and lobbying strategies. Furthermore, each generic action has two 'specific' strategic actions. **Figure *17*** presents their findings. It is worth noting that their proposal remains strongly linked to previous work in the field.

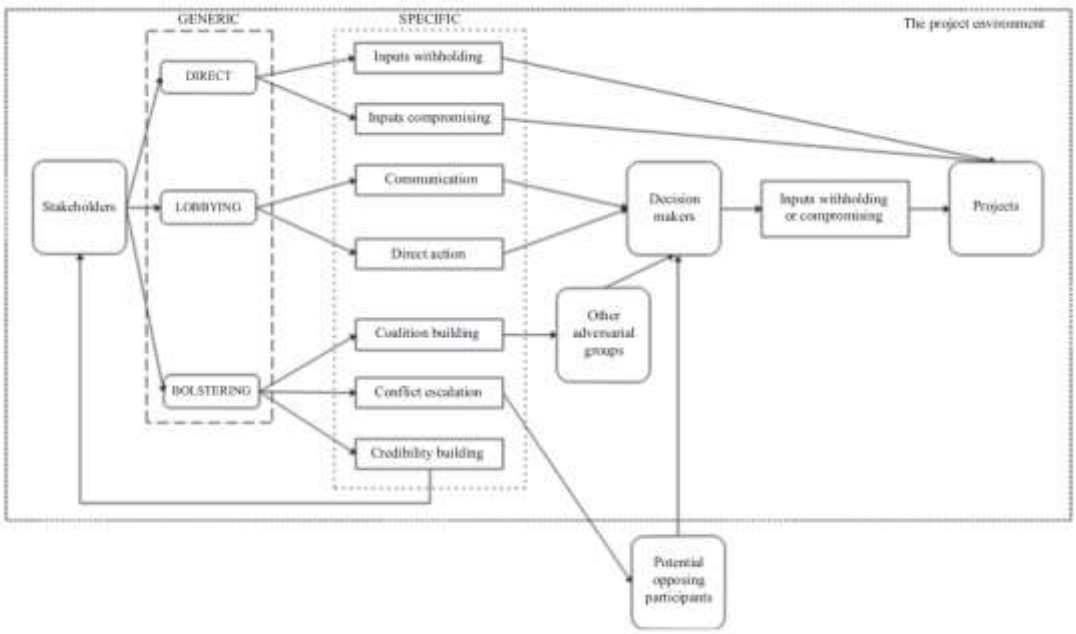



**Figure 17:** Stakeholder influence pathways in construction projects
*Source: (T. H. D. Nguyen et al., 2019)*

In his pivotal work, Frooman (1999) underscored that the value of stakeholder influence strategies is to be aware of how stakeholders may try to influence a firm or project. Based on this strategic knowledge, a manager could plan and act accordingly.

In addition to stakeholders' influence behaviour and project management stakeholder activities – which are discussed in the following section – contextual conditions play an essential role in stakeholder dynamics (Aaltonen et al., 2015). Literature often assumes that projects operate in a

vacuum-sealed, isolated context; however, that is far from reality. Earlier, the issue of how stakeholders' salience may be influenced by perceptions, and, in turn, contextual conditions was mentioned. Furthermore, literature suggests that not only the context plays a role in influencing stakeholder dynamics but also the stage of the life cycle the project is in. Furthermore, the literature suggests that not only the context plays a role in influencing stakeholder dynamics, but also the stage of the project's life cycle. It has been noted that stakeholder positions will also change with the project stages (Aaltonen & Kujala, 2010).

Research also notes that institutional conditions, practices, and environments influence stakeholder dynamics significantly. These implications contribute to stakeholder mobilization patterns, determining standard engagement practices, and project governance arrangements (Aaltonen et al., 2015).

It is important to note that the categories of challenges are not exhaustive, nor are they independent from each other. The division helps to explain more clearly the challenges, yet, as it has been argued in earlier sections, stakeholders' responses and actions are dependent on their context, actions towards them, and their contextual circumstances.

## 3.4 Strategies for External Stakeholder Management

According to Aaltonen et al. (2015), stakeholder management strategies are actions taken by project management to shape the attributes or positions of stakeholders. Therefore, contributing to mitigate stakeholder dynamics, and in particular as a countermove for stakeholder influence strategies. They are management responses to stakeholder pressure (Aaltonen & Sivonen, 2009).

Nikoi-Hammon and Booth (2010) observe that studies of stakeholder management strategies typically focus on two aspects: practical management, as observed in real-world situations and prescribing best practices based on theoretical principles.
Regarding best practices, Clarkson's (1999) principles of stakeholder management are widely recognised as cornerstone of what stakeholder management should be (Chinyio & Olomolaiye, 2010; Nikoi-Hammon & Booth, 2010).

**Table 16:** Clarkson Principles of Stakeholder Management

| Principle | Description |
|---|---|
| Principle 1 | *Managers should* ***acknowledge and actively monitor*** the concerns of all legitimate stakeholders, and should take their interests appropriately into account in decision-making and operations. |
| Principle 2 | *Managers should* ***listen and openly communicate*** with stakeholders about their respective concerns and contributions, and about the risks that they assume because of their involvement with the corporation. |
| Principle 3 | *Managers should adopt* ***processes and modes*** of behaviour that are sensitive to the concerns and capabilities of each stakeholder constituency. |
| Principle 4 | *Managers should* ***recognise the interdependence*** of efforts and rewards among stakeholders, and should attempt to achieve a fair distribution of the benefi ts and burdens of corporate activity among them, taking into account their respective risks and vulnerabilities. |
| Principle 5 | *Managers should* ***work cooperatively*** with other entities, both public and private, to ensure that risks and harms arising from corporate activities are minimised and, where they cannot be avoided, appropriately compensated. |
| Principle 6 | *Managers should* ***avoid altogether*** activities that might jeopardise inalienable human rights (e.g. the right to life) or give rise to risks that, if clearly understood, would be patently unacceptable to relevant stakeholders. |
| Principle 7 | *Managers should* ***acknowledge the potential conflicts between*** (a) their known roles as corporate stakeholders and (b) their legal and moral responsibilities for the interests of stakeholders, and should address such confl icts through open communication, appropriate reporting, incentive systems and, where necessary, third-party review |

*Source: (The Clarkson Centre for Business Ethics, 1999)*

Table 17 provides an overview of various stakeholder management strategies found in the literature. These strategies can be broadly categorised into two groups based on whether the stakeholder and the organisation or project are aligned or not. This is illustrated by Chinyio and Akintoye (2008) trade-off and concession approach. More recently, Nguyen et al. (2023) offer an alternative classification, that includes two main categories: diverting or conceding, each with a series of sub actions.

Alternatively, a more detailed view categorises strategies into four types: reactive, defensive, accommodative, or proactive, aligning with the frameworks of Freeman (1984), Savage et al. (1991), and Clarkson (1994).

**Table 17:** Stakeholder Management Strategies

| Strategy | Description | Author |
|---|---|---|
| Hold | Doing nothing and monitoring existing programs; reinforcing current beliefs about the firm; guarding against changes in the transaction process. | Freeman (1984) |
| Defense | Reinforcing current beliefs about the firm; maintaining existing programs; linking issues to others that the stakeholder sees more favorably; letting stakeholder drive the transaction process | |
| Swing | Changing formal rules through government, the decision forum, the kinds of decisions that are made, and the transaction process. | |
| Offense | Adopting the stakeholder's position; linking the program to others that the stakeholder views more favorably; changing the transaction process | |
| Involve | Listening to and involving stakeholders in the project process. | Savage et al. (1991); Karlsen (2002) |
| Monitor | Monitoring existing performance except when a negative influence is detected. | |
| Defende | Reducing the dependence that forms the basis for the stakeholders' interests in the project | |
| Collaborate | Collaborating with stakeholders and trying to find a compromising solution. | |
| Reaction | Either fighting against addressing a stakeholder's issues or completely withdrawing and ignoring the stakeholder. | Clarkson (1994); Elias et al. (2002) |
| Defense | Doing only the minimum legally required to address a stakeholder's issues. | |
| Accomodation | Relative to pro-action, it is a less active approach to dealing with a stakeholder's issues | |
| Pro-Action | Doing more than is required to address a stakeholder's issues. | |
| Trade-off | Proposing another option for stakeholder requests | Chinyio & Akintoye (2008) |
| Concession | Listening and yielding to stakeholder demands. | |
| Adaptation | Obeying the demands and rules that are presented by stakeholders | Aaltonen & Sivonen (2009) |
| Compromise | Ngotiating with the stakeholders, listening to their claims related to the project and offering possibilities and arenas for dialogues. | |
| Avoidance | Loosening attachments to stakeholders and their claims in order to guard and shield oneself against the claims. | |
| Dismissal | Ignoring the presented demands of stakeholders | |
| Influence | Shaping proactively the values and demands of stakeholders; actively sharing information and building relationships with stakeholders. | |
| Informing | Informing stakeholders who have a minor influence on the project and the uncertainty in the environment | De Schepper et al. (2014) |
| Involving | Involve stakeholders who have a potential influence on the project and the uncertainty in the environment | |
| Collaborating | Collaborate with stakeholders who have a direct influence on the project and its environment | |
| Collaborate | Support stakeholders to prevent potential danger and garner support | Pacagnella Júnior et al. (2015) |
| Involve | Demonstrate the advantages of the project to stakeholders and encourage them to engage. | |
| Monitor | Observe stakeholders during the project and continuously verify changes | |
| Defend | Strive to eliminate impacts on the stakeholder | |
| Persuation | Persuading opositions via "inspirational appeals", "pressure", "rational persuation", and "consultation". | Ninan et al. (2019) |
| Deputation | Involves coordinating with external stakeholders through the deployment of employees of parters, following the co-optation strategy. Includes Influence tactis such as: Personal Appeal and Consultation | |
| Give and take | With the give-and-take strategy, the project team entered into an formal "exchange" following "consultation" with the stakeholders to compensate them. With government stakeholders, "exchange" was used in combination with "personal appeal" enabled by project team members on deputation. | |
| Extra work for stakehodlers | It means extra work internaly for the project. It can be enabled by the combination of "exchange," "consultation," and "personal appeal" made by the project team members on deputation. the strategy was premised on more of a quid pro quo, enforced through more subtle means. | |
| Flexibility | Learning to accomodate resistance. Changing the design, construction methodology, and schedule of the project evolved. | |
| Negotiatin-Manipularing | Contact with influencia actors. Exerting indirect influence on input holders through powerful parties | T.H.D. Nguyen et al. (2023) |
| Negotiatin-Persuading | Communication skills and strategies. Convincing them by providing explanations directly or via public relation campaigns | |
| Negotiatin-Bargaining | Additional budget and support mechanism. Offering additional benefits or proposing sensible solutions | |
| Negotiatin-Litigating | Project Legitimacy. Taking legal actions. | |
| Conceding-Diverting | Delay: buying time and finding a feasible solution or passing issues to those who can make the final decision | |
| Conceding-Complying | Making changes in projects to fulfil stakeholder requirements: Change Scope/Increase Budget. | |
| Conceding-Terminaring | Abandon the Project: due to disastrous impacts from stakeholder actions. | |

*Source: Based on (T. S. Nguyen, 2019; R. J. Yang et al., 2014); (Aaltonen & Sivonen, 2009; De Schepper et al., 2014; Elias et al., 2002; Freeman, 1984; T. H. D. Nguyen et al., 2023; Ninan et al., 2019)*

Nikoi-Hammon and Booth (2010) also note some limitations, stakeholder management strategies presume that stakeholders are known with some certainty. Furthermore, some strategies are idealised based on the notion that depending on the level of alignment between the values and the level of cooperation of the stakeholder with the organisation, certain strategies should be used. In other words, certain strategies are more instrumental and therefore oriented towards a management of stakeholder's approach.

These limitations align with Eskerod and Jepsen (2013) who outline two contrasting approaches: proactive strategies and reactive strategies. They advocate for proactive strategies that are consistent with a collaborative or management-for-stakeholders approach. Conversely, a reactive strategy means there is a response from the project to an action or a stakeholder's need, aligning more with a power-based or management-of-stakeholders approach.

It is important to note that according to this proactive-reactive categorisation, all the strategies presented in Table 17 would belong to a reactive category.

According to Eskerod and Jepsen (2013), a proactive approach encourages the alignment between the stakeholders' attitudes and behaviours to support the project rather than to influence or force them to support it. Proactiveness also implies anticipating stakeholders' actions, making plans, and taking steps to mitigate them before they occur. It is an approach cantered into stakeholder engagement; however, rather than a concrete set of steps, the authors suggest it is more of a mindset that should be continuously reflected. Nevertheless, Table 2 provides guidance on what tactics could be implemented in a proactive stakeholder strategy.

**Table 18**: Proactive Stakeholder Management Strategies

| Aim | Tactics |
|---|---|
| **Sustain Position** | - Involve in the project<br>- Inform<br>- Akcnowledge<br>- Engage |
| **Change Negative Attitude** | - Increase their Benefits/Reduce their disbenefits<br>- Change their expectations<br>- Educate on potential benefits<br>- Enhance perception of fairness |
| **Activate Help Potential** | - Enhance possibility of contribute<br>- Give cues to action<br>- Use power-based preasure<br>(no harm potential stakeholders)<br>- Enhance perception of (social) appropriateness |
| **Reduce Harm Potential** | - Adapt the project to reduce power-base of stakeholder<br>- Identify substitude sources for the needed contribution<br>- Build project power-base network |

*Source: (Eskerod & Jepsen, 2013)*

## 3.5 Resilience in Infrastructure Projects

*"The bamboo that bends is stronger than the oak that resists"*

(Japanese proverb)

### 3.5.1 Introduction to Resilience and Project Resilience

*Project resilience* is one of the many constructs in academic research that have evolved from ecological resilience. In its ecological dimension, resilience is viewed as how fast a system returns to the equilibrium state following a perturbation (X. Yang et al., 2022). The term 'resilience' is derived from the Latin verb *saliere* (climb or jump) and in particular from its extension, *resiliere*, which literally means to bounce back or recoil (Frigotto et al., 2022; Morkan et al., 2023).

In recent years, the concept of resilience has become a central construct in various social domains. According to Frigotto et al. (2022), this growing interest is due to the complexities and uncertainties of the modern world, triggered by a series of significant global events such as the financial crisis, climate change, and the COVID-19 pandemic. Furthermore, they argue that this renewed interest in resilience also reflects a broader dissatisfaction with linear and reductionist perspectives, particularly in volatile, uncertain, complex, and ambiguous (VUCA) environments. Resilience, therefore, represents a holistic alternative approach that combines different disciplines and theoretical and conceptual perspectives to better understand interconnected and dynamic societal systems, crucial to addressing 'wicked problems'.

### 3.5.2 Theoretical Foundations of Resilience

#### Origins and Evolution

Resilience, as a concept, has roots that date back to the early 19th century. The term's first known use, according to the Merriam-Webster dictionary, was in 1807 and referred to as "*the capability of a strained body to recover its size and shape after deformation caused especially by compressive stress*" (Merriam-Webster, n.d.-b). Modern understanding of resilience has two foundations: engineering and ecological resilience. This early definition aligns with the now termed 'engineering resilience', which is the ability to resist and quickly return to equilibrium—regarded by scholars as a narrow' use of the term (Folke et al., 2010).

It was not until the work of C.S. 'Buzz' Holling in 1973 that resilience gained a broader ecological perspective, shifting from a static concept to one emphasising system dynamics, adaptation, and change. Holling - like Edward Freeman in stakeholder theory- is considered by many to be the

father of ecological resilience theory. His work paved the way for future studies, extending the concept of resilience from its ecological roots to a broader systems-theory perspective. This new framework strives to explore and understand how individuals, communities, organisations, and ecosystems face uncertainties, challenges, and opportunities, both known and unknown (Bhamra et al., 2011; Hassler & Kohler, 2014).

Resilience has since evolved into a multidisciplinary and multidimensional construct (Zhang et al., 2023). It has taken various forms and has been extensively examined across numerous fields, including ecology, metallurgy, psychology, supply chain management, strategic management, engineering, crisis management, safety engineering, and perhaps most notably, organisations (Bhamra, 2015; Morkan et al., 2023). And while the context of the term, its definition, and its properties change across all these fields, the essence of the concept remains the same: to "return to a stable state after a disruption" (Bhamra, 2015). The concept's popularity is reflected in the growing body of research on resilience, with dedicated organizations like the Resilience Alliance established in 1999 to explore and advance the understanding and practical application of resilience in socio-ecological systems. Also in 2023, the IJPM released a special collection on 'Resilience in Project Studies' to instigate a shift in academia towards the exploration of resilience within the project research. Some of the contributions of this issue are discussed in this section (e.g., Iao-Jörgensen (2023) ; Morkan et al. (2023); Nguyen et al.(2023); Piperca & Floricel (2023))

Bhamra (2015) provides an analysis of the state-of-the-art resilience literature. Their study covered 108 papers from 1973 to 2015. His study identified five general perspectives in literature, with the most prominent being organisational and socio-ecological/community, followed by individual, ecological, and supply chain. The most prominent focus among the reviewed articles was behaviour and dynamics, with 68 out of 100 papers addressing this aspect. Bhamra noted that most studies leaned towards theory-building, frameworks, and models, with limited empirical evidence to support these theories. This gap in empirical studies suggests the need for more case studies to validate theoretical concepts and further explore the real-world applications of resilience.

The use of the construct over various domains has led to its conceptualization in diverse ways, including as a capability, capacity, characteristic, outcome, process, behaviour, strategy, performance, or a combination of these (Hillmann & Guenther, 2021).

## Key Concepts and Perspectives

Within the discourse on resilience, scholars have distinguished between two fundamental perspectives: recovery and transformation. The recovery perspective focuses on a system's capacity to resist disruptions and efficiently return to its pre-disturbance state. In other words, it is the system's ability to 'bounce back' to normality after an unexpected and often disruptive event (Frigotto et al., 2022). However, some scholars view this as a narrow interpretation of resilience aligning more with engineering resilience (Folke, 2016). It can be exemplified by a forest regrowing after a wildfire.

The transformative perspective, on the other hand, recognises that some events may surpass a system's existing structural capacities, requiring adaptation instead of mere absorption of the shock (Bhamra, 2015). The idea of 'bouncing back' while meaningful in the context of material sciences, in more complex arenas, like social sciences, is hard to grasp; in reality, context and events dynamically coevolve; therefore, the notion of returning to a previous unchanged state is not feasible (Young et al., 2022). Therefore, this broader viewpoint emphasises the dynamics of complex adaptive systems and uncertainty, exploring effective adaptation to and exploitation of change (Folke, 2016). This perspective aligns with the idea of 'bouncing back stronger' or 'bouncing forward', and it can be illustrated by how a forest adapts to climate change without becoming a desert.

To address the consistencies, inconsistencies, and theoretical gaps, Frigotto et al. (2022) proposed three fundamental principles that conceptualise the core and functional dynamics of resilience. Firstly, they argue that resilience is the intersection of stability and change. This duality is pivotal in understanding how subjects—individuals, organisations, or systems—adapt and maintain continuity of essence despite adversities. This principle emphasises that change is essential for adaptation and growth. However, this change should be commensurate, as radical change or mere survival without change are both incompatible with resilience. Likewise, despite the changes, there is a need for stability or a 'continuity of essence'. The principle of continuity of essence highlights the need for balance between adapting to new challenges and maintaining core identity of the system.

This notion of balance between stability and changes aligns with Bhamra et al.'s (2015) argument that the resilience of a system is a function of its vulnerability and adaptive capacity. Vulnerability refers to the degree to which a system is exposed to harm or disruption, including its sensitivity to external stresses and its capacity to respond to them. Adaptive capacity, also known as adaptability, refers to a system's ability to respond to changes, recover from disturbances, and adjust to new conditions. It encompasses flexibility, learning, and the capability to find new equilibriums. This capacity enables resilience by allowing a system to link resources to outcomes.

Martin-Breen and Anderies (2011) make the important distinction that adaptive capacity should not be confused with adaptation, which is adjusting to specific changes or disruptions. Adaptation can be immediate or planned, positive, negative, or neutral and does not necessarily imply learning or broader system flexibility. While adaptation is a response to specific conditions, adaptive capacity represents a more dynamic and systemic capability to cope with and evolve in response to various changes. This broader scope of adaptive capacity supports a system's resilience, while adaptation can be seen as one of its possible manifestations.

Secondly, they describe resilience as a "processual practice" of becoming rather than a static state or property. Thus, resilience is an evolving process demonstrated over time, with three temporal dimensions: resilience foresight before adversity, resilience mechanisms during adversity, and resilience outcomes after the triggers. It is also relevant to mention that the adversity trigger can be

one acute and severe event or a series of chronic and ongoing instances. As Kutch and Hall (2020) point out, most projects experience creeping performance erosion, or 'death by a thousand cuts'. Figure 18 presents a general depiction of resilience in a temporal context.

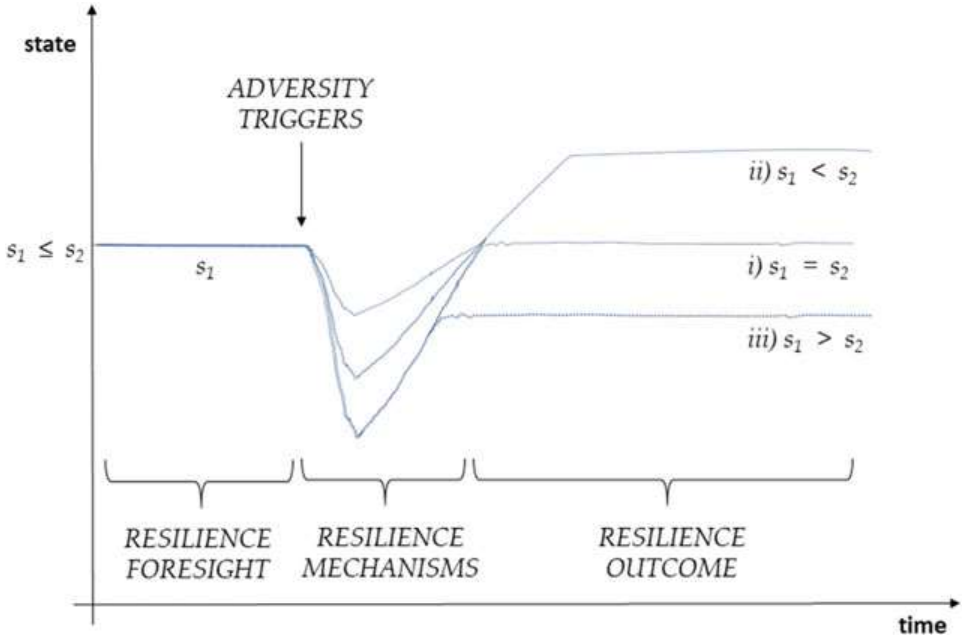



**Figure 18:** Temporal dimensions of Resilience
*Source: from (Frigotto et al., 2022)*

Lastly, Frigotto et al. (2022) identify three types of resilience—absorptive, adaptive, and transformative.

- *Absorptive resilience* refers to the ability of a system to recover to its original state quickly and efficiently. This type of resilience highlighting's a system's inherent stability and minimal change. As a result, it only responds to of low uniqueness disturbances, which can usually be anticipated through risk assessments and contingency plans. Its response mechanisms are usually pre-learned and pre-established. Changes resulting from these responses are minor. Thus, the 'final state' usually reverts to the initial state, aligning with the traditional 'bounce back' paradigm.
- *Adaptive resilience* encompasses the capacity to adjust, withstand shocks, and maintain functionality, incorporating a blend of stability and moderate change to 'move/adapt within a threshold'. This resilience type addresses medium uniqueness adversities, requiring more than simple anticipation. It responds by leveraging existing knowledge and targeting "known unknowns" to buffer against disruptions and maintain functionality. The adaptive response introduces important, lasting changes that may alter the entity's state without redefining its essence.
- *Transformative resilience* represents the most profound level of adaptation. At this level, an entity significantly alters its essence in response to disruptive changes, thereby navigating towards a fundamentally new state of operation. Transformative resilience responds to

unpredictable, high-uniqueness disturbances, requiring engagement with "unknown unknowns."

### Limitations

It is important to acknowledge that resilience is not always good and desirable (Naderpajouh et al., 2020; B. H. Walker, 2020). There are 'resilient' behaviours – for instance from external stakeholders – that can be persistent a lead to undesirable outcomes. Folke (2016) also notes that resilience is about having the capacity to continue, learn, re-organise, and develop under dynamic, uncertain, and unexpected environments, much like navigating through turbulent waters. However, the navigation can lead to particular paths that are difficult to get out or undesirable.

There are also some theoretical limitations to the construct. Similarly to the stakeholder construct, resilience suffers from over-exploitation and exploration across different fields and contexts. This has led to different implications across theory and practice, making the term prone to misunderstanding and misuse (Naderpajouh et al., 2023) and possibly making the term meaningless from having too many meanings (Hassler & Kohler, 2014). To give conceptual clarity to research, Carpenter et al. (2001) present the notion of "resilience of what" and "resilience to what".

Other constructs and variables of resilience are also subject to debate among researchers. For instance, the concept of 'continuity of essence' is subject to debate, as it might be variable depending on the perspective from which one chooses to assess it. The case of Nokia is frequently cited in this context (Frigotto et al., 2022). Some consider Nokia a textbook case of organisational resilience because it has survived many crises, while others argue that its radical transformation from a pulp and paper company to a telecommunications company indicates a loss of continuity. This discussion gains complexity when examined from a societal perspective. Although Nokia's business has changed, it still contributes significantly to Finland's GDP, suggesting continuity from a societal viewpoint despite its business transformation.

Kutch and Hall (2020), drawing upon insights from both scholars and practitioners, identify three major challenges in applying resilience: (1)context-dependency, (2)measurement difficulty, and (3)evaluation challenges. They explain that resilience can vary across scenarios, making it hard to generalise or replicate. The abstract nature of resilience complicates measurement, while the absence of unprecedented shocks makes it difficult to evaluate resilience. Furthermore, Kutch and Hall argue that assessing resilience in the absence of an unprecedented shock poses significant challenges, raising the question of how one can determine if an organisation is truly resilient. On this last issue, they note that resilience is not simply a product of 'inputs', arguing that small organisations with limited resources and planning can exhibit remarkable resilience during crises.

Specifically, regarding organisational resilience, Kutch and Hall (2020) discuss two main dilemmas. Firstly, they argue that building resilience without prior experience or practice is

challenging, especially since severe shocks are rare. Secondly, they question whether individuals within organisations aim merely to survive or to thrive amidst uncertainty.

### 3.5.3 Project Resilience

Project resilience remains a relatively new construct (X. Yang et al., 2022), thus it remains largely undefined and ambiguous (Rahi, 2019). Naderpajouh et al. (2020) laid the theoretical foundations for exploring resilience and projects. Their framework aims to bridge the gap between resilience research and project management research. By doing so, they suggest a series of shifts from the resilience perspective to accommodate the shift towards project resilience. The author mainly builds from the notion of 'management of resilience', which is about the desired operation of projects or systems under various conditions, such as recovering from shocks or performing under stressors. It follows notions from three major perspectives: engineering, social, and organisational, though primarily from the organisational perspective.

In their framework, Naderpajouh et al. (2020) propose that projects should be viewed as nested systems, a perspective that allows for the exploration of resilience-oriented research from multiple levels or projects and related systems (i.e., individual, team, project, organisation, network). They also highlight that past research on project management into resilience-related aspects has been primarily focused on risk management and flexible organising. However, they also noted apparent differences between the research fields, despite some intersections. For example, traditional project risk management focuses primarily on identifying and mitigating risks, assuming that these risks are manageable. On the other hand, resilience research recognises that risks are often unpredictable and unmanageable. As such, the basic principle of resilience research deviates from traditional project risk management.

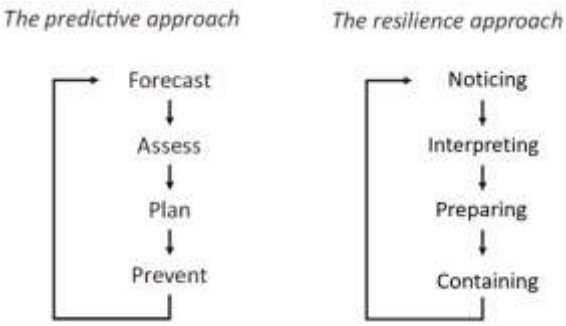
Moreover, they note that a common misconception of resilience is that it is a normative attribute; however, they clarify that it is not normative in essence and could negatively affect the system and its context. They also emphasize that resilience serves as both a process and an attribute, but in the project domain, they propose viewing it as a performance. Ultimately, Building upon the work of Kutsch et al. (2015), Naderpajouh et al. (2020, p. 5) define project resilience as "the capacity to organise under variety of scenarios, including disruptions in the form of shocks or stressors".

Yang et al. (2022) note that, from a process-based perspective, organizational resilience can be interpreted as a three-stage capability, including:

- **Readiness and Preparedness:** As an ex-ante or pre-adversity capability, it involves preparing resource endowment, detecting weak signals, spotting errors, and anticipating disruptions.
- **Response and Adaptation:** This is an in-crisis organising capability that involves absorbing shock and reducing loss of function.
- **Recovery or Adjustment**: As an ex-ante or post-crisis capability, it involves remaining flexible and rebuilding primary functions to adapt and recover as early as possible.

This differentiation resonates with the temporal dimensions of resilience presented above (Figure 18). Moreover, the last phase (recovery or adjustment) implies the possibility of becoming either adaptive or transformative types of resilience, following the nomenclature by Frigotto et al. (2022).

Kutsch et al.'s (2015) proposed an alternative perspective to project resilience. Their book 'Project Resilience' is one of the first attempts to bridge the resilience perspective with the project management domain. Their work advocates for a shift from traditional mechanistic approaches to a 'mindful' approach. Their book is positioned as an alternative way of looking at risk in light of the inherent complexity and uncertainty surrounding projects. They argue that traditional project management tools and approaches have suffered from reductionism and overemphasis on efficiency, driven by a desire for certainty, quantification, and the capacity to pre-emptively plan for future events. Such approaches, they argue, are not well suited to address the challenge of risk and uncertainty.




They support the idea that resilience is more of a mindset—a mindset of how organisations should be formed and operated that allows certain behaviours, which they argue are necessary for project-based resilience. Consequently, central to their proposal is the human element. They highlight the pivotal role of mindfulness in project management, positioning it as a strategy that values situational awareness and cognitive flexibility over strict adherence to pre-established protocols. As they describe, mindfulness is about generating new pathways and possibilities rather than selecting from pre-defined options. This approach encourages ongoing reassessment of project goals, adaptation to emerging insights, and an openness to unforeseen challenges. It champions a richer engagement with the project context, seeking out novel dimensions that can inform better foresight and improved project outcomes. By embracing mindfulness, project management can move beyond its traditional confines, adopting a more proactive and adaptable stance towards the unpredictability and intricacy of projects.

Piperca and Floricel (2023) uncover three distinct resilience patterns through their cross-case analysis of disruptive events, contributing to understanding project resilience dynamics. These patterns reinforce trajectory, bounce back, and jump to an alternative trajectory, aligning with the notion of the three kinds of resilience.

The *reinforced trajectory* pattern emerges when projects face challenges due to complexity and uncertainty, revealing limitations in their designed robustness. It involves making minor clarifications and adaptations within the relational network to maintain the intended project

path. This approach signifies a commitment to the original plan, requiring exceptional organising efforts to stay on course despite unforeseen perturbations.

In the *bounce back* pattern, projects encounter significant deviations due to underestimating risks and planning oversights. This necessitates more substantial transformations to address faults and improve governability, yet the aim is to return the project to its original trajectory. The focus is on recovery, leveraging designed robustness and exceptional organising to realign with the initial goals.

The *jump to alternative trajectory* pattern reflects a strategic shift involving major organisational changes that propel the project onto a new path. This pattern arises when unexpected, major events challenge the initial project framework, requiring a comprehensive re-evaluation of strategies and relationships within the project network.

In terms of the organising process around resilience, they identified a multi-level and dynamic interplay of actions. The base of the projected trajectory is the designed robustness, which is a deliberate shaping action by the organisation. This can be achieved, for example, by anticipating risk and organisational structures. Then, there is cultivated governability. Its ability to steer, coordinate, and control processes and outcomes—despite uncertainties and challenges.

Lastly, there is emerging responsiveness through exceptional organization. Emerging responsiveness refers to an organisations cultivated ad hoc effort and achievement. While exceptional organising is supported by the organisation's network and anticipatory measures. Their findings note that the most disruptive events can only be addressed at this last level of the organising process.

### 3.5.4 Factors Influencing Resilience

Zhang et al. (2023) study focuses on project resilience from a capability-view. Their research aims to define project resilience dimensions and propose methods for measuring them, aligning with prior studies by identifying three core aspects of project resilience: anticipation, coping, and adaptation capabilities. This is similar to Bhamra et al.'s (2011) organisational resilience framework, which includes readiness and preparedness, response and adaptation, and recovery or adjustment. Their analysis revealed 21 categories of capabilities—eight related to anticipation, eight to coping, and five to adaptation—totalling 74 indicators, which they propose as KPIs or measuring tools.

The top anticipation capabilities are channels of communication, clear roles and responsibilities, risk awareness, and risk management tools. The study observed a greater diversity within the top coping capabilities, encompassing organisational structure, cooperation and trust, leadership, communication management, recovery ability, and utilising internal and external resources. The ethos of learning, a sense of vigilance in times of peace, and innovation for new methods are among the most notable findings regarding adaptation capabilities.

**Table 19:** Resilience Capabilities

| | Anticipation Capabilities "Readiness and Preparedness" | source | Coping Capabilities "Response and Adaptation" | source | Adaptation Capabilities "Recovery or Adjustment" | source |
|---|---|---|---|---|---|---|
| Individual/Team Level (Mirco) | Self-awareness of role and responsibilities | 3 | Mutual trust among members | 3,6 | Ethos of learning | 2,3 |
| | Risk & Hazar Awareness | 1,5,6 | Trust in superior decision-making | 3 | Emergency response assessment | 3 |
| | Communication of preventive measures | 1, 3 | Internal cooperation | 3 | Utilization of assessment results | 3 |
| | Communication of collaborative measures | 3,6 | Leadership decisiveness | 3,5 | Resource assessment | 3 |
| | Channels of communication | 3 | Leadership democracy | 3,6 | Training for project roms and their ability to change | 5 |
| | Emergency drills | 3 | Leadership flexibility | 3,5,6 | | |
| | Optimization of drill plans | 3 | Effectiveness of decision-making procedures | 3 | | |
| | Evaluation of drill plans | 3 | Information access for decision-making | 3 | | |
| | Leadership expertise | 3,5,6 | Support for decision-making | 3 | | |
| | | | Communication for plans | 3 | | |
| | | | Innovative decision-making by the PM | 5 | | |
| | | | Continuous communication channels | 3,5 | | |
| | | | Incentivising Beyond Compliance | 6 | | |
| | | | Relationship management | 3,5,6 | | |
| Project Level (Meso) | Formal definition | 3 | Establishment of emergency management structure | 3 | Sense of vigilance in times of peace | 3 |
| | Development of risk management tools | 3 | Stability of emergency management structure | 3 | Sense of collaboration | 3 |
| | Awareness of interdependency | 3 | Flexibility of project organizations | 3,6 | Additional precautionary measures | 5 |
| | Awareness of connectivity effects | 3 | Efficiency of organizational structure | 3,6 | Proper changes in baseline plans, design and method statement | 5 |
| | Awareness of crisis management objectives | 3 | Resilience plan implementation | 3 | | |
| | Phased prioritisation | 3 | Selection of response tools as planned | 3 | | |
| | Power to the 'right' people | 1,5,6 | Flexible implementation | 3,6 | | |
| | Safety measures and proactive/continous monitoring | 5 | Loss assessment | 3 | | |
| | Digitized site works and project documents | 5 | Development of recovery plans | 3 | | |
| | Well-tailored contracts with suppliers and (sub)contractors | 5 | Execution of recovery plans | 3,5 | | |
| | Adjustment of objective priorities | 3,6 | External cooperation | 3,5 | | |
| | Risk and Opportunity Intepreting | 6 | Insurance for construction equipmetn | 3,5 | | |
| | Noticing mindset | 6 | Claims and variation orders management | 5 | | |
| | | | Creating space to reflect | 6 | | |
| | | | Management reserves | 5 | | |
| Organisational Level (Macro) | Allocation of project members | 1,3,6 | Internal resources | 3,5 | Assessment methods and procedures | 3 |
| | Substitution of responsabilities or duties | 3 | Flexibility in resource allocation | 3,5,6 | Meeting information needs | 3 |
| | Risk management process | 3 | External resources | 3 | Sharing important information | 3,6 |
| | Evaluation of drill plans | 3 | Prevention of secondary damages | 3 | Continuously collecting information | 3 |
| | Objective assessment | 3 | Strong Organisational Culture | 1 | Recording and reporting of lessons learnt | 2,5,6 |
| | Adjustment of objective priorities | 3 | Financial support by the compnay for its projects | 5 | | |
| | Promoting resilience plans | 3 | | | | |
| | Channels for training | 3 | | | | |
| | List of alternatives for subcontractors and suppliers | 5 | | | | |
| | Evaluation of drill plans | 3 | | | | |

*Source: 1 (Nachbagauer & Schirl-Boeck, 2019); 2(Borg et al., 2022);3 (Zhang et al., 2023); 4(Kerner & Thomas, 2014) ; 5(Hilu & Hiyassat, 2023); 6(Kutsch & Hall, 2020)*

### 3.5.5 Synergies with Stakeholder Management

Building upon Bhamra et al.'s (2011) organisational resilience framework (encompassing readiness and preparedness, response and adaptation, and recovery or adjustment), Yang et al. (2022) explored a stakeholder management perspective from an inter-organisational viewpoint. They focused on how previous and existing relationships among external stakeholder organisations impact their involvement in unexpected situations. Their empirical research on two megaprojects in China highlighted two primary strategies for mobilising external stakeholders in inter-organisational projects: distributed engagement, a decentralised and agile approach, and centralised engagement, an orderly and centralised method.

In terms of *readiness and preparedness*, Yang et al. (2022) found that both a few and many prior ties among stakeholders contribute to the preparedness phase, with a few considerations. According to the authors, fewer ties support the distributed engagement responses. However, they highlight

the importance of creating an environment where stakeholders can speak freely, report immediately, and provide different perspectives without interference. This freedom supports vigilance and preparedness. Conversely, many ties generate accumulated trust, tacit understanding, and shared cognition, promoting social solidarity and a network conducive to trust-building, thus supporting centralised engagement.

For the *response and adaptation* phase, contractual governance was noted to support distributed engagement by clarifying roles and task assignments, ensuring stakeholders fulfil their responsibilities throughout the crisis management process. On the other hand, relational governance fosters centralised engagement by promoting collective cognition, which encourages stakeholders to cooperate actively during crises, minimising internal conflicts.

Lastly, in the *recovery or adjustment* phase, they recommend a plural governance approach. Dynamic distribution and centralised engagement are advocated to achieve both flexibility and solidarity, particularly when collaborative efforts are necessary to navigate disruptions.

Morkan et al. (2023) investigated the impact of stakeholder behaviour on improving project resilience, focusing on a single case study of a construction project in Europe. Their research is centred on the concept of megaproject citizen behaviour (MCB), derived from organisational theory. Their findings underscore the significant role of both internal and external stakeholders' citizenship behaviours in enhancing megaproject resilience. Therefore, they suggest that individual behaviours alone may not enhance resilience, at least in megaprojects, due to their size and complexity. They identified three critical transition mechanisms, namely three discretionary actions: quantity (power in numbers), getting critical issues to the right people (boosting), or engagement (mindset shift).

Morkan et al. (2023) highlight three key takeaways from their study. Firstly, stakeholders can be a valuable resource in uncertain situations. Therefore, project managers should recognise and encourage emergent voluntary behaviours and remove barriers to activate critical transition mechanisms. Secondly, managers can harness external stakeholders' sense of social value to promote citizenship behaviour. Finally, managers need to be aware of how stakeholder attitudes and demands can positively or negatively impact project resilience. With the identified transition mechanisms, managers have strategies to mitigate negative impacts or enhance positive stakeholder behaviours.

### Intermediate Conclusion Section 3.4

Resilience is a multi-level concept applicable across various contexts, including individuals, teams, projects, organisations, networks, and sectors. It has gained popularity as a way to address environmental complexities across many industries, particularly in project management, where traditional practices often fall short when faced with uncertainty and unpredictability. Resonating with the paradigm shift from ‘predict and control’ to ‘prepare and commit’.

Several constructs allow us to understand resilience better. For instance, resilience as a process can be dissected into three distinct phases: the anticipation phase, the coping phase, and the recovery phase. Three kinds of resilience can be distinguished: absorptive resilience, adaptive resilience, and transformative resilience (Frigotto et al., 2022; Iao-Jörgensen, 2023; Piperca & Floricel, 2023). Absorptive resilience is the ability to withstand shocks with minimal change; adaptive resilience involves adjusting to disruptions; and transformative resilience involves changing fundamentally to cope with significant disturbances. Each type of resilience will emerge based on the disruption of the event or stressor, the level of anticipation of the event, the governability of the organisation against unexpected events, and the ability of the organisation to perform exceptional organising.

Given the insights from the literature, a few key points need to be clarified. First, this research focuses on the "management of resilience" rather than the "organising for resilience." This means concentrating on how resilience is enacted in projects, not just how it is built. Second, the research is focused on "project-level" resilience and aligns with the concept of organisational resilience. Following Carpenter et al. (2001), who discussed "resilience of what" and "resilience to what," the following definition emerges for this study: "Resilience in the context of infrastructure projects refers to the capacity of a project to anticipate, resist, absorb, respond to, adapt to, and recover from disturbances emanating from the external environment of the project." This definition aligns with the process-oriented view of resilience, emphasising preparation for and recovery from disruptions.

## Conclusion Chapter 3

This chapter has explored the evolution of stakeholder management from its roots in strategic management to its current significance in the project management domain. External stakeholder management is widely recognised as critical to project success, yet there remains a lack of clear distinctions between frameworks for managing internal and external stakeholders. This is problematic because the same principles are often applied to both, even though external stakeholders are inherently more dynamic, have no formal ties to the project, and are more challenging to engage in a two-way relationship. Nevertheless, the involvement of external stakeholders is crucial, as they can exert significant pressure and influence on projects if not appropriately addressed.

Research on resilience in project studies has gained momentum, largely in response to the increasing volatility, uncertainty, and complexity of construction projects and the environments where they are executed. Interest in resilience has grown as it addresses the adverse effects of unexpected external disruptions and is seen as crucial for ensuring the successful completion of infrastructure projects. However, there is limited exploration into how external stakeholder management strategies contribute to resilience. Some studies have suggested certain practices have an impact on resilience (e.g., (Cuppen et al., 2016; Lehtinen & Aaltonen, 2020; T. H. D. Nguyen et al., 2023), viewing resilience as a possible reaction to practice, but with no detailed explanation.

Alternatively, studies focusing on project resilience have advanced our understanding, although only a handful of studies have examined the relationship between external stakeholders and resilience, for instance, from a citizenship behaviour perspective (Morkan et al., 2023), or from an inter-organisational perspective focused (X. Yang et al., 2022), or from a program perspective (Shen & Ying, 2022). However, the direct link between external stakeholder management strategies and project resilience outcomes remains underexplored.

This chapter establishes a theoretical link between external stakeholder management and project resilience, confirming a direct relationship between the two. It also narrows the research focus to examine the intricate relationship between external stakeholder pressure, project responses (through various strategies), and the different types of resilience discussed in the literature, as depicted in Figure 19. This refined focus sheds light on how distinct external stakeholder management strategies can lead to various resilience outcomes, offering a valuable framework for practitioners to better understand the implications for project success. The subsequent chapters will further investigate these findings and discuss their broader impact on future research and practice.

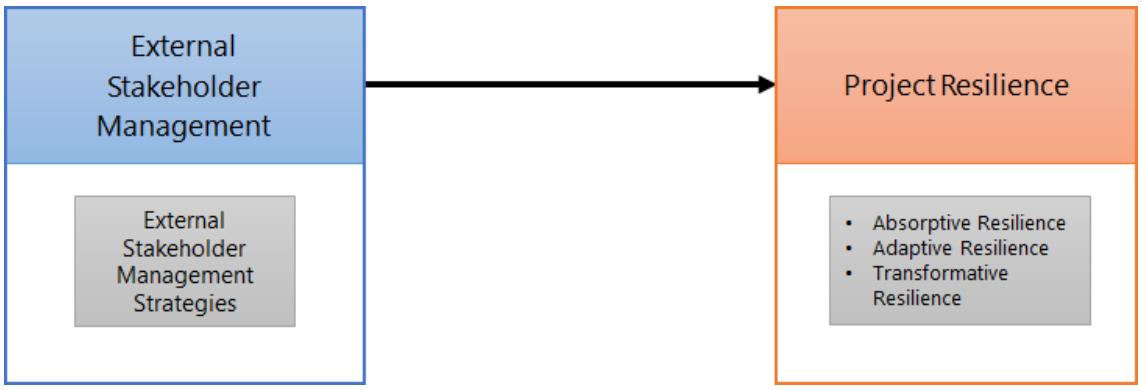
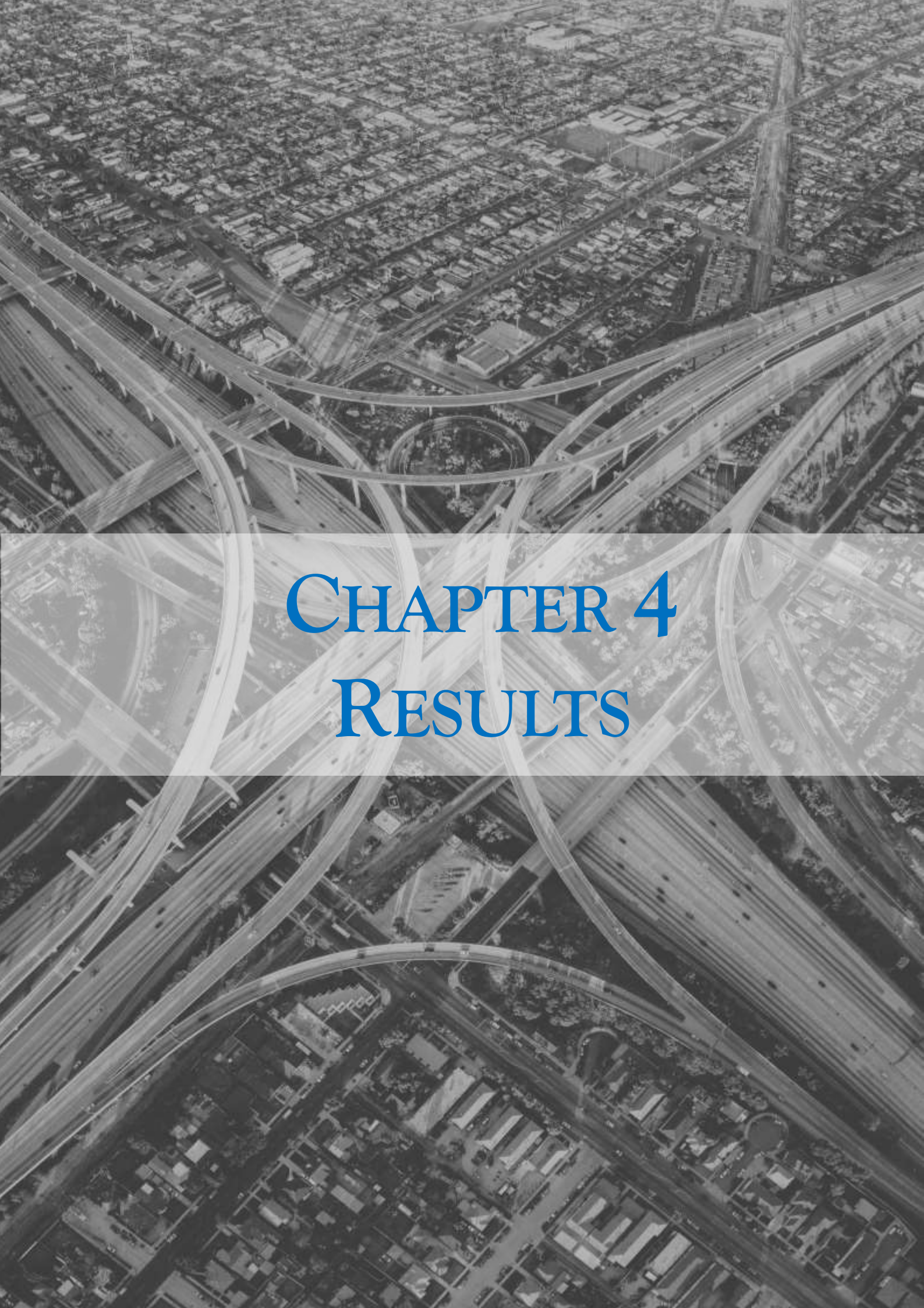



*Figure 19: Narrowed Conceptual Framework*



# Chapter 4
# Results

# 4 | Results

This section provides the results from the case study analysis. The results are presented per stakeholder group with the narrative of the events which the project faced involving them. The chapter concludes by presenting two tables with the synthesis of the results. The aim of this section is to answer sub-research question 3. What events did the case study face related to external stakeholders, and how did the project respond to them?

## 4.1 Local Communities

### 4.1.1 Impacted Community – 'El Cayaco'

The project's initial design included a 4.7-kilometre surface viaduct linking the tunnel to the main highway from Mexico City to Acapulco. Unlike the tunnel, this section required acquiring the right of way (ROW). A review of the relevant documents revealed that the state government was responsible for the ROW acquisition. The concessionaire's only obligation to the ROW was to pay a fee for land acquisition and cover the costs for studies and project design. According to the tender documents, the acquisition of the ROW was scheduled for completion by December 2012. However, the process remains incomplete to this day. One significant factor contributing to this delay has been the active opposition from the Cayaco and Llano Largo communities.

In particular, the 'El Cayaco' ejido emerged as a prominent opponent to the project's execution. Initially, some members of the ejido agreed to sell their land to the government, while others were hesitant to sell due to their dissatisfaction with the government's offer. The communal nature of ejido land necessitates common consent for property cession, which, from the outset, made negotiations complex due to the community's divided stance.


**Figure 20**: Conflict areas
*Source: Adapted from Google Earth (2024). Annotations by author.*

The ejidatarios of El Cayaco demonstrated their opposition to the project early on, with their first public protest taking place in January 2013, before construction had officially begun. They claimed that *"they will not allow machinery to enter until the government has paid for the entire area"* [N-3]. This initial demonstration set the stage for an escalating conflict involving legal and physical actions to enforce their demands.

As the situation intensified, the ejido's representative filed an amparo lawsuit in April 2014, seeking legal intervention to halt construction due to the alleged incomplete acquisition of several hectares necessary for the project ROW. In November of 2014, a court granted the amparo. The government and the PO failed to attend to court hearings intended to address the issue on three occasions. Following the court's ruling and prompted by what they perceived as a lack of interest to settle the issue the ejidatarios decoded to enforce the court's suspension themselves by physically blocking the project.

> *"He [the representative of the ejidatarios] recalled that the ejidatarios gave 10 days for the authorities to approach them, but... there were no agreements, so today they will stop the work as established in the federal amparo... On November 6, ejidatarios... reported that the Eighth District Court... granted them an amparo to suspend the construction... due to the lack of compensation from the state government." [N-58, emphasis in the original]*

The situation escalated further in December 2014, when, after the PO failed to appear at the first court hearing, the ejidatarios extended their protest by blocking two concrete plants that

supplied the project. The PO's continued absence at a second court meeting led to a reinforced blockade and, reportedly, a court fine against the PO.

> *"Castillo Ortiz [leader of the ejido] said that the blockade continues at the two points [the concrete plants] due to a lack of attention from Governor Rogelio Ortega Martínez... On Tuesday, the ejidatarios reinforced their blockade in the two cement plants... to prevent the [construction]activities from continuing because they pointed out that the state government has not compensated them"[N-65].*

Ultimately, on the 23rd of December of 2014 after 35 days, the conflict reached a resolution when the government reached a verbal agreement with the leaders of the ejido.

> *The ejidatarios of the community of El Cayaco have lifted their 35-day blockade at the Macrotúnel construction site on the Cayaco-Puerto Marqués avenue, because the state government has agreed to pay the debt it owes them and has promised to sign an agreement to compensate them for the land, according to Yeni Sánchez Rodríguez, the ejidatarios' legal representative…"(the ejido) has not wanted to harm Acapulco because we are from here, we held the occupation so that the state government would come back to see us". [N-67, emphasis in the original]*

Resolving the blockade was an important achievement at the time, since in addition to the schedule disruption, the news quotes the governor stressing the seriousness of the work being halted, as each day that the company could not work cost 2.5 million pesos (±200,000 USD) in penalties [N-66].

While the release of the blockade by the ejidatarios of El Cayaco in late 2014 seemed like a potential turning point for the PO, the relief was short-lived. Shortly after that, El Cayaco ejido allied with the residents of Llano Largo, who were also protesting against the project. This coalition between the neighbouring communities emerged in response to perceived inaction and disregard for their concerns. At a press conference announcing their alliance, the legal representative criticized the government's proposals, stating that: *they [the government] handed over a proposal for an agreement that does not favour the people affected in any way. "The ejido El Cayaco and the co-ownership, united by their rights to be paid for what they have and what has been taken away from them by the state government,"* [N-69].

A notable aspect of the alliance of the communities is not only their dissatisfaction with how the PO, specifically the government, handled the issue, but also their opposition to the project and its mission. As the representative of the coalitions claimed:

> *"She announced that both the ejido and the co-ownership will jointly pursue legal action because they were all victims of the urbanisation…The tunnel is not of social benefit but a business, if it were a hospital it would benefit us all, but it is an attraction, a project that will give more renown to the person who is financing it, who is Carlos Slim, that is why the small property and the ejido are going to keep us united" [N-69]*

Unlike El Cayaco, the Llano Largo residents adopted a more persistent stance, presenting a more significant challenge to the PO—a formidable challenge that did not lead to a resilient response from the project's side. However, their temporary alliance with El Cayaco is noteworthy.

Llano Largo's residents also promoted an amparo lawsuit against the project; additionally, they took direct measures to escalate their protest. Claiming they had the legal right to do it, they reclaimed the disputed land by erecting a small structure to serve as a meeting point, effectively asserting their presence. Moreover, they used machinery to intervene on the land, marking a clear stance against the project's progression. This escalated to a blockade on April 15th, effectively halting project work and denying access to construction workers in the contested area. [N-35; N-37]

The coalition, which amassed almost 350 individuals, was short-lived. It displayed only two instances. One was a joint protest in which the coalition between El Cayaco and Llano Largo claimed they would indefinitely  take the road next to the Cayaco junction. However, riot police interfered in the protest, dissolving the attempt to block the road.

The united front also negotiated with the government; however, the coalition was ultimately dissolved following the government's proposal to address their demands: *"... the state government intends to compensate with public works and social programmes, as it does not have the money to cover the payment"* [N-79]. While the ejidatarios of El Cayaco showed interest in this proposal, arguing they would only accept payment in kind for their lands, the representatives from Llano Largo rejected it, deeming it unsatisfactory for their needs and contending they would only accept economic remunerations.

On January 20, 2015, the ejidatarios of El Cayaco reestablished their blockade, compelling the PO to significantly change its construction procedure. Initially, the tunnel was intended to be built from both extremes, but the blockade which obstructed access to the east portal limited construction to continue solely from the west side in the Brisamar area. This constraint required the redirection of substantial resources, including the procurement of specialised ventilation equipment from Europe, essential for adapting to the new singular access point. Moreover, extra work shifts became crucial to accommodate the adjusted working conditions. A quote from an article by members of the construction company, published by an engineering association, highlights the challenges posed by the blockade:

> *...due to social issues, tunnel excavation activities were suspended from the Cayaco portal towards the Diamante portal, when the excavation length of the upper half section was 745 m... which made it necessary to excavate the rest of the total length of the tunnel through the Brisamar portal.*
>
> *More than 2.4 km were excavated through a single [work]front, which increased the degree of difficulty of the excavations; the ventilation of the tunnel became more complicated the further the [work]front got from the portal; the haulage*

*distances were greater and the manoeuvres inside the tunnel became significantly more complicated. (Súarez et al., 2016, p. 11)*

During this period, the dialogue between the ejidatarios and the government broke down, with the former citing a lack of adequate response from the latter [N-91; N-94]. Eight months into the blockade, the situation became even more complicated when protesters prevented Civil Protection authorities from inspecting the abandoned work front's status. During the tunnelling process, excess water from the natural water drainage of the mountain was a situation that raised alarms, which promoted Civil Protection authorities and the PO to verify the structural integrity of the halted portal [N-99].

The prolonged blockade caused significant strain, affecting time, finances, and the project's overall scope. The shift to constructing solely from one side extended the project duration, escalating costs. For instance, some equipment budgeted during the tender phase, suffered due to exchange rate fluctuations, that occurred with the toll equipment.

Figure 21 puts in a timeline perspective the main events between the community of El Cayaco and the project execution.

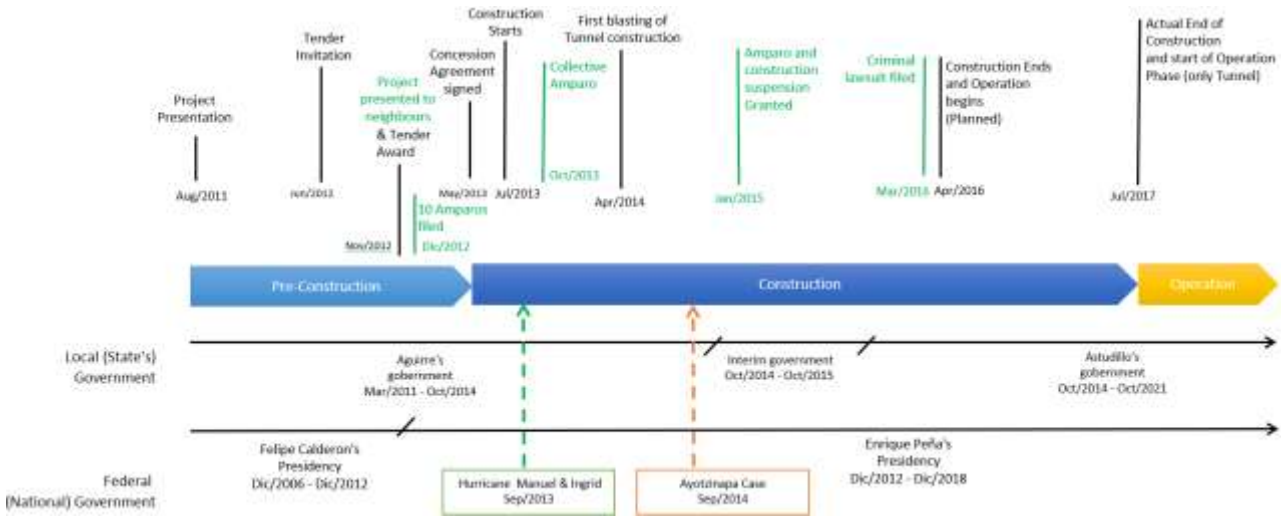



**Figure 21:** Overview of El Cayaco main events
*Source: Author own*

The El Cayaco community's involvement had a significant impact on the project's trajectory, both directly and indirectly. The prolonged blockade and the ejidatarios' firm stance necessitated a strategic pivot by the PO, which decided to split the project into two phases. This strategy involved diverting all available resources to first complete the tunnel, while hoping to resolve the blockade and, as a subsequent phase, finish the road connecting the tunnel with the Diamante junction.

*As it is a private concession, we have limited resources for the construction, so we have 100 pesos to build for exaple, and we said, we are going to spend every last peso to be able to enable at least the most important part of the project,*

*which is the tunnel, which is what is going to help the population the most in terms of connectivity, right? [PM2, Interview]*

*Precisely because of the issues that happened, such as the blockades… The money that had been allocated for the viaduct went to the tunnel in order to finish it, it was decided to finish the tunnel and leave the viaduct as a second stage. [CPM1, Interview]*


**Figure 22:** Brisamar Junction context
*Source: Adapted from Google Earth (2024). Annotations by author.*

### 4.1.2 Affected Neighbours – 'Joyas de Brisamar residents'

The project's west portal, located in the Brisamar area, faced a series of social challenges distinct from those at the east portal. This area, which is part of Acapulco's 'Dorada' zone, features the Brisamar junction, which is arguably the most critical junction of the project because it links the Diamante and Dorada zones. Moreover, the Brisamar junction was the most technically complex due to its location at the heart of a densely populated and urbanised zone.

The project's design largely avoided the need for private property acquisition for the ROW, with the exception of the community centre within the Brisamar residential area. This gated community, located on a hillside with views overlooking Acapulco Bay, is considered a premium residential area. Given its hillside location and the tunnel portal and junction situated at the hill's base, only the residences in the lower part of the area were likely to be impacted. This lower section also housed the community centre.

Despite the potential for disruption, early dialogues between the government and the Brisamar community were initially promising. In late November of 2012, the same month the tender award was granted, in a move of proactive engagement, a high-ranking state government official met with and presented the project to a committee of the Joyas de Brisamar community. However, despite the initial dialogue, by the end of 2012, residents had already filed ten amparo lawsuits, and were seeking a collective amparo lawsuit as a community.

*Figure 23: Before and After Neighbours attitude*

| Before [N-168] | After [N-167] |
|---|---|
| *"The Secretary General of Government, Humberto Salgado Gómez, met with members….of the Joyas de Brisamar housing development, to whom he explained the project of the Escénica Alterna project, so that in coordination with them they can analyse the inconveniences that may result from the work.[a member of the committee] described the meeting as "excellent" because "the important thing is that the government seeks out the citizens to talk, explain and publicise the works that are being done". [the committee member] added that they will meet to expose to the authorities the problems they see in the project and make modifications".* | *"The neighbourhood association president of Joyas de Brisamar, Carlos Reyes Paris, said that the state government did not meet the deadline they requested to give them a date for the next meeting, in which the construction company of the Macrotunnel or Escénica Alterna project would answer their doubts. Reyes Paris reported that the association is still in the process of filing an injunction against the project, which they do not agree with, because they consider that it does not resolve the traffic conflict that is supposed to save…"* |

In October 2013, the collective amparo considering the 450 neighbourhood residents in was filed. At this time, the discourse of the residents was still that they saw deficiencies in the project, but overall, they were in favour of the project*: "He [the representative of the neighbourhood] denied that the Joyas de Brisamar development is opposed to the work, but commented that they are not "very much in agreement" with the resolution of the project, due to the fact that it is poorly planned…" [N-2]*

The legal battle continued to escalate and was followed by another nine amparos by January 2014. While some amparos were dismissed, a January 2015 court ruling favoured a suspension of construction activities adjacent to their homes.

> *"In January, residents of Joyas de Brisamar obtained an amparo to stop the [construction]work on the land next to their homes, which is the access to the Macro-tunnel. In February, the authorities stopped the work, following a demonstration by neighbours…" [N-95]*

In addition to the legal actions, the residents shifted their discontent from the design of the project to the effect the construction was having on them, making vocal their frustration over construction noise and their perceived lack of governmental response: *"They have done us a lot*

*of harm... day and night we hear noise, detonations... the previous governor, Ángel Aguirre, never wanted to receive us" [N-95].* Additionally, they started to raise concerns about the project's compliance with legal and environmental requirements: *"[the construction company]ICA is not complying with the conditions established in its EIA [Environmental Impact Assessment] for the Macro-tunnel construction site"* [N-12]. And became very vigilant and vocal of regulatory oversights: *"SEMANART made an observation... PROFEPA has an 'appeal' against ICA-Carso…. the construction site does not have an operating licence"* [N-71].

In addition, they escalated their complaints and objections across all levels of government:

> *...the Macro-tunnel...is affecting...more than 450 residents, with over 55 homes greatly affected... "It has been reported to the governor, it has been reported to the municipal president, it has even been reported in an open letter to President Peña Nieto... we have denounced SEMARNAT, because the environmental impact statement... had not been complied over the last three years... The Ministry of Communications and Transport also received a complaint from us in which the General Directorate of Tunnels had not issued a report or authorisation... The National Water Commission (CONAGUA)... received a complaint from us... about how they are going to resolve the groundwater, the rainwater channels... I am talking about mangroves, wetlands, recovery of flora and fauna..." [N-100].*

Amid these grievances, residents filed a criminal complaint against the construction company for disregarding a judicial suspension order. *"Residents... have agreed to file a criminal complaint... for not respecting the suspension issued by a civil judge" [N-124].*

In response to the numerous complaints from Brisamar area residents, the PO implemented several measures to mitigate the reported issues. These efforts included adjusting construction techniques, such as changing the type of explosives used to reduce noise and vibrations and installing acoustic screens. The PO also went beyond its direct responsibilities by repairing damages in some residences, even when these were not directly linked to the construction activities. As the construction manager explains:

> *We were always very careful, but someone always had a complaint. We did have a lot of conflict with the Brisamar area. They argued damages that we never caused; they attributed structural damages to us in their houses that were not really caused by our construction process… However, we sometimes had to negotiate with some owners to repair some houses without us being responsible for it.*
>
> *Well, look, we have been building tunnels for a long time. So, we more or less know where issues are going to come from… [However],we did not foresee so many complaints in the areas where we were working… So, we had in our proposal a conventional explosive, so to speak, and we had to migrate to a slightly more innovative … [that] reduces noise and vibrations. [CPM1, Interview]*

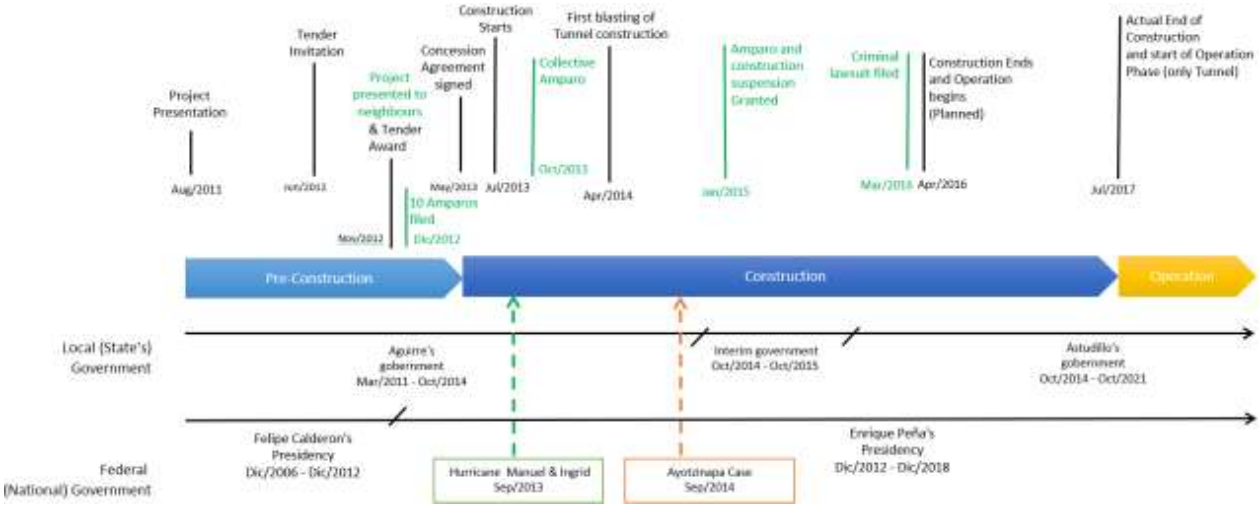



**Figure 24:** Overview Joyas de Brisamar resident's main events
*Source: Author own*

## 4.2 Governmental Authorities

### 4.2.1 National Water Authority – CONAGUA

The analysis of the project's development reveals critical events that have shaped its current status as partially completed. The missing section of the project, which was planned to connect the Cayaco junction with the Diamante junction—linking the tunnel to the highway leading to and from Mexico City—crosses over predominantly empty land; however, this adds to the complexity of the project execution. Beyond the social opposition from the communities of El Cayaco and Llano Largo, environmental and hydrological factors played a significant role in the challenges of this section of the project, as these areas are prone to flooding. The severe weather events of September 2013 highlighted this not long after the project officially started construction. Additionally, its proximity to the 'La Sabana River required adherence to specific regulations and the acquisition of permits from the National Water Authority (CONAGUA), underscoring the complex interplay between the project's infrastructure requirements and environmental safeguards.

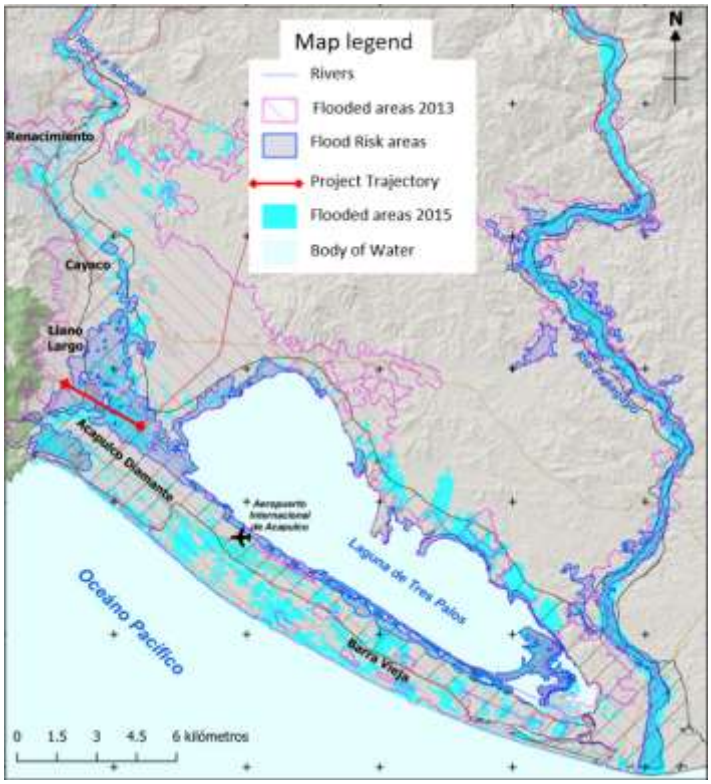



**Figure 25:** Floor Risk Areas Acapulco Diamante
*Source: Adapted from (Flores-Lorenzo & Dávila-Hernández, 2018)*

In September 2013, three months after the construction started, a rare convergence of two hurricanes which caused severe flooding, underscored the vulnerability of this area to natural disasters. As quoted by a former water authority official:

> *"there was a very important event… a hydro meteorological event in in September 2013, Manuel and Ingrid, the two hurricanes that met Manuel on the Pacific coast, Ingrid on the Atlantic coast, they collided, they stopped and caused catastrophic rains" [WA-1, Interview]*

Figure 25 illustrates the surface road's planned trajectory, highlighting its position within the flood-impacted areas and those at risk. While this flood event did not directly impact the project, it led to other issues.

In the aftermath of the hurricanes, by October 2013, concerns began to emerge among residents and environmentalists regarding the project's construction over flood-prone areas: *"environmentalists considered this type of work to be unfeasible, since after the passage of tropical storm "Manuel", the disruption caused by works in flood zones and wetlands became evident." [N-8].* Echoing these concerns, local government officials called for a re-evaluation of the project. Mayor Luis Walton Aburto of Acapulco claimed that *"the state government and those responsible for the Macro-tunnel or Alternate Escenica project should review the work to ensure that there is no flooding in the Diamante area, to prevent what happened last September with tropical storm Manuel, which affected several houses in the area" [N-9].*

By August 2014, communities affected by the project and seeking compensation for their losses continued to express concerns about the project's potential impact on future flooding. Analysis of several news articles indicated a widespread belief among the public that the construction method, particularly building an embankment to lay the road, could act like a dam and intensify future flooding.

> *Members of the coalition [seeking compensation for their damages] asked representatives of the National Water Commission (CONAGUA) to modify the type of construction, as they considered that the tubes used to allow the passage of water would be insufficient. [N-54]*

In August 2015, this culminated with the national water antiauthority decision to temporarily halt the construction works due to the absence of the necessary permits, marking a critical juncture for the project: *"the CONAGUA temporarily closed the Macro-tunnel works on the stretch that runs from the Cayaco-Puerto Marqués federal highway to the junction with the Diamante viaduct that connects with the Autopista del Sol [highway to/from Mexico City], as it lacks the permits for this work." [N-111].*

The PO perceived the National Water Authority's (CONAGUA) intervention as a reaction to media pressure stemming from the extensive flooding in the Diamond Zone: *"CONAGUA got alarmed, and yes, there was a very mediatic pressure. Since the entire diamond zone was flooded, there was a lot of pressure."* [Project Manager 2]. In response, the PO not only filed an appeal against CONAGUA's closure but also engaged in discussions to address the concerns raised:

*"the environmental advisor for the Macro-tunnel project, said that the state government had filed an appeal against the closure of the project by the National Water Commission (Conagua)"* [N-114]

However, in April 2015, CONAGUA, ruled that whatever works had been done in the contested area, had to be removed as they did not comply with their requirements:

> *The National Water Commission (Conagua) authorized the state government to remove 450,000 tons of stone that had been placed for the road that connects the tunnel exit to the Diamante Viaduct of the Macrotunnel project. The approval of the new project is still pending because it continues to be developed to comply with the rules of the federal agencies." [N-125]*

Consequently, the PO had to comply with the authorities' ruling and remove the structures built in the following two years. This hydrological challenge had a profound impact on the project's completion. As noted in an interview, the inability to resolve flood risks meant that the project could only be partially completed, leaving the infrastructure and its stakeholders to contend with the consequences of an unfinished vision: *"The hydrological issue, which, well, we could not solve[in time], we could not solve it, and it meant that the project was not finished, and the project was only half finished."* [PM2, Interview].

Ultimately, the PO had to divert additional resources to adjust its project to comply with the observations made by the water authority, in addition to the observations of the environmental authorities (SEMARNAT and Profepa). However, this meant that only in June of 2016 was the revised project approved, as noted in the information provided in the interview with a former official of the environmental authority: *"On June 1, 2016, SEMARNAT... authorised the modifications to the project consisting of: The construction of an elevated viaduct 2.4 kilometres long and 12.00 metres wide"* [EA-1, Interview]. Although this solution was ultimately accepted, it introduced significant financial implications. According to company documents, completing the revised project, which essentially entailed the development of a bridge-like structure or elevated viaduct as referred to in the project documentation, incurred additional costs amounting to an estimated 47% of the original tender agreement.

The costs of these modifications, coupled with the prior strategic decision to redirect resources towards finalising the tunnel amidst ongoing blockades and time pressure, contributed to the delineation of this project phase as a subsequent follow-up stage of the tunnel.

The following figure presents the key events related to the National Water Authority's intervention in the project. For additional context, the main events from the Cayaco community's blockade are included in orange.

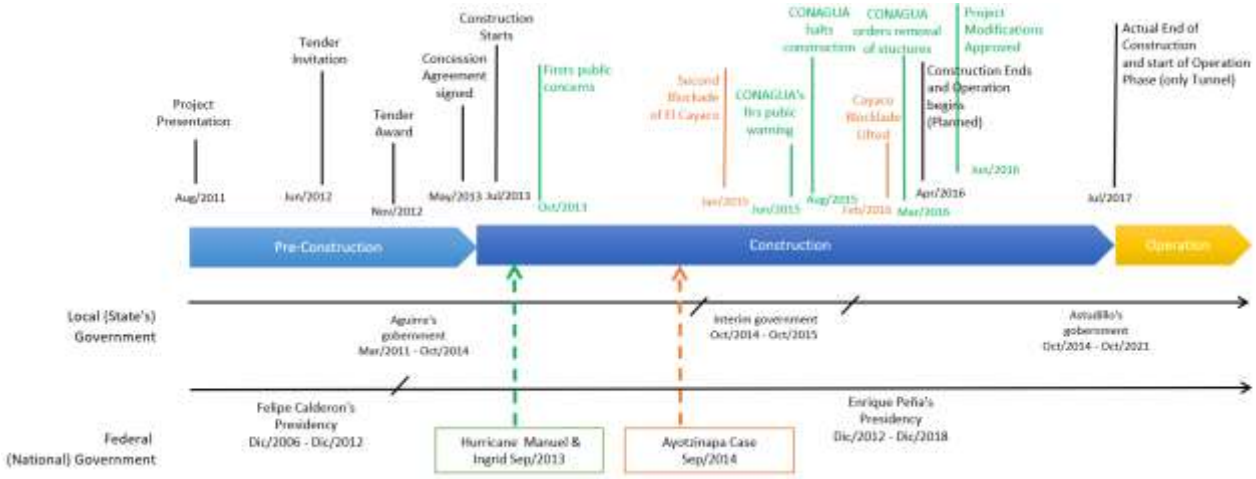



**Figure 26:** Overview of National Water Authority (CONAGUA) events
*Source: Author own*

### 4.2.2 Environmental Authority – PROFEPA

In Mexico, the Ministry of Environment and Natural Resources, known as SEMARNAT, provides the principal environmental oversight. This authority approved the Environmental Impact Assessment (EIA), locally referred to by its Spanish acronym, MIA. However, the Federal Attorney for Environmental Protection (PROFEPA), a decentralised authority of SEMARNAT, monitors and verifies compliance with environmental laws and regulations. Regarding the case study, PROFEPA's role was mainly supportive, especially in cooperation with the National Water Authority (CONAGUA) on the issues already described. PROFEPA was involved in the discussions surrounding the project's transition from a sur-face road to an elevated viaduct. One distinct instance where PROFEPA took a more direct role concerned the mangroves located in the wetlands through which the project planned to pass. The PO had to make adjustments to the construction methods and take additional mitigation measures. These included the rescue and relocation of mangroves affected by the project's right of way, as well as reforestation efforts.

> *"for the second segment. The problem is that to get from where the tunnel ends in the Zona Diamante to connect to the Mexico-Acapulco highway. It is a lagoon that is full of mangroves. So, this is the first problem with SEMARNAT, with the environmental authority here in Mexico, because they did not agree that the mangroves should be destroyed. So, in other words, that those mangroves would be removed to, well, to build the viaduct" [PM1, Interview]*

> *"PROFEPA's intervention was due to the issue of the second stage, where the viaduct was contemplated, because there were mangroves where they intended to place the piles for the viaduct that connected with the diamond junction. So there were wetlands, which they did not want to be affected. [CPM1, Interview]*

### 4.2.3 Municipality of Acapulco

The municipality of Acapulco, prompted by the Citizens Council of Acapulco and the Urban Development and the Acapulco Urban Planning Council, issued a suspension order to halt construction activities in the Brisamar area. The foundation of the municipality was that the project in that area did not comply with the local urban development plan. The expert groups additionally argued that the project lacked adequate permits for building the section from the Tunnel to the Diamante highway – that part that is missing- since it was wetlands and lacked environmental permits. From the documents reviewed, the PO had no response about the suspension, and it carried on with the construction activities [N-93].

**Table 20:** Proof quotes Instance with Municipality

| N-92 | N-170 |
|---|---|
| *"On Thursday, Mayor Luis Uruñuela Fey [of Acapulco]ordered the suspension of the Macro-tunnel work after the report presented by the Public Works and Citizen's councils, and those in charge of the work have this week to present a proposal to modify the work.... the president of the Citizens' Council, Humberto Díaz Díaz, reiterated that the work does not comply with the guidelines of the Urban Development Plan, because it harms traffic circulation and must be modified, because if it is not done, there will be "permanent" damage.* | *" Presidents of the Acapulco Citizens' Council, the State Executive Commission for Urban Development and the Acapulco Urban Planning Council demanded that the state and federal governments enforce the law for the irregularities committed in the Macro-tunnel… They warned that the company Ingenieros Civiles Asociados (ICA), which is part of Carlos Slim Helú's Carso group, began construction without submitting an official project to the local authorities, and that they have even ignored the closures they made last week.* |

### 4.2.4 Local water service provider – CAPAMA

The local water commission and service provider 'CAPAMA' was an 'uncomfortable' ally of the PO. On the one hand, they required their support to install the new water pipes that would go through the tunnel. However, during the construction of the Brisamar Junction (Figure 22), the PO first had the issue that the commission was not providing them on time with information on the location of their underground installations. Then, once they got the information, it turned out that it was mostly wrong or outdated. For time constraints, the PO had to make do with what it had and carry on in spite of the limited reliability of its information. Ultimately, they repair any damage they incurred by working close to a water line, and also elaborate updated as-built drawings with the actual location of the underground facilities and share them with CAPAMA.

**Table 21:** Proof quotes CAPAMA Instance

| CPM1- Interview | |
|---|---|
| *"with CAPAMA, it was almost trial and error, because they sent us some plans. They would tell us, for example, that here is a pipe and you can pass through it, and as it turned out it was passing throug another place one somewhere else. Or here is the drinking water line and it wasn't there, it was on the other side. So, we were there on a trial and error basis, and with the information provided by the government, which was supposed to be accurate, you suddenly found surprises or some other things that they didn't even know about."* | *"that's precisely what causes you not to have the certainty, that you start digging in a place where there is supposed to be nothing and it turns out that you hit a pipe that is there, so there were events, I'm not going to say no, but well, you are detecting where the installations really are, you are repairing…we had to tell them, we've just finished your plan, it should go like this, look, I'll give it to you, it's not here, it's here, and well, they also helped to rearrange the drainage and drinking water configuration that they had there".* |

### 4.2.5 Mexican Navy – SEMAR

Looking at Figure 22, we can see the Navy borders at the north with the Brisamar Junction. Due to the layout of the junction and its structures, the perimeter fence and some small structures inside the naval base had to be temporarily demolished. Also, due to some omissions in the design and larger interference with structures inside the naval base, the PO had to take on at least four additional activities outside of its scope to mitigate this. Furthermore, for their cooperation, the PO had to contemplate doing some mitigation work in favour of the Navy, such as retrofitting some areas within the base, in addition to rebuilding anything that had to be moved or demolished for the construction of the junction.

### 4.2.6 State-owned Oil & Gas company – PEMEX

Adjacent to the Brisamar junction and the tunnel's entrance lies a PEMEX facility (see Figure 22) , a crucial infrastructure asset for the state of Guerrero, serving as a key distribution point for gasoline, diesel, and other petroleum products. The Brisamar junction's construction necessitated PEMEX ceding land, showcasing inter-governmental cooperation and commitment to the project, with the state government finalising this agreement with PEMEX. However, it appears that certain expectations accompanied the collaboration between PEMEX and the PO, namely, that the PO would take responsibility for addressing any issues that arose as a result of the land transfer. For instance, the presence of contaminated soil and several interferences with PEMEX's underground infrastructure posed a significant challenge. These complications required the PO to divert additional resources to address the issues. They were required to safely remove and appropriately dispose of the contaminated soil in accordance with environmental standards. Additionally, some structural aspects of the junction needed reconfiguration to accommodate PEMEX's subterranean pipelines. This led to the added burden of obtaining

authorization for the alterations not only from the state government but also from PEMEX to ensure that all works involving their infrastructure meet their specific standards.

> *"No, look, they had an area of the PEMEX facilities that we had to adjust... there was an arrangement between governments, where PEMEX gave that part... there were pipelines... that we had to line with concrete to prevent any effect on vehicle crossing... we had to make a lot of configurations, like moving the PEMEX fence to free up this lane and reinforce everything underneath, so that vehicles could circulate without affecting the structures that were already there." [CPM1, Interview]*

### 4.2.7 Local Union

In the early stages of the project, a local transport workers' union went on strike twice, with one strike following closely after the other. Payment issues triggered the strikes. The project owner (PO) had a labour agreement with a national union, which subcontracted the local union to transport materials from the tunnel's construction. A dispute arose over the transport tariffs, and the local union struck after not receiving payment [N-16,17,19].

Initial negotiations between the PO, the government, and the unions successfully lifted the first strike [N-21]. However, a month later, the local union went on strike again due to ongoing payment issues. This led to another round of negotiations involving the national and local unions, the government, and the PO [N-24-28]. The PO had anticipated the possibility of such a disruption and had contingency resources in place to facilitate further negotiation. Ultimately, a new set of tariffs was agreed upon, allowing the project to continue with a mitigation plan in place [N-31].

**Table 22:** Proof quotes Union Issue

| N-26 | N-30 |
|---|---|
| *"For the second time in March, more than a hundred transport workers have stopped working on the Macro tunnel construction site, due to the non-payment of almost eight million pesos by the company ICA."* | *"Within the first minutes of this Tuesday, work resumed on the Macro-tunnel, which had been suspended for almost five weeks, following an agreement between the authorities, the construction company and the transport workers, and the strike came to an end (...) It was indicated that the work will be carried out 24 hours a day, and that [work] fronts will be opened to make up for the activities that were delayed as a result of the strike.."* |

Table 23 below shows the results obtained from the data analysis that have just been described above. The description in this section is limited to the first six columns: Events, Timing, External stakeholder, External stakeholder category, and stakeholder action. This portion of the table then sets the groundwork for the discussion section, which addresses the rest of the table. Then, the table not only encapsulates the main outcomes derived from the research but also serves as a bridge to the discussion and findings.

**Table 23:** Overview of Results

| | | | | External Stakeholder Domain | | | Stakeholder Management Domain | | Resilience Domain |
|---|---|---|---|---|---|---|---|---|---|
| **No.** | **Events** | **Timing** | **External Stakeholder** | **External Stakeholder Category** | **Stakeholder Action (practice)** | **Category of Influence Strategy (practice)** | **Project Response** | **Response Strategy (practice)** | **Type of Resilience** |
| **1** | Ejidatarios blockaded for 35 days the East front of the Tunnel. In this period, they also extended their blockade to concrete plants who supplied to the project. | Construction Phase (Nov-Dic 2014) | Residents of 'El Cayaco' ejido | Land Owners | Multiple-Blockade + Legal Action | Progress Obstruction | The state government engaged in negotiations, leading to a verbal agreement followed by lifting of the blockade. | Dialogue and Negotiation (**Reactive**) | ***Absorptive Resilience*** |
| **2** | El Cayaco and Llano Largo residents formed a coalition to pressure and make tougher demands on the government regarding the contested land. | Construction Phase (Dic-2014 to Jan-2015) | El Cayaco and Llano Largo residents | Land Owners | Coalition Building | Protest | The government engaged in daily dialogues with the opposition groups and proposed to compensate with public works and social programmes. | Dialogue and Negotiation (**Reactive**) | ***Absorptive Resilience*** |
| **3** | Non-conformist neighbours of the project blockaded a federal highway next to the project to make the government negotiate with them for the payment of their lands. | Construction Phase (Jan-2015) | El Cayaco and Llano Largo residents | Land Owners | Coalition Protest | Protest | The government decided to deploy riot police to remove the protestors. | Coercive Negotiation (**Reactive**) | ***Absorptive Resilience*** |
| **4** | Residents of El Cayaco area blockade for a second time the East portal of the Tunnel. | Construction Phase (Jan-2015 to Feb-2016) | Residents of 'El Cayaco' ejido | Land Owners | Prolonged Blockade **(Conflict Escalation)** | Progress Obstruction | The construction company had to change the construction procedure and divert additional resources to continue building. | Resourcefulness (**Reactive**) | ***Transformative*** |
| **5** | As a consequence of the blockade, the construction of the tunnel had to change from two construction fronts to one. | Construction Phase | Indirectly caused by El Cayaco Residents (Event 4) | Land Owners | Indirect Effect of Stakeholder Action | Collateral Event | The new building conditions meant the PO had to acquire a new ventilator exported from Europe, given its unique characteristics. | Resourcefulness (**Reactive**) | ***Adaptive Resilience*** |
| **6** | The adapted construction method (Event 5) of the tunnel resulted in extreme heat conditions. | Construction Phase | Indirectly caused by El Cayaco Residents (Event 4) | Land Owners | Indirect Effect of Stakeholder Action | Collateral Event | The PO had to increase and reorganise work shifts. | Resourcefulness (**Reactive**) | ***Adaptive Resilience*** |
| **7** | The extended duration of the construction project, influenced by the El Cayaco blockade, resulted in an increase in the cost of foreign-sourced electronic toll equipment due to exchange rate fluctuations. | Construction Phase | Indirectly caused by El Cayaco Residents (Event 4) | Land Owners | Indirect Effect of Stakeholder Action | Collateral Event | The company was allowed (by the government) to divert the additional resources necessary to acquire the equipment to maintain service levels. | Resourcefulness (**Reactive**) | ***Adaptive Resilience*** |
| **8** | The El Cayaco ejidatarios had blockaded one of the portals of the tunnel | Construction Phase | Residents of 'El Cayaco' ejido | Land Owners | Blockade | Progress Obstruction | After more than 1 year of blockade, and ups and downs in the negotiations, the ejidatarios agreed to lift their blockade in exchange of community works offered by the government. | Dialogue and Negotiation (**Reactive**) | ***Adaptive Resilience*** |

| | | | | External Stakeholder Domain | | | Stakeholder Management Domain | | Resilience Domain |
|---|---|---|---|---|---|---|---|---|---|
| **No.** | **Events** | **Timing** | **External Stakeholder** | **External Stakeholder Category** | **Stakeholder Action (practice)** | **Category of Influence Strategy (practice)** | **Project Response** | **Response Strategy (practice)** | **Type of Resilience** |
| **9** | During the initial stages of tunnel construction and due to the proximity of some houses, there was a high risk of flying debris from the explosions that could injure neighbours. | Construction Phase | Residents of 'El Cayaco' ejido | Land Owners | Preventive actions to mitigate possible Influence strategies from stakeholders | Proactive Mitigation | Company employees would ask neighbours to evacuate the area during the explosions. | Dialogue and Negotiation (**Proactive**) | ***Absorptive Resilience*** |
| **10** | Blockade by the ejidatarios of El Cayaco led to risks of damage to the Macro-tunnel due to filtrations, potentially compromising the tunnel's integrity and safety. | Construction Phase (Jun-Ago 2015) | El Cayaco Residents / Civil Protection Agency | Land Owners and National Authority | Blockade **(Conflict Escalation)** | Progress Obstruction | Specific negotiations were in place to gain temporary access to the construction site to drain the accumulated water. This approach was executed simultaneously with the presence of riot police. | Coercive Negotiation (**Reactive**) | ***Adaptive Resilience*** |
| **11** | Due to the tunnel's construction method, there was a risk of potential damage complaints to neighbouring structures during construction. | Construction Phase | Residents of 'Joyas de Brisamar' neighbourhood | Affected Neighbours | Preventive actions to mitigate possible Influence strategies from stakeholders | Proactive Mitigation | The construction company pre-arranged agreements with specialists to verify the actual extent of their impact on neighbouring structures. | Resourcefulness (**Proactive**) | ***Absorptive Resilience*** |
| **12** | There was strong opposition and complaints from the neighbours about the discomfort of the construction method (i.e., explosives) | Construction Phase | Residents of 'Joyas de Brisamar' neighbourhood | Affected Neighbours | Neighbour Complaints | Protest | To attenuate the discomfort of the neighbours, the construction company had to install acoustic screens in the site. | Resourcefulness (**Reactive**) | ***Adaptive Resilience*** |
| **13** | Despite mitigation measures, the level of complaints about construction nuisances exceeded expectations. Legal action to suspend the work also took place. | Construction Phase | Residents of 'Joyas de Brisamar' neighbourhood | Affected Neighbours | Neighbour Complaints | Protest | The construction company had to change the conventional explosives it initially contemplated for more innovative ones. | Resourcefulness (**Reactive**) | ***Transformative*** |
| **14** | Neighbours of the construction project claimed their houses were suffering damages due to construction activities, and also complain about the nuisance. | Construction Phase | Residents of 'Joyas de Brisamar' neighbourhood | Affected Neighbours | Neighbour Complaints | Protest | Despite the company believing some of the neighbour's complaints regarding damages to their property were not caused by the tunnel's construction, the company committed and made the necessary repairs. | Resourcefulness (**Reactive**) | ***Absorptive Resilience*** |
| **15** | A court issued a suspension order to halt construction work on the Macro-tunnel next to the residences in the Joyas de Brisamar area based on structural damages reported by the residents. | Construction Phase (Apr to Jun-2015) | Residents of 'Joyas de Brisamar' neighbourhood | Affected Neighbours | Legal Action | Progress Obstruction | The construction company managed to appeal against the judicial order, arguing the necessity of continuing work due to safety concerns. | Ignoring (**Reactive**) | ***Absorptive Resilience*** |
| **16** | Arguing that the construction company had not respected the judge's suspension order. The neighbours decided to escalate the issue and file a criminal lawsuit against the construction company. | Construction Phase (Mar-2016) | Residents of 'Joyas de Brisamar' neighbourhood | Affected Neighbours | Legal Action **(Conflict Escalation)** | Progress Obstruction | The PO had to divert additional resources to address the legal defence. | Resourcefulness (**Reactive**) | ***Adaptive Resilience*** |

| | | | | External Stakeholder Domain | | | Stakeholder Management Domain | | Resilience Domain |
|---|---|---|---|---|---|---|---|---|---|
| **No.** | **Events** | **Timing** | **External Stakeholder** | **External Stakeholder Category** | **Stakeholder Action (practice)** | **Category of Influence Strategy (practice)** | **Project Response** | **Response Strategy (practice)** | **Type of Resilience** |
| **17** | In light of an un-planned explosion in the construction site injured four workers, damaged neighbouring homes and caused distress among residents. The local civil protection agency requested an updated safety plan. | Construction Phase (Jul - 2014) | Civil Protection Agency/ Joyas de Brisamar Neighbours | National Gov. Authority and Neighbours | Authority intervention due to safety Concerns and Neighbour Complaints | Demand for Compromise | The construction company submitted an enhanced safety plan, including additional safety trainings in collaboration with the Amy, and collaboration with civil protection agencies to improve safety measures at the construction site. | Dialogue and Negotiation (**Proactive**) | ***Absorptive Resilience*** |
| **18** | Disagreement between the Local Union of Transportation Workers and the National Union (contracted by the project) led to a strike due to tariff disputes. | Construction Phase (Feb-Mar 2014) | Local Transport Union | Local labour union | Strike **(Conflict Escalation)** | Progress Obstruction | The PO negotiated with the Unions, and an agreement was reached. This agreement included measures to expedite work recovery. | Dialogue and Negotiation (**Proactive/Reactive**) | ***Adaptive Resilience*** |
| **19** | The local municipality issued a suspension of the Macro-tunnel construction works on the grounds that the project was not in compliance with the Urban Development Plan. | Construction Phase (Jun -2015) | (Local) Municipality of Acapulco | Municipal government | Work Suspension | Demand for Compromise | Construction activities continued. | Ignoring (**Reactive**) | ***Absorptive Resilience*** |
| **20** | For the Brisamar junction, PEMEX ceded part of the land where its major facility is. However, the project encountered unforeseen obstacles, including contaminated soil and the location of pipelines. | Construction Phase | National Oil&Gas company (PEMEX) | State-owned company | Inconvenient neighbour | Demand for Compromise | The PO had to deal with the soil contamination and reconfigure construction details and activities to safeguard existing pipelines. | Resourcefulness (**Reactive**) | ***Adaptive Resilience*** |
| **21** | Changes in the Brisamar junction project led to interference with structures within the Naval Base. | Construction Phase | Mexican Navy (SEMAR) | Armed Forces | Inconvenient neighbour | Demand for Compromise | Given the design interference and initial suspension of works by the Navy. The company had to modify the project and take on additional works to mitigate the damages. | Resourcefulness (**Reactive**) | ***Adaptive Resilience*** |
| **22** | The PO faced significant delays and complications due to inaccurate or incomplete information from CAPAMA regarding the locations of water pipes and other utilities. | Construction Phase | Local Water Authority (CAPAMA) | Local-government service provider | Misinformation | Demand for Compromise | The PO adopted a trial-and-error method to accurately locate utilities, reconfiguring their plans based on real-time discoveries of pipe locations and other infrastructure. This approach included immediate repairs and adjustments to continue construction safely and efficiently. | Resourcefulness (**Reactive**) | ***Adaptive Resilience*** |

| | | | | External Stakeholder Domain | | | Stakeholder Management Domain | | Resilience Domain |
|---|---|---|---|---|---|---|---|---|---|
| **No.** | **Events** | **Timing** | **External Stakeholder** | **External Stakeholder Category** | **Stakeholder Action (practice)** | **Category of Influence Strategy (practice)** | **Project Response** | **Response Strategy (practice)** | **Type of Resilience** |
| **23** | The construction path of the Macro-tunnel project intersected with a mangrove area, prompting environmental authorities (PROFEPA/ SEMARNAT) to demand the protection of this sensitive ecosystem. | Construction Phase (Jun 2015-Jun 2016) | Environmental Protection Agency (PROFEPA) | National Regulatory Agency | Authority Intervention due to Environmental Concerns | Demand for Compromise | The project organisation had to re-design part of the project in that area and request the authorization of the Environmental body. Additional do the project modifications, there were additional works and reforestation measures. | Resourcefulness (**Reactive**) | ***Transformative*** |
| **24** | CONAGUA issued a shutdown of the construction activity of the surface section due to the non-compliance with its regulations. Additionally, it demanded the removal of the embankments already built, claiming they posed a risk of flooding. | Construction Phase (Ago-Apr 2016) | National Water Authority (CONAGUA) | National Governmental Authority | Work Suspension | Demand for Compromise | Initially, the PO appealed the decision. But ultimately, it complied with the orders from the authority. It stopped the works, removed the embankments, and subsequently had to re-design the surface section. | Resourcefulness (**Reactive**) | ***Transformative*** |
| **25** | The PO faced several technical, social and regulatory challenges during the execution of the construction activities. | Construction Phase | Indirectly caused by El Cayaco and CONAGUA events | Multi-Stakeholder | Indirect Effect of Stakeholder Action | Collateral Event | At a critical stage, the collective decision was made to allocate all resources to finish the tunnel. This included those of the surface road. | Resourcefulness (**Reactive**) | ***Transformative*** |
| **26** | Strategic resource allocation led to the completion of the project's tunnel segment, resulting in limited traffic and an indefinite postponement of the remaining viaduct. | Operation Phase | Multi-Stakeholder | Multi-Stakeholder | Indirect Effect of Stakeholder Action | Collateral Event | The Concessionaire faced reduced traffic flow due to partial operation, necessitating operational strategies to improve efficiency, restructure loans, and allocate additional capital for expenses and obligations. | Resourcefulness (**Reactive**) | ***Transformative*** |

# Chapter 5
# Discussion

# 5 | Discussion

This chapter is structured in three main sections, drawing from Figure 22. The first section discusses the external stakeholder actions. Then section 5.2 presents the stakeholder management strategies, and lastly section 5.3 discusses the implications of resilience of the stakeholder management strategies.

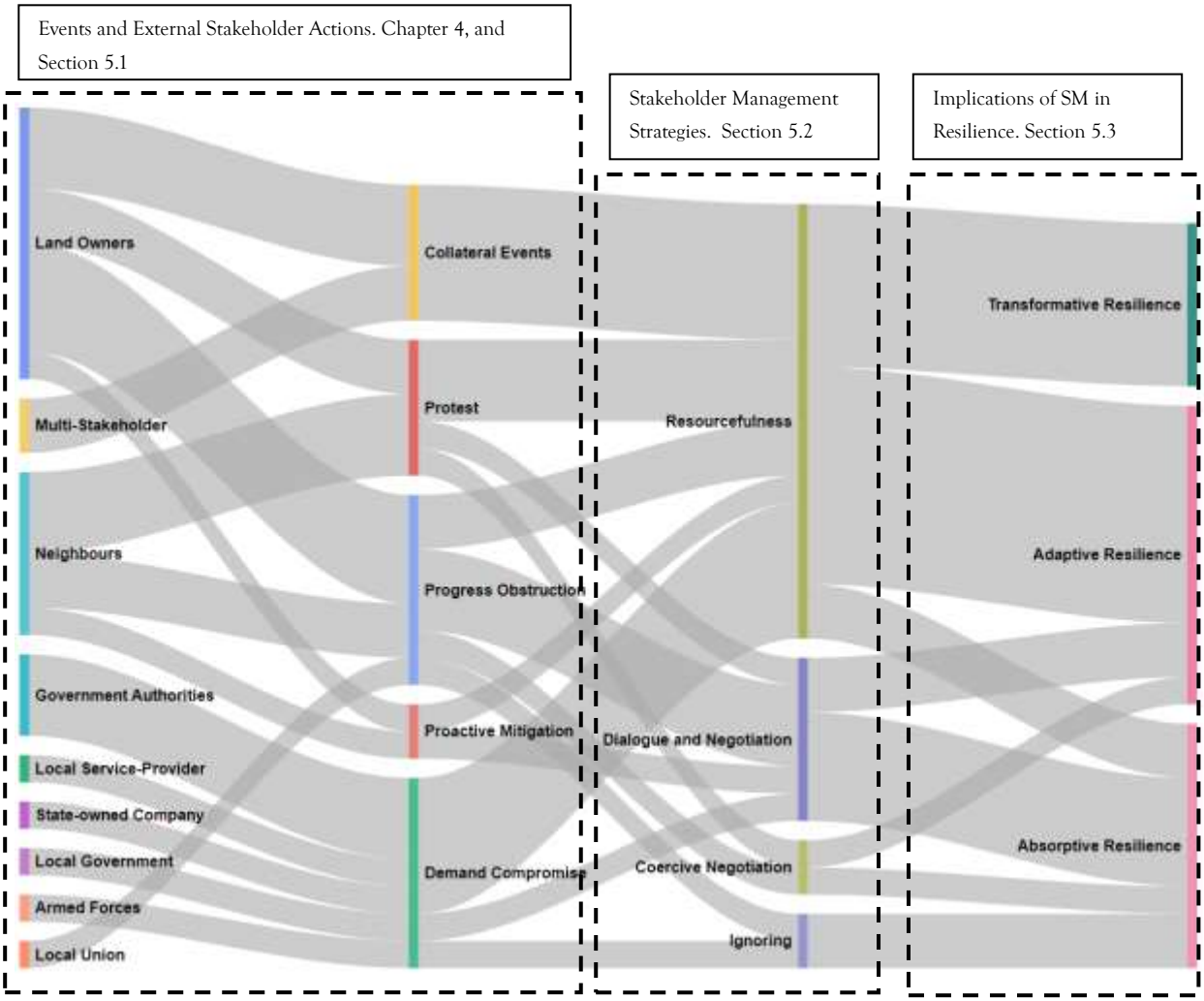



**Figure 27:** Overview of Relationships between Stakeholder Actions, Responses and Resilience

## 5.1 External Stakeholder Actions

### 5.1.1 Demand for Compromise

The 'Demand for Compromise' influence strategy emerged when governmental stakeholders – traditionally holders of power and legitimacy—exerted their influence towards the project. A pat-

tern emerged in the events under the category, showing a dynamic spectrum of the strategy's applicability. For instance, the majority of events (Events 17, 20, 21, and 23 in Table 23) fall on the lower end of the strategy spectrum and involve a more cooperative form of compromise. These events align with the "direct-input compromising strategy" as described by Nguyen et al. (2019). For example, in Event 20, the state-owned company (PEMEX) and the armed forces (SEMAR, Event 21) provided inputs required by the project but with 'strings attached'. These instances represent a "collaborative compromise" that stems from the project owner's strategic interest in aligning with stakeholder requirements.

In contrast, Events 19 and 24 demonstrate an escalated form of this strategy, where government authorities not only supervise but actively enforce regulations. This spectrum of strategy aligns with Vuorinen & Martinsuo's (2019) strategy of "setting rules and supervising the project", but extends it further to an interventionist stakeholder stance in addition to being vigilant. These cases demonstrated the stakeholders' willingness to issue suspension orders to halt construction activities, which were mainly driven by the legitimacy of the authorities rather than their power. For instance, in Event 19, the local municipality uses its legitimate position to assert influence, even when it lacked the authority (power). The significance of legitimacy is further highlighted in Event 24, where CONAGUA enforces compliance and the PO's failure to comply triggered the exercise of authority.

Event 22 on the other hand, presents a scenario where the resource in question—accurate information from CAPAMA—is not physical. This diverges from the direct-input compromising strategy and suggests a different form of resource dependency, one that is crucial yet intangible. This scenario is indicative of an 'indirect' form of compromising that is not extensively covered in existing literature focusing on influence strategies (i.e., (Aaltonen et al., 2008; T. H. D. Nguyen et al., 2019; Vuorinen & Martinsuo, 2019).

### 5.1.2 Progress Obstruction

As its name suggests, 'Progress Obstruction' is all about stakeholder actions that aim to obstruct the progress of the project. This can be done by blockades in the project's right-of-way (e.g., Events 4, 8, and 10), disruption affecting both the project and its material supplies (Event 1), workforce strikes (Event 18), legal actions seeking the project suspension (Event 15), and even escalating to filing a criminal case against the PO (Event 16).

Studies on stakeholder influence reveal a range of similar strategies. For example, "direct input withholding" (Aaltonen et al., 2008; T. H. D. Nguyen et al., 2019), which primarily originates from a resource dependency perspective inspired by Frooman's (1999) work. However, in this case, 'Progress Obstruction' is not limited to resource-related actions. The literature also describes strategies like "litigation" (Hendry, 2005), though in more recent frameworks (i.e., Aaltonen et al.

(2008), Nguyen et al. (2019)), this strategy is not clearly emphasized. This likely reflects the context-driven effectiveness of employing legal action; for instance, Nguyen et al. (2019) observed that external stakeholders refrained from legal action as the context of their study did not support such measures. Interestingly, although the context of this study might also be subject to questioning the efficacy of the legal system, it was nonetheless a strategy that played a central role in stakeholder tactics, either employed as the primary strategy to obstruct the progress of the project (Events 15, and 16) or in combination with other actions, like blockades (Event 1).

'Progress Obstruction' broadens the dialogue to encompass these diverse strategies, representing a concerted effort by stakeholders to halt or slow the progression of a project through various means. The category captures the multifaceted nature of stakeholder strategies, uniting them under the shared aim of project disruption. It takes a more comprehensive approach to include the collective impact of various tactics—blockades, legal challenges, or strikes—that converge to form a significant force against project continuation.

### 5.1.3 Protest

The 'Protest' strategy encompasses a series of different stakeholder tactics that indicate opposition, though with a lower impact on the project and its progression. Instances of 'Protest' in this study ranged from public demonstrations (Event 2) to forming coalitions against the project's aspects (Event 3), along with communication efforts such as lodging public complaints, penning letters, and media engagement (Events 12, 13, and 14).

This strategy reflects elements found in literature, mirroring Aaltonen et al.'s (2008), concepts of "coalition building" and "direct actions". It also aligns with Nguyen et al.'s (2019) taxonomy involving "direct", "lobbying", and "bolstering" strategies. However, the 'Protest' strategy adopts a broader lens, unifying multiple tactics into a singular, overarching classification. It directly showcases stakeholder discontent through multiple actions rather than dissecting the nuances of each. This broader interpretation of the strategy aligns more with Vuorinen and Martinsuo's (2019) "complaining and resolving disputes" strategy.

The 'Protest' category is closely linked to the 'Progress Obstruction' strategy identified earlier; not only does it serve as its precursor, but it also involves the same group of external stakeholders—primarily landowners of the project's right-of-way or affected neighbours. The involvement of these stakeholders reflects how the project's layout is a common trigger for stakeholder actions, consistent with Liu et al.'s (2018) findings.

The two strategies allow us to see the escalation of tactics employed by these stakeholders. They begin with relatively milder forms of expression, such as complaints or letters (protest), and escalate to actions that aim to halt project activities (obstruction). From a salience perspective, the

strategic progression from protest to obstruction illustrates a shift in stakeholder tactics—from increasing the urgency of their claims (protest) to amplifying their perceived power and legitimacy (obstruction).

### 5.1.4 Collateral Events

The category 'Collateral Events' deviates from the strategies previously discussed, which can be characterised as 'direct' since they involve instances where external stakeholders explicitly intend to influence the project, such as through a blockade. In contrast, 'Collateral Events' encompasses events that are repercussions, either intentional or unintentional, of such direct actions. This category highlights how the ramifications of direct events can ripple across various project stages, manifesting at different times. For instance, a change in construction procedures (Event 5) was a direct outcome of a blockade (Event 4), illustrating a clear and immediate link. It should also be noted that the blockade of Event 4 was a conflict escalation, demonstrating the ramifications of a powerful escalatory action. Conversely, other events may be more distantly connected and result from a mix of factors, not solely stakeholder actions (e.g., Events 25 and 26).

The literature review reveals no similar categories in earlier studies. However, Nguyen et al. (2019) acknowledged a gap in their research concerning the long-term effects of influence strategies. This gap suggests a niche that 'Collateral Events' could fill. It is also important not to confuse this category with 'indirect' strategies like the "indirect withholding strategy"(Aaltonen et al., 2008), which involves stakeholders influencing resources they do not control.

This category is particularly relevant for this study as it draws attention to the actions and reactions of the project organisation in response to these indirect influences. It demonstrates how past actions, such as prolonged blockades or regulatory suspensions, can cascade into operational challenges.

### 5.1.5 Proactive Mitigation

The 'Proactive Mitigation' influence category includes anticipatory actions taken by the project organisation to address potential concerns or objections from stakeholders before they escalate into active influence strategies. Although this category is not directly triggered by stakeholder actions, it is closely linked to stakeholder perceptions and potential reactions. According to Liu et al. (2018) the public's perception of the risks and benefits associated with the project is a critical factor that contributes to collective actions against the project, highlighting the relevance of this category.

Event 9 illustrates this, with the project organisation taking preventive measures to mitigate the risks posed by construction activities. Recognizing the danger flying debris posed to nearby residents, the organization sought to mitigate these risks, thereby preempting potential opposition

or demands from the landowners who could be affected by such activities. Similarly, Event 11 demonstrates the project organisation's initiative to hire specialist contractors to monitor vibration levels due to the construction work, aiming to avoid complaints or a 'protest' influence strategy.

## 5.2 External Stakeholder Management Strategies

### 5.2.1 Resourcefulness

'Resourcefulness' emerged as the predominant strategy through the study, appearing in 17 distinct cases out of the 26 total. This strategy, except for Event 11, was primarily reactive, allowing the project owner to navigate the influence of external stakeholders by reallocating resources to address the issue. This strategy often involved modifications in construction methods (Events 4, 13, 20, and 22), diverting additional resources (Events 5, 6, 7, and 12), and design changes (Events 21 and 23). It was also used to comply with a government authority order (Event 24) and do additional work and non-attributable repairs to prevent conflict escalation (Event 12).

This strategy aligns with previous propositions such as Aaltonen and Sivonen's (2009) "Adaptation" strategy, Ninan et al.'s (2019) "Flexibility" strategy, and Nguyen et al.'s (2023) "Complying" strategy. However, these strategies, while all "accepting" the stakeholders' influence, have distinct underlying motives. For example, Nguyen et al. (2023) suggest that this strategy is employed when the project is adaptable or when the stakeholder requirements can be accommodated, a view supported by Ninan et al. (2019). Conversely, Aaltonen and Sivonen (2009) view adaptation as a response to powerful stakeholders.

In this case, the use of 'resourcefulness' aligns more with the demands of powerful stakeholders, similar to Aaltonen and Sivonen's (2009) proposition. This is demonstrated in the reactions to the 'Protest' influence strategy by affluent neighbours (Events 12, 13, and 14), indicating the PO's recognition of the stakeholders' power. Conversely, it was only when conflicts with landowners escalated that the PO – forcefully- redirected significant resources to resolve the 'Collateral Events' resulting from the prolonged blockade (Event 4). Furthermore, it is crucial to note that most of the 'Demand for Compromise' strategies were addressed through resourcefulness, which also underscored the significant influence of powerful stakeholders and the legitimacy of their claims. This was particularly evident in issues concerning government authorities, which were often linked to design flaws or omissions.

An additional aspect of 'resourcefulness' is its inherent focus on maintaining project momentum. Faced with unexpected challenges, the PO was required to adapt swiftly to the 'imposed' conditions (e.g., from the prolonged blockade in Event 4). These adaptations, involving significant changes to construction procedures, demonstrated a strategy deeply rooted in maintaining the

project's continuity. It is important to note the use of this strategy was accompanied by clear political support. Not only as an enabler for employing the strategy (i.e., authorizing resource reallocation), but also as a driver for the pressing urgency to carry on. The government's backing as an enabler for this kind of strategy is also supported by Ninan et al. (2019).

### 5.2.2 Dialogue and Negotiation

The 'Dialogue and Negotiation' strategy was predominantly used by the project owner (PO) as a means to engage with stakeholders and seek resolution to emergent issues. It was implemented in six instances within the study, with an equal split between proactive (internally driven) and reactive (triggered by external pressures) responses. The strategy's dual nature reflects different situational tactics employed by the PO.

External stakeholders' actions aimed at obstructing or protesting the project's progress typically trigger reactive responses. In such cases, the PO usually relied on government intermediaries for negotiations, resulting in prolonged and unproductive discussions with short-term solutions and repeated conflicts or escalation. For example, during the first blockade (Event 1), engaging in dialogue temporarily resolved the issue. However, as landowners felt their concerns were not being addressed, they escalated the conflict by aligning with other opposition groups (Events 2 and 3), ultimately leading to a prolonged and critical blockade (Event 4). These situations necessitated further dialogue, culminating in the PO conceding to stakeholder demands (Event 8).

Alternatively, in cases where the strategy was internally driven, it was aimed at proactively addressing potential disputes or possible conflict escalations. For example, the PO took the initiative to collaborate with safety authorities and revise the site safety plan after a hazardous incident (Event 17) or to mediate with union leaders and government officials to resolve a strike (Event 18).

The dialogue and negotiation responses had a dual nature. On the one hand, in its broader and more purposeful form, it aligns with propositions such as Aaltonen and Sivonen's (2009) "compromising strategy" or Ninan et al.'s (2019) "give-and-take". However, the instances that portray a reactive dialogue and negotiation approach align more with a combination of counter strategies such as "bargaining" and conceding strategies such as "diverging", as the combination of both would entail buying time (diverting) while negotiating (bargaining) (T. H. D. Nguyen et al., 2023).

### 5.2.3 Coercive Negotiation

The 'Coercive Negotiation' strategy emerged as a tactic employed by the PO to exert pressure and force to respond to stakeholder actions. In a way, it aligns with 'Dialogue and Negotiation, as it involves engaging stakeholders in discussions. However, it stands apart due to the element of pressure that shapes these negotiations.

While it shares some similarities with the “manipulating” strategy proposed by Nguyen et al. (2023), or Ninan et al. (2019) “persuasion via pressure strategy”, the 'coercive negotiation' strategy carries a more forceful undertone. It entails leveraging power to influence stakeholder actions and decisions, as well as compelling stakeholder compliance through pressure.

In practice, the 'Coercive Negotiation' strategy was employed three times, all directed towards the landowners. The first instance presents a straightforward use of the strategy; in response to a 'Protest' (Event 3), the government deployed riot police to disperse protestors obstructing a road. The other instances involved more complex scenarios, showcasing the full spectrum of 'coercive negotiation' and its overlap with the 'dialogue and negotiation' strategy, both centred around the prolonged blockade (Event 4). One situation arose from concerns about water filtration threatening the tunnel's integrity after the site was abandoned due to the blockade. The PO and civil protection authorities began negotiations to address this issue, but the blockaders remained primarily focused on land payment demands. In response, the government escalated its approach, threatening to use police force to remove the blockade and justifying this escalation with safety concerns (Event 10). In another instance, during negotiations with landowners, the government's attempts to delegitimize the stakeholders' claims exacerbated tensions rather than easing them, ultimately leading to government concessions, which is why this particular case was labelled as 'dialogue and negotiation’ (Event 8).

‘Coercive Negotiation’ emerged as a response enabled by the government, which had the authority to deploy forceful measures such as police intervention. However, it was ultimately the PO's responsibility to address and mitigate the repercussions of these actions. The forceful nature of this strategy underscores its potential consequences and the need for careful consideration.

### 5.2.4 Ignoring

The 'Ignoring' strategy emerged a calculated response to specific stakeholder pressures that could obstruct project progress. This strategy was implemented in response to actions classified under 'Progress Obstruction' and 'Demand for Compromise,' in which legal and administrative suspension orders were issued against the project. Despite these significant pressures, the PO opted to continue with project activities, effectively setting aside the stakeholder claims.

This approach is similar to the “dismissal” strategy identified by Aaltonen and Sivonen (2009), which involves disregarding stakeholder pressure. However, in this study, 'Ignoring' takes on a different perspective. The strategy suggests that besides simply disregarding a claim(e.g., Event 19), the PO can actively take deliberate measures to defuse the situation, basically sweeping it under the rug (Event 15).

In both instances, the PO's application of this strategy suggests a strategic choice. It was a calculated risk to 'Ignore' the stakeholders' actions based on an assessment of their legitimacy, which in both cases could be argued as low, deeming it less critical than maintaining project momentum.

## 5.3 Implication of Stakeholder Management Strategies in Resilience

### 5.3.1 Resilience Outcomes of 'Resourceful' Strategies

Resourcefulness was the only response strategy that led to all types of resilience: absorptive, adaptive, and transformative. Notably, the response emerged primarily as a reactive strategy, only emerging once as a proactive response (Event 11), resulting in absorptive resilience. In the rest of the cases, it was employed reactively, meaning that only when pressured by external stakeholders did the PO concede to the demands, and the accommodative nature of the response allowed for a variety of resilience types to emerge.

Overall, it only resulted in absorptive resilience on two occasions. Given the reactive nature of the response, this fact implies that the reactive use of resourcefulness triggers significant changes that result in adaptive resilience and fundamental shifts that lead to transformative resistance. It goes without saying that such changes required considerable resources.

Transformative resilience, characterised by a profound level of adaptation and fundamental changes in response to highly unique and significant disturbances, was the outcome of six 'resourcefulness' responses observed in the project. Two instances involved conflict escalations from neighbours (Event 14) or landowners (Event 4), necessitating substantial project adaptations such as changes in construction procedures. Another two instances (Events 23 and 24) stemmed from authority demands that required major project modifications. The final pair of transformative events (Events 25 and 26) directly resulted from earlier transformative challenges, underscoring that enacting resilience responses is not a synonym for avoiding further adjustment.

It is also crucial to note that, unlike other resilient outcomes, transformative resilience requires the support of additional internal stakeholders beyond the project organization. Governmental support, a crucial enabler to overcome issues during the construction stage, was visibly acknowledged in most instances, as confirmed by all internal stakeholders interviewed (PM1, PM2, CPM1, see Table 2).

Based on the above discussion, the following proposition is presented:

**P1:** *Resourcefulness as a response strategy exhibits a high degree of adaptability. It can support all types of resilience—absorptive, adaptive, and transformative—depending on the unique demands of the situation and the nature of stakeholder interactions. The outcome in terms of resilience is contingent upon the complexity of the disturbance, the immediacy of the threat to project integrity, and the strategic objectives of the Project Organisation.*

### 5.3.2 Resilience Outcomes of 'Dialogue and Negotiation' Strategies

'Dialogue and Negotiation' emerged as a response in six instances within the case study, leading to *absorptive resilience* four times and *adaptive resilience* twice. The results revealed two significant patterns. First, the only two instances where 'dialogue and negotiation' was employed proactively, it led to absorptive resilience. This implies that proactive engagement with stakeholders preemptively mitigates risks and avoids escalation of issues, leading to resilience, which is in line with previous research that emphasises early engagement with relevant stakeholders to prevent confrontation (Cuppen et al., 2016; Lehtinen & Aaltonen, 2020).

Secondly, 'dialogue and negotiation' resulted in adaptive resilience when addressing already escalated conflicts (Events 8 and 18). This suggests that the outcome will likely require flexibility and moderate change when employed as a response to conflict escalation. For instance, negotiating new terms with the union in Event 18 demonstrates this adaptability. Drawing from these observations, the following proposition is suggested:

**P2:** *The deployment of 'Dialogue and Negotiation' by the Project Organisation, whether used proactively or in response to influence strategies like 'Protest' or 'Progress Obstruction', typically promotes absorptive resilience, thereby aiming to contain emerging situations and preserve the project's trajectory. Conversely, when this strategy is reactive to already escalated conflicts, it prompts adaptive resilience, necessitating the integration of changes to effectively manage and resolve the conflict.*

### 5.3.3 Resilience Outcome of 'Ignoring' Strategy

The 'Ignoring' strategy was visible on two occasions, both instances leading to absorptive resilience. This outcome, characterised by the ability to 'bounce back', indicates that the strategy facilitated a quick return of the project to its 'business as usual' state. However, it's critical to distinguish that the use of 'Ignoring' was a calculated decision rather than a passive lack of response, as discussed earlier (see 'Ignoring' in §5.2.) Thus, while 'Ignoring' led to resilience in these instances, it's important to consider that other types of ignoring—without careful consideration—may not yield resilient outcomes and could potentially lead to negative consequences. Drawing from these observations, the following proposition is suggested:

**P3:** *Ignoring strategies are likely to be employed when the stakeholder's influence threatens project progress, and the claim lacks enough legitimacy to be instrumentally ignored without leading to conflict*

*escalation. This usually leads to absorptive resilience, as the project continues without significant changes.*

### 5.3.4 Resilience Outcome of 'Coercive Negotiation' Strategy

Coercive negotiation, observed in two instances, led to absorptive resilience in one case and adaptive resilience in the other. This pattern suggests that this strategy is typically applied in situations with low to medium novelty, resulting in minimal to moderate change in project dynamics. Despite its capacity to achieve resilience, this approach raises significant ethical concerns due to its coercive and potentially violent nature.

These examples underscore the negative aspects of resilience when it is used to justify stakeholder management practices. Although the strategy might appear 'successful' in achieving project objectives, it carries risks of larger consequences that can outweigh its benefits. For instance, in one case, coercive negotiation led to the forcible removal of protestors and could have potentially compromised ongoing and future dialogues with stakeholders. Such actions not only risk inflaming opposition and exacerbating NIMBY syndrome but can also erode the project's social licence, thereby creating long-term issues for the Project Organisation (PO).

Moreover, these cases illustrate resilience's 'dark' side and support the argument that resilience is not inherently normative or not necessarily good (Naderpajouh et al., 2020; B. H. Walker, 2020). The instrumental use of coercive negotiation also aligns with criticisms of stakeholder management practices, where some scholars contend that these practices often focus on achieving project goals without proper regard for stakeholders' rights and ethical considerations (Di Maddaloni & Sabini, 2022; Huemann et al., 2016). The outcomes of coercive negotiation serve as a reminder that stakeholder management practice should be rooted in its normative principles. Consequently, the following proposition is presented:

**P4:** *Stakeholder management practices—whether proactive or reactive—should be bound to normative principles, prioritising ethical management strategies, and fostering purposeful negotiations.*

Based on the discussion, and the propositions developed, the framework that has been evolving through the thesis is finalised, as presented in Figure 28.

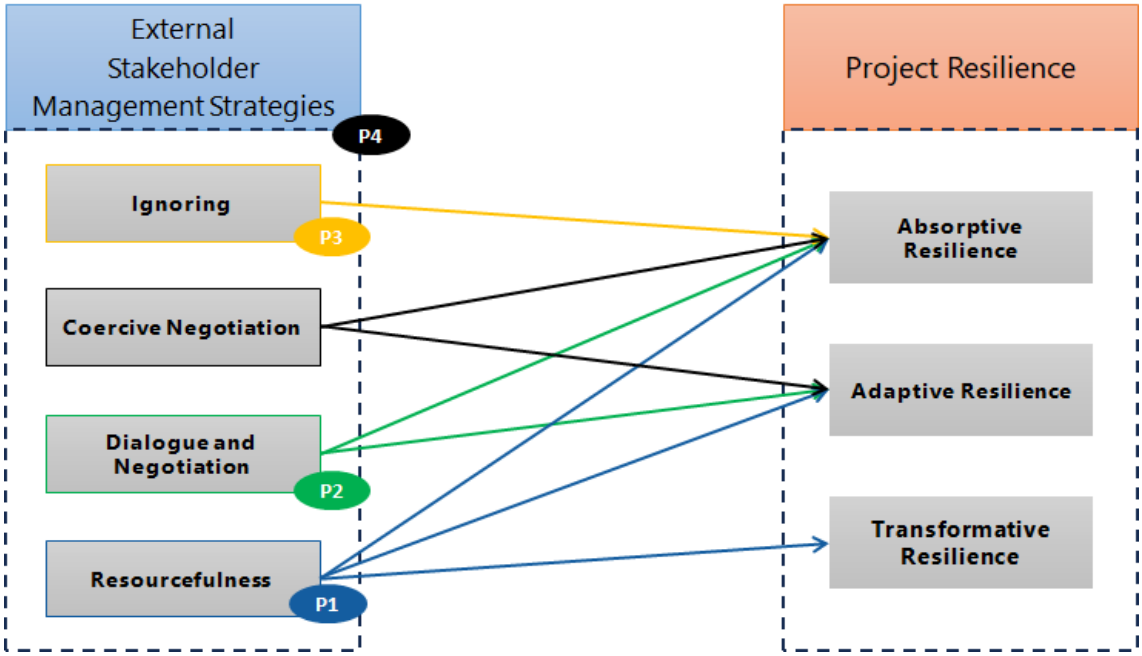



**Figure 28:** Final Framework

# 6 | Conclusion

## 6.1 Research Conclusions

This research sought to illuminate the practical implications of transitioning toward a 'prepare and commit' approach, as suggested by scholars. It focused on the relationship between external stakeholder management practices and their contribution to project resilience. A conceptual framework was proposed to guide the analysis and interpretation of the results, and ultimately, the research findings were incorporated into the framework (see Figure 28).
The left side of the framework outlines the external stakeholder management strategies identified—ignoring, coercive negotiation, dialogue and negotiation, and resourcefulness—and links them to the type of resilience they lead to based on the reviewed data.

These strategies or responses should not be viewed as guiding principles. Instead, they reflect the outcomes and consequences of various approaches and their impact on resilience. For example, from a resilience perspective, proposition 1 (P1) underscores the positive correlation between facilitating changes and maintaining project continuity. However, profound changes leading to transformative resilience come with trade-offs that must be carefully considered to ensure they benefit the project's long-term success. Resilience does not inherently link to progress or overall success—excessive reliance on transformative resilience can be problematic. Project flexibility should be designed and cultivated rather than forced in response to opposition.

Proposition 2 (P2) highlights that dialogue and negotiation, when employed proactively, result in fewer changes compared to when used to address escalated conflicts. This underscores the importance of early dialogue with external stakeholders.

The findings confirm that external stakeholder management can lead to resilience, but there is often a better way. For instance, several strategies led to resilient outcomes, but this does not mean the underlying issues are resolved or will not resurface. Proposition 3 (P3) serves as a reminder that even when ignoring leads to resilience, it might only be temporary. Ignoring social issues or addressing them purely through technical solutions may not make them disappear—they are likely to return.

Finally, the case of coercive negotiation exposed the unethical aspects of an instrumental approach to stakeholder management, which led to proposition 4 (P4), emphasizing the importance

of a normative foundation for stakeholder management strategies. This proposition reiterates the need to address stakeholder issues with ethical principles and avoid coercive or aggressive tactics.

## 6.2 Answering the Research Questions

**Sub-research question 1:** What is the current state of knowledge regarding the challenges and strategies of external stakeholder management?

Managing external stakeholders presents inherent challenges, notably due to their lack of formal ties with the project. This absence complicates the analysis, engagement, cooperation, and monitoring of such stakeholders. Moreover, organisations and projects often face constraints in the resources available to tackle stakeholder-related issues, intensifying these challenges. Additionally, managing or engaging with them proves complex, as each stakeholder group would have different expectations. Requiring some to be managed as a group and others as individuals.
In terms of strategies for managing these stakeholders, the literature presents two broad categories of strategies and approaches. One approach is managing with or for stakeholders, which involves sharing the decision-making process with the stakeholders. Alternatively, the management of stakeholders considers a more instrumental technique where project managers, through a series of strategies, influence stakeholders to align with project objectives.
Specific strategies can be categorised as either reactive or proactive. Reactive ones are an ex-ante response to a stakeholder's action. Alternatively, proactive ones consider anticipation and mitigation actions for possible stakeholder influences.

Project resilience in the infrastructure domain refers to an organisation's ability to anticipate, withstand, and adapt to disruptions. It is founded on three primary types of resilience: absorptive, which enables quick recovery to an original state; adaptive, which allows moderate adjustments while preserving the project's essence; and transformative, which involves significant change towards a new operational paradigm. Theoretical discussions on resilience centre on three phases: readiness and preparedness to cope with adverse situations, response, and adaptation to address immediate challenges, and recovery or adjustment for long-term project continuity. Infrastructure studies demonstrate extensive capabilities across these phases, such as robust risk management, effective communication, and flexible organisational structures. Recent research highlights the project organisation's importance in preparing to organise exceptionally. A process that is highly influenced by the state of the network in which the project is, therefore, important for effective external stakeholder management strategies to enact supportive behaviours of stakeholders.

**Sub-research question** 2: What events did the case study face related to external stakeholders, and how did the project respond to them?

The project faced a number of events involving external stakeholders. Even before the construction started, opposition movements were already coming from external stakeholders with essential resources against the project. The project being in an urbanised and densely populated area exacerbated the challenges. Consequently, 26 instances were found and analysed to assess the actions taken by the stakeholders and the responses enacted by the project organisation (PO). Given the project context, the two most recurrent influence strategies in the events are withholding of inputs, mainly land, and direct action by legal actions against the project. Conversely, the project organisation's preferred response was adaptation, followed by compromising strategies.

Sub-research question 3: How can stakeholder management strategies enhance resilience in infrastructure projects?

The research has identified four management strategies that organizations use to respond to the external stakeholders' actions, in turn these strategies influenced the type of resilience achieved in the project, from absorptive to adaptive and transformative. Resourcefulness: This strategy is characterized by adaptability, allowing project management to reallocate resources and adjust construction methods. It can support all types of resilience—absorptive, adaptive, and transformative—depending on the situation's demands. Dialogue and Negotiation: This strategy involves engaging with stakeholders to address concerns and resolve conflicts. It is generally associated with absorptive resilience when used proactively but can lead to adaptive resilience when addressing escalated conflicts. Ignoring: This strategy involves disregarding certain stakeholder actions when their claims lack sufficient legitimacy. It can lead to absorptive resilience, allowing the project to continue with minimal changes. Coercive Negotiation: This strategy involves exerting pressure or force to influence stakeholder actions. While it can achieve resilience, it carries ethical risks and may have long-term negative consequences.

However, while the research revealed a link between stakeholder management strategies and different types of resilience, it also revealed that resilience might not ultimately lead to project success. For instance, moderate or high changes from adaptive or transformative resilience might navigate the project to an unwanted state. Consequently, it is clear that resilience can be achieved quickly through the 'Ignoring' strategy, for instance, with the trade-off of possible recurrence or conflict escalation. The research findings ultimately suggest that proactive strategies should be prioritised as they lead to lower changes, similar to absorptive resilience.

## 6.3 Contributions

### 6.3.1 Theoretical Contributions

Firstly, from the case study analysis, the research classified four management strategies employed to address issues with external stakeholders: resourcefulness, dialogue and negotiation, coercive negotiation, and ignoring. Thus, the research provides additional understanding of what types of strategies project organisations employ to address influence strategies from external stakeholders and under what circumstances they employ them. These findings add to the existing but limited literature on the topic (e.g., Aaltonen and Sivonen (2009), Nguyen et al. (2023), Ninan et al. (2019)).

Secondly, this study contributes to the emerging body of research on project resilience by providing empirical evidence supporting the link between stakeholder management and resilience. Despite the growing interest in project resilience, few studies have explored the relationship between external stakeholders and resilience (e.g., (Morkan et al., 2023; T. H. D. Nguyen et al., 2023; X. Yang et al., 2022). This research contributes to this novel and growing body of knowledge by exploring the relationship between external stakeholder management strategies and their output in terms of the three types of resilience—absorptive, adaptive, and transformative—identified by Frigotto et al. (2022). Furthermore, the study also sheds light on the possible positive and negative consequences of using specific strategies.

Lastly, from a stakeholder management perspective, this study has addressed the call for additional studies on external stakeholders and the implications of their actions towards the project and how they are managed (Aaltonen et al., 2008; Aaltonen & Sivonen, 2009; Di Maddaloni & Davis, 2017; Diyagama et al., 2023; T. H. D. Nguyen et al., 2023). The findings reveal three primary influence strategies employed by external stakeholders: 'protest', 'progress obstruction', and 'demand for compromise'. Moreover, the concept of 'collateral events'—highlighting the repercussions of stakeholder actions—emerges as an important addition to existing frameworks. The study also underscores the role of 'proactive mitigation', a strategy to mitigate potential conflicts before they escalate into significant challenges.

### 6.3.2 Practical Contributions

For practitioners, in addition to the relationship presented in Figure 28 between external stakeholder management strategies and resilience, I believe those insights complement well with the following figure, which offers practical guidance on when different types of resilience are most beneficial. Resilience, like many concepts in project management, is a one-size-fits-all solution. Consequently, practitioners should recognise that every project will require some level of response

aligned with the three kinds of resilience: absorptive, adaptive, and transformative. However, the following framework outlines a general approach to guide practitioners in selecting the appropriate resilience strategy based on specific project circumstances.

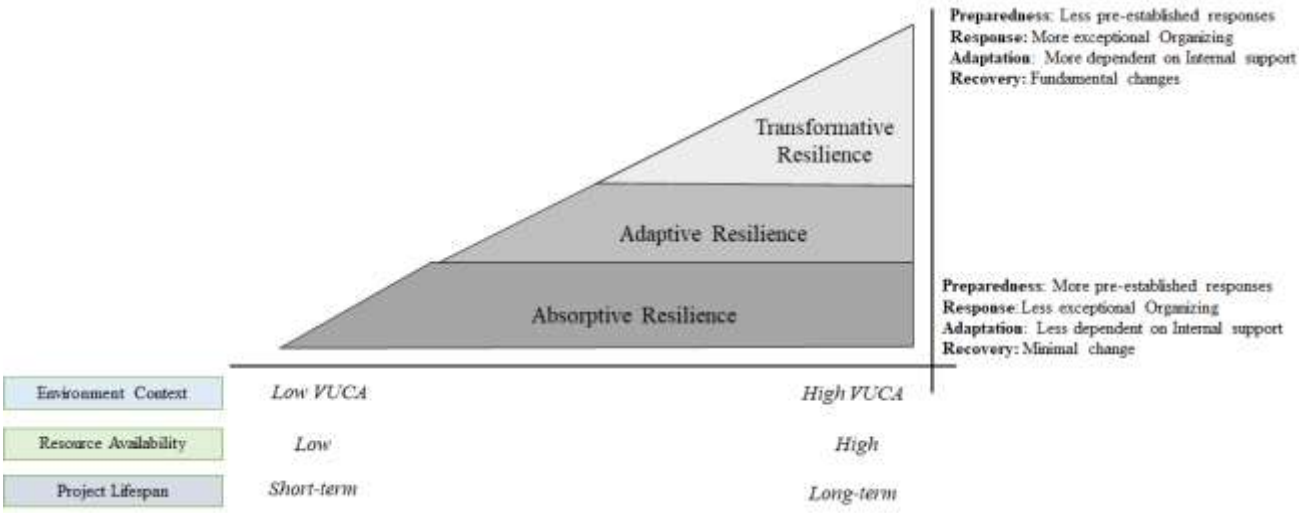



**Figure 29**: A practitioner's framework for Project resilience

The horizontal axis in Figure 29 addresses three strategic considerations for determining the most suitable resilience type. First, consider the project and its environment in terms of volatility, uncertainty, ambiguity, and complexity (VUCA). Complex projects, or those embedded in highly dynamic environments, may benefit from adaptive or transformative resilience, whereas absorptive resilience is more suitable for those in more stable settings. Second, as the findings demonstrate, some types of resilience can be resource-intensive, so projects with tighter budgets should assess their capacity to implement strategies that lead to resource-demanding resilience. Lastly, the project timeline influences the type of resilience required. Short-term projects may find absorptive and adaptive resilience more applicable, focusing on stability and incremental adjustments. In contrast, long-term projects could require transformative resilience to address ongoing changes and evolving needs. Furthermore, as evidenced by the findings, transformative resilience is accompanied by lasting changes, so short-term projects might not get the benefit of this kind of response.

The vertical axis of the framework shows the considerations that each type of resilience have. It integrates the three phases of resilience (readiness and preparedness, response and adaptation, and recovery or adjustment) with kinds of resilience. To highlight the underlying characteristics each kind of resilience has.

It is important to emphasize that this framework (Figure 29) is illustrative rather than prescriptive. While every project can benefit from all types of resilience, each comes with challenges and is more useful in specific contexts. Thus, the relevance of the framework to make practitioners cave-

at the use of management strategies in accordance with the kind of resilience that suits more the project.

## 6.4 Limitations and Recommendations

### 6.4.1 Research Limitations

The research revealed a series of limitations. For instance, the most notable were the time constraints, which had implications for the depth and breadth of the research and its findings. Additionally, while the single-case study is regarded as a valid research method, it inherently limits the applicability of the results. Further empirical case studies would be needed to identify clearer correlations between responses and their effect on project resilience. The timing of the data and the project also presented some limitations. As mentioned, the case study was executed between 2013 and 2017. Therefore, reaching stakeholders for an interview proved challenging. Given the changes in governments and ownership of the project, the number of interviewees willing to participate in the study was limited. Additionally, it is possible that, due to the time of the construction project, some details were missing from the interviewees' narratives. Finding external stakeholders also proved challenging, and there were a limited number of them. Despite the news articles covering some elements of the external 'story,' further verification from the side of the external stakeholder would have provided additional insights.

### 6.4.2 Recommendations for future research

- A first recommendations is to expand and corroborate the findings of the present research. Further studies with a similar scope should be undertaken to enhance our understanding of how stakeholder management strategies contribute to resilience. The inherent limitations of a single empirical study only provide a partial understanding. Further evidence from multiple case studies of infrastructure projects in different contexts can enrich this discourse.
- Future research could benefit from incorporating quantitative methods to complement the qualitative findings and provide a more rounded understanding, particularly of the cost associated to achieving each type of resilience.
- Further studies could delve into the role of inter-organisational dynamics in fostering project resilience. Specifically, it could examine how different contract types and organisational structures facilitate or hinder the ability to respond to unforeseen challenges. This could extend to studying the mechanisms through which other types of contracts and other forms of organisational partnerships impact resilience.
- While the focus on external stakeholders is crucial, the influence of internal stakeholders and project team dynamics on resilience merits further investigation. Research could ex-

plore how internal stakeholder alignment, communication, and decision-making processes contribute to or detract from resilience.

- Through the research, clear parallels and intersections emerged between risk management, resilience, and stakeholder management. For scope purposes that remained outside of the present study, but future research can explore these relationships in depth.

# Bibliography

Aaltonen, K. (2010). *Stakeholders Management in International Projects* [Doctoral Dissertation, Aalto University]. http://lib.tkk.fi/Diss/2010/isbn9789526033440

Aaltonen, K., Jaakko, K., & Tuomas, O. (2008). Stakeholder salience in global projects. *International Journal of Project Management*, *26*, 509–516. https://doi.org/doi:10.1016/j.ijproman.2008.05.004

Aaltonen, K., & Kujala, J. (2010). A project lifecycle perspective on stakeholder influence strategies in global projects. *Scandinavian Journal of Management*, *26*(4), 381–397. https://doi.org/10.1016/j.scaman.2010.09.001

Aaltonen, K., Kujala, J., Havela, L., & Savage, G. (2015). Stakeholder Dynamics during the Project Front-End: The Case of Nuclear Waste Repository Projects. *Project Management Journal*, *46*(6), 15–41. https://doi.org/10.1002/pmj.21549

Aaltonen, K., & Sivonen, R. (2009). Response strategies to stakeholder pressures in global projects. *International Journal of Project Management*, *27*(2), 131–141. https://doi.org/10.1016/j.ijproman.2008.09.007

Achterkamp, M. C., & Vos, J. F. J. (2008). Investigating the use of the stakeholder notion in project management literature, a meta-analysis. *International Journal of Project Management*, *26*(7), 749–757. https://doi.org/10.1016/j.ijproman.2007.10.001

Amadi, C., Carrillo, P., & Tuuli, M. (2018). Stakeholder management in PPP projects: External stakeholders' perspective. *Built Environment Project and Asset Management*, *8*(4), 403–414. https://doi.org/10.1108/BEPAM-02-2018-0048

Amaeshi, K. (2010). Stakeholder Management: Theoretical Perspectives and Implications. In E. A. Chinyio & P. O. Olomolaiye (Eds.), *Construction Stakeholder Management* (pp. 13–40). Wiley-Blackwell.

Association for Project Management. (2019). *APM Body of Knowledge* (7th ed.). Association for Project Management.

Bahadorestani, A., Karlsen, J. T., & Motahari Farimani, N. (2019). A Comprehensive Stakeholder-Typology Model Based on Salience Attributes in Construction Projects. *Journal of Construction Engineering and Management*, *145*(9), 04019048. https://doi.org/10.1061/(ASCE)CO.1943-7862.0001684

Bakker, H. L. M., & de Klejin, J. P. (Eds.). (2018). *Projects and People: Mastering Success*. NAP - Process Industry Network. https://books.google.co.uk/books?id=KS70xwEACAAJ

Bhamra, R. (Ed.). (2015). *Organisational Resilience: Concepts, Integration, and Practice* (1st ed.). CRC Press. https://doi.org/10.1201/b19305

Bhamra, R., Burnard, K., & Dani, S. (2015). Chapter 1: Resilience: The Concept, a Literature Review and Future Directions. In R. Bhamra (Ed.), *Organisational Resilience: Concepts, Integration, and Practice* (1st ed., pp. 3–29). CRC Press. https://doi.org/10.1201/b19305

Bhamra, R., Dani, S., & Burnard, K. (2011). Resilience: The concept, a literature review and future directions. *International Journal of Production Research*, *49*(18), 5375–5393. https://doi.org/10.1080/00207543.2011.563826

Borg, N., Naderpajouh, N., Scott-Young, C. M., & Borg, J. (2022). An interdisciplinary and multi-level review of resilience to inform training of human resources for critical infrastructure. *International Journal of Disaster Risk Reduction*, *78*, 103113. https://doi.org/10.1016/j.ijdrr.2022.103113

Bosch-Rekveldt, M., Jongkind, Y., Mooi, H., Bakker, H., & Verbraeck, A. (2011). Grasping project complexity in large engineering projects: The TOE (Technical, Organizational and Environmental) framework. *International Journal of Project Management*, *29*(6), 728–739. https://doi.org/10.1016/j.ijproman.2010.07.008

Bourne, L. (2005). *Project Relationship Management and the Stakeholder Circle* [Doctoral Dissertation].

Bourne, L. (2009). *Stakeholder Relationship Management: A Maturity Model for Organizational Implementation* (Rev. ed). Gower.

Bourne, L., & Walker, D. H. T. (2008). Project relationship management and the Stakeholder Circle™. *International Journal of Managing Projects in Business*, *1*(1), 125–130. https://doi.org/10.1108/17538370810846450

Bryson, J. M. (2004). What to do when Stakeholders matter: Stakeholder Identification and Analysis Techniques. *Public Management Review*, *6*(1), 21–53. https://doi.org/10.1080/14719030410001675722

Carpenter, S., Walker, B., Anderies, J. M., & Abel, N. (2001). From Metaphor to Measurement: Resilience of What to What? *Ecosystems*, *4*(8), 765–781. https://doi.org/10.1007/s10021-001-0045-9

Castelblanco, G., Guevara, J., Mesa, H., & Hartmann, A. (2022). Social Legitimacy Challenges in Toll Road PPP Programs: Analysis of the Colombian and Chilean Cases. *Journal of Management in Engineering*, *38*(3), 05022002. https://doi.org/10.1061/(ASCE)ME.1943-5479.0001010

Chan, A. P. C., & Oppong, G. D. (2017). Managing the expectations of external stakeholders in construction projects. *Engineering, Construction and Architectural Management*, *24*(5), 736–756. https://doi.org/10.1108/ECAM-07-2016-0159

Chinyio, E. A., & Akintoye, A. (2008). Practical approaches for engaging stakeholders: Findings from the UK. *Construction Management and Economics*, *26*(6), 591–599. https://doi.org/10.1080/01446190802078310

Chinyio, E. A., & Olomolaiye, P. O. (Eds.). (2010). *Construction Stakeholder Management*. Wiley-Blackwell.

Cleland, D. I., & Ireland, L. R. (2002). *Project Management: Strategic Design and Implementation* (4tj ed.). McGraw-Hill.

Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). SAGE Publications.

Cuppen, E., Bosch-Rekveldt, M. G. C., Pikaar, E., & Mehos, D. C. (2016). Stakeholder engagement in large-scale energy infrastructure projects: Revealing perspectives using Q methodology. *International Journal of Project Management*, *34*(7), 1347–1359. https://doi.org/10.1016/j.ijproman.2016.01.003

De Schepper, S., Dooms, M., & Haezendonck, E. (2014). Stakeholder dynamics and responsibilities in Public–Private Partnerships: A mixed experience. *International Journal of Project Management*, *32*(7), 1210–1222. https://doi.org/10.1016/j.ijproman.2014.01.006

Derakhshan, R., Turner, R., & Mancini, M. (2019). Project governance and stakeholders: A literature review. *International Journal of Project Management*, *37*(1), 98–116. https://doi.org/10.1016/j.ijproman.2018.10.007

Di Maddaloni, F., & Davis, K. (2017). The influence of local community stakeholders in megaprojects: Rethinking their inclusiveness to improve project performance. *International Journal of Project Management*, *35*(8), 1537–1556. https://doi.org/10.1016/j.ijproman.2017.08.011

Di Maddaloni, F., & Davis, K. (2018). Project manager's perception of the local communities' stakeholder in megaprojects. An empirical investigation in the UK. *International Journal of Project Management*, *36*(3), 542–565. https://doi.org/10.1016/j.ijproman.2017.11.003

Di Maddaloni, F., & Sabini, L. (2022). Very important, yet very neglected: Where do local communities stand when examining social sustainability in major construction projects? *International Journal of Project Management*, *40*(7), 778–797. https://doi.org/10.1016/j.ijproman.2022.08.007

Diyagama, D., Victar, H. C., Waidyasekara, A. S., & Rameezdeen, R. (2023). Managing external stakeholders influences in mega construction projects. *International Journal of Construction Management*, 1–11. https://doi.org/10.1080/15623599.2023.2215109

Donaldson, T., & Preston, L. E. (1995). The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications. *The Academy of Management Review*, *20*(1), 65–91.

El-Gohary, N. M., Osman, H., & El-Diraby, T. E. (2006). Stakeholder management for public private partnerships. *International Journal of Project Management*, *24*(7), 595–604. https://doi.org/10.1016/j.ijproman.2006.07.009

Elias, A. A., Cavana, R. Y., & Jackson, L. S. (2002). Stakeholder analysis for R&D project management. *R&D Management*, *32*(4), 301–310. https://doi.org/10.1111/1467-9310.00262

Enciclopedia Guerrerense, G. C. S. X., A. C. (2020, November 3). *History* [Government]. H. Ayuntamiento Constitucional De Acapulco De Juárez. https://acapulco.gob.mx/historia/

Eskerod, P. (2020). A Stakeholder Perspective: Origins and Core Concepts. In P. Eskerod, *Oxford Research Encyclopedia of Business and Management*. Oxford University Press. https://doi.org/10.1093/acrefore/9780190224851.013.3

Eskerod, P., & Huemann, M. (2013). Sustainable development and project stakeholder management: What standards say. *International Journal of Managing Projects in Business*, *6*(1), 36–50. https://doi.org/10.1108/17538371311291017

Eskerod, P., Huemann, M., & Savage, G. (2015). Project Stakeholder Management—Past and Present. *Project Management Journal*, *46*(6), 6–14. https://doi.org/10.1002/pmj.21555

Eskerod, P., & Jepsen, A. L. (2013). *Project Stakeholder Management*. Gower.

Eskerod, P., & Larsen, T. (2018). Advancing project stakeholder analysis by the concept 'shadows of the context'. *International Journal of Project Management*, *36*(1), 161–169. https://doi.org/10.1016/j.ijproman.2017.05.003

Flyvbjerg, B. (2014). What you Should Know about Megaprojects and Why: An Overview. *Project Management Journal*, *45*(2), 6–19. https://doi.org/10.1002/pmj.21409

Flyvbjerg, B., Bruzelius, N., & Rothengatter, W. (2003). *Megaprojects and Risk: An Anatomy of Ambition* (1st ed.). Cambridge University Press. https://doi.org/10.1017/CBO9781107050891

Flyvbjerg, B., & Gardner, D. (2023). *How big things get done* (First edition). Currency.

Folke, C. (2016). Resilience (Republished). *Ecology and Society*, *21*(4), art44. https://doi.org/10.5751/ES-09088-210444

Folke, C., Carpenter, S. R., Walker, B., Scheffer, M., Chapin, T., & Rockström, J. (2010). Resilience Thinking: Integrating Resilience, Adaptability and Transformability. *Ecology and Society*, *15*(4), art20. https://doi.org/10.5751/ES-03610-150420

Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Pitman.

Freeman, R. E., Harrison, J. S., Wicks, A. C., & Parmar, B. L. (2010). *Stakeholder Theory: The State of the Art*. Cambridge University Press. http://www.cambridge.org/9780521190817

Freeman, R. E., Harrison, J. S., & Zyglidopoulos, S. (2018). *Stakeholder Theory: Concepts and Strategies* (1st ed.). Cambridge University Press. https://doi.org/10.1017/9781108539500

Frigotto, M. L., Pinheiro, R., & Young, M. (2022). Chapter 1: Resilience in Organizations and Societies: The State of the Art and Three Organizing Principles for Moving Forward. In R. Pinheiro, M. L. Frigotto, & M. Young (Eds.), *Towards Resilient Organizations and Societies: A Cross-Sectoral and Multi-Disciplinary Perspective* (pp. 3–40). Springer International Publishing. https://doi.org/10.1007/978-3-030-82072-5

Frooman, J. (1999). Stakeholder Influence Strategies. *The Academy of Management Review*, *24*(1), 191–205. https://www.jstor.org/stable/259074

Harrison, J. S., & St. John, C. H. (1996). Managing and partnering with external stakeholders. *Academy of Management Perspectives*, *10*(2), 46–60. https://doi.org/10.5465/ame.1996.9606161554

Hassler, U., & Kohler, N. (2014). Resilience in the built environment. *Building Research & Information*, *42*(2), 119–129. https://doi.org/10.1080/09613218.2014.873593

Hendry, J. R. (2005). Stakeholder Influence Strategies: An Empirical Exploration. *Journal of Business Ethics*, *61*(1), 79–99. https://doi.org/10.1007/s10551-005-8502-6

Hillmann, J., & Guenther, E. (2021). Organizational Resilience: A Valuable Construct for Management Research? *International Journal of Management Reviews*, *23*(1), 7–44. https://doi.org/10.1111/ijmr.12239

Hilu, K. A., & Hiyassat, M. A. (2023). Qualitative assessment of resilience in construction projects. *Construction Innovation*. https://doi.org/10.1108/CI-10-2022-0265

Holloway, J., & Bryde, D. (2016). *A Practical Guide to Dealing with Difficult Stakeholders* (R. Joby, Ed.; 1st ed.). Routledge.

Huemann, M., Eskerod, P., & Ringhofer, C. (2016). *Rethink! Project stakeholder management*. Project Management Institute, Inc.

Iao-Jörgensen, J. (2023). Antecedents to bounce forward: A case study tracing the resilience of inter-organisational projects in the face of disruptions. *International Journal of Project Management*, *41*(2), 102440. https://doi.org/10.1016/j.ijproman.2023.102440

Jayasuriya, S., Zhang, G., & Yang, R. J. (2020). Exploring the impact of stakeholder management strategies on managing issues in PPP projects. *International Journal of Construction Management*, *20*(6), 666–678. https://doi.org/10.1080/15623599.2020.1753143

Jergeas, G. F., Williamson, E., Skulmoski, G. J., & Thomas, J. L. (2000). Stakeholder management on construction projects. *AACE International Transactions*, 12.1-12.6. https://www.proquest.com/scholarly-journals/stakeholder-management-on-construction-projects/docview/208199241/se-2

Kerner, D., & Thomas, J. (2014). Resilience Attributes of Social-Ecological Systems: Framing Metrics for Management. *Resources*, *3*(4), 672–702. https://doi.org/10.3390/resources3040672

Kutsch, E., & Hall, M. (2020). *Mindful Project Management: Resilient Performance Beyond the Risk Horizon* (2nd ed.). Taylor & Francis Group.

Kutsch, E., Hall, M., & Turner, N. (2015). *Project Resilience* (1st ed.). Gower.

Lehtinen, J., & Aaltonen, K. (2020). Organizing external stakeholder engagement in inter-organizational projects: Opening the black box. *International Journal of Project Management*, *38*(2), 85–98. https://doi.org/10.1016/j.ijproman.2019.12.001

Leung, M.-Y., & Olomolaiye, P. O. (2010). Risk and Construction Stakeholder Management. In E. A. Chinyio & P. O. Olomolaiye (Eds.), *Construction Stakeholder Management* (pp. 75–98). Wiley-Blackwell.

Liu, B., Li, Y., Xue, B., Li, Q., Zou, P. X. W., & Li, L. (2018). Why do individuals engage in collective actions against major construction projects? —An empirical analysis based on Chinese data. *International Journal of Project Management*, *36*(4), 612–626. https://doi.org/10.1016/j.ijproman.2018.02.004

Locatelli, G., Mikic, M., Kovacevic, M., Brookes, N., & Ivanisevic, N. (2017). The Successful Delivery of Megaprojects: A Novel Research Method. *Project Management Journal*, *48*(5), 78–94. https://doi.org/10.1177/875697281704800506

Martin-Breen, P., & Anderies, J. M. (2011). Resilience: A literature review. *The Bellagio Initiative*, 1–64. https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/3692

Merriam-Webster. (n.d.-a). Ejido. In *Merriam-Webster.com dictionary*. Retrieved 20 March 2024, from https://www.merriam-webster.com/dictionary/ejido

Merriam-Webster. (n.d.-b). Resilience. In *Merriam-Webster.com*. Retrieved 16 March 2024, from https://www.merriam-webster.com/dictionary/resilience

Mexicanlaws S.A. de C.V. (n.d.). *WHAT IS AMPARO?* Mexican Laws. Retrieved 20 March 2024, from https://mexicanlaws.com/amparo.htm#:~:text=AMPARO%20is%20a%20judicial%20action,protected%20by%20the%20Mexican%20Constitution.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (Edition 3). Sage.

Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts. *The Academy of Management Review*, *22*(4), 853–886. https://www.jstor.org/stable/259247

Molwus, J. J. (2014). *Stakeholder Management in Construction Projects: A Life Cycle Based Framework* [Doctoral, Heriot Watt University]. http://hdl.handle.net/10399/2877

Morkan, B., Bertels, H. M. J., Sheth, A., & Holahan, P. J. (2023). Building megaproject resilience with stakeholders: The roles of citizenship behavior and critical transition mechanisms. *International Journal of Project Management*, *41*(5), 102485. https://doi.org/10.1016/j.ijproman.2023.102485

Moura, H. M., & Teixeira, J. C. (2010). Chapter 17: Managing Stakeholders Conflicts. In E. A. Chinyio & P. O. Olomolaiye (Eds.), *Construction Stakeholder Management* (pp. 286–316). Wiley-Blackwell.

Muñoz, R. J. B., & Nechar, M. C. (2021). *El turismo en Acapulco: De los inicios artesanales a la modernizacion del destino turístico*.

Murray-Webster, R., & Simon, P. (2006). *Making Sense of Stakeholder Mapping*. *11*.

Nachbagauer, A. G. M., & Schirl-Boeck, I. (2019). Managing the unexpected in megaprojects: Riding the waves of resilience. *International Journal of Managing Projects in Business*, *12*(3), 694–715. https://doi.org/10.1108/IJMPB-08-2018-0169

Naderpajouh, N., Matinheikki, J., Keeys, L. A., Aldrich, D. P., & Linkov, I. (2020). Resilience and projects: An interdisciplinary crossroad. *Project Leadership and Society*, *1*, 100001. https://doi.org/10.1016/j.plas.2020.100001

Naderpajouh, N., Matinheikki, J., Keeys, L. A., Aldrich, D. P., & Linkov, I. (2023). Resilience science: Theoretical and methodological directions from the juncture of resilience and projects. *International Journal of Project Management*, *41*(8), 102544. https://doi.org/10.1016/j.ijproman.2023.102544

NETLIPSE. (n.d.). *IPAT*. https://netlipse.eu/project-assessments/

Newcombe, R. (2003). From client to project stakeholders: A stakeholder mapping approach. *Construction Management and Economics*, *21*(8), 841–848. https://doi.org/10.1080/0144619032000072137

Nguyen, N. H., Skitmore, M., & Wong, J. K. W. (2009). Stakeholder impact analysis of infrastructure project management in developing countries: A study of perception of project managers in state-owned engineering firms in Vietnam. *Construction Management and Economics*, *27*(11), 1129–1140. https://doi.org/10.1080/01446190903280468

Nguyen, T. H. D., Chileshe, N., Rameezdeen, R., & Wood, A. (2019). External stakeholder strategic actions in projects: A multi-case study. *International Journal of Project Management*, *37*(1), 176–191. https://doi.org/10.1016/j.ijproman.2018.12.001

Nguyen, T. H. D., Chileshe, N., Rameezdeen, R., & Wood, A. (2023). Strategic responses to external stakeholder influences. *International Journal of Project Management*, *41*(1), 102434. https://doi.org/10.1016/j.ijproman.2022.102434

Nguyen, T. S. (2019). *Investigation into Stakeholder Management in Complex Projects* [PhD Doctorate, Griffith University]. https://research-repository.griffith.edu.au/handle/10072/389681

Nikoi-Hammon, F., & Booth, C. A. (2010). Chapter 18. Environmental Stakeholder Management. In E. A. Chinyio & P. O. Olomolaiye (Eds.), *Construction Stakeholder Management* (pp. 317–337). Wiley-Blackwell.

Ninan, J., Mahalingam, A., & Clegg, S. (2019). External Stakeholder Management Strategies and Resources in Megaprojects: An Organizational Power Perspective. *Project Management Journal*, *50*(6), 625–640. https://doi.org/10.1177/8756972819847045

Ninan, J., & Sergeeva, N. (2022). Mobilizing Megaproject Narratives for External Stakeholders: A Study of Narrative Instruments and Processes. *Project Management Journal*, *53*(5), 520–540. https://doi.org/10.1177/87569728221102719

Olander, S. (2007). Stakeholder impact analysis in construction project management. *Construction Management and Economics*, *25*(3), 277–287. https://doi.org/10.1080/01446190600879125

Olander, S., & Atkin, B. (2010). Stakeholder Management – The Gains and Pains. In E. A. Chinyio & P. O. Olomolaiye, *Construction Stakeholder Management* (pp. 266–275). Wiley-Blackwell.

Olander, S., & Landin, A. (2005). Evaluation of stakeholder influence in the implementation of construction projects. *International Journal of Project Management*, *23*(4), 321–328. https://doi.org/10.1016/j.ijproman.2005.02.002

Olander, S., & Landin, A. (2008). A comparative study of factors affecting the external stakeholder management process. *Construction Management and Economics*, *26*(6), 553–561. https://doi.org/10.1080/01446190701821810

OpenStreetMap. (n.d.). *Acapulco Steet Map* [Map]. https://www.openstreetmap.org/#map=13/16.8068/-99.8219

Oppong, G. D. (2020). *External Stakeholder Management at the Planning Stage of Construction Projects in Ghana: Consultants' Perspective* [Doctoral Dissertation, The Hong Kong Polytechnic University]. https://theses.lib.polyu.edu.hk/handle/200/10457

Oppong, G. D., Hom, H., & Kong, H. (2019). Factors Hindering External Stakeholder Management in Construction Projects of Developing Countries: Case Study of Ghana. *Proceedings of the CIB World Building Congress 2019*, 2900–2910. http://hdl.handle.net/10397/88028

Orts, E. W., & Strudler, A. (2009). Putting a Stake in Stakeholder Theory. *Journal of Business Ethics*, *88*(S4), 605–615. https://doi.org/10.1007/s10551-009-0310-y

Pedrini, M., & Ferri, L. M. (2019). Stakeholder Management: A Systematic Literature Review. *Corporate Governance: The International Journal of Business in Society*, *19*(1), 44–59. https://doi.org/10.1108/CG-08-2017-0172

Piperca, S., & Floricel, S. (2023). Understanding project resilience: Designed, cultivated or emergent? *International Journal of Project Management*, *41*(3), 102453. https://doi.org/10.1016/j.ijproman.2023.102453

PMI (Ed.). (2016). *Construction extension to the PMBOK guide*. Project Management Institute, Inc.

PMI. (2021). *The standard for project management and a guide to the project management body of knowledge (PMBOK guide).* (7th ed.). Project Management Institute.

Rahi, K. (2019). Project resilience: A conceptual framework. *International Journal of Information Systems and Project Management*, *7*(1), 69–83. https://doi.org/10.12821/ijispm070104

Rowlinson, S., Koh, T. Y., & Tuuli, M. M. (2010). Chapter 13: Stakeholder Management in the Hong Kong Construction Industry. In E. A. Chinyio & P. O. Olomolaiye (Eds.), *Construction Stakeholder Management* (pp. 216–239). Wiley-Blackwell.

Sachs, S., & Kujala, J. (2021). Stakeholder Engagement in Management Studies: Current and Future Debates. In S. Sachs & J. Kujala, *Oxford Research Encyclopedia of Business and Management*. Oxford University Press. https://doi.org/10.1093/acrefore/9780190224851.013.321

Saunders, M. N. K., Lewis, P., & Thornhill, A. (2023). *Research methods for business students* (Ninth edition). Pearson.

Shen, W., & Ying, W. (2022). Large-scale construction programme resilience against creeping disruptions: Towards inter-project coordination. *International Journal of Project Management*, *40*(6), 671–684. https://doi.org/10.1016/j.ijproman.2022.06.004

Signori, S. (2017). Chapter 8. From 'Managing for Stakeholder' to 'Managing with Stakeholders': When Stakeholder Can Help Rescue a Company. In R. E. Freeman, J. Kujala, & S. Sachs, *Stakeholder Engagement: Clinical Research Cases* (Vol. 46). Spinger.

Súarez, J., Banuet, M., & Torres, M. (2016, March). Macrotunel Acapulco: Wills that cross mountains. *Mexican Association of Tunnel Engineering and Underground Works*, *12*, 7–12. www.amitos.org

Teo, M. M., & Loosemore, M. (2017). Understanding community protest from a project management perspective: A relationship-based approach. *International Journal of Project Management*, *35*(8), 1444–1458. https://doi.org/10.1016/j.ijproman.2017.08.004

The Clarkson Centre for Business Ethics. (1999). *Principles of Stakeholder Management*. Joseph L. Rotman School of Management. Unversity of Toronto. https://www.rotman.utoronto.ca/-/media/Files/Programs-and-Areas/CCBE/Principles-of-Stakeholder-Management-The-Clarkson-Principles-Clarkson-Centre-for-Business-Ethics-a.pdf?la=en&hash=A601D7C7D8ED8C348AC90F16EDD914D730FB66A9

UN-OCHA. (2023, November 16). *Mexico: Hurricane Otis Situation Report No. 02 (As of 15 November 2023)* [NGO]. OCHA. https://www.unocha.org/publications/report/mexico/mexico-hurricane-otis-situation-report-no-02-15-november-2023

Unterhitzenberger, C., Wilson, H., James Bryde, D., Rost, M., & Joby, R. (2021). The stakeholder challenge: Dealing with challenging situations involving stakeholders. *Production Planning & Control*, *32*(11), 926–941. https://doi.org/10.1080/09537287.2020.1776907

Verschuren, P., Doorewaard, H., & Mellion, M. J. (2010). *Designing a research project* (2nd ed. / rev. and ed. by M.J. Mellion). Eleven International Pub.

Vuorinen, L., & Martinsuo, M. (2019). Value-oriented stakeholder influence on infrastructure projects. *International Journal of Project Management*, *37*(5), 750–766. https://doi.org/10.1016/j.ijproman.2018.10.003

Walker, B. H. (2020). Resilience: What it is and is not. *Ecology and Society*, *25*(2), art11. https://doi.org/10.5751/ES-11647-250211

Walker, D. H. T., Bourne, L. M., & Shelley, A. (2008). Influence, stakeholder mapping and visualization. *Construction Management and Economics*, *26*(6), 645–658. https://doi.org/10.1080/01446190701882390

Winch, G. (2017). Megaproject Stakeholder Management. In B. Flyvbjerg (Ed.), *The Oxford handbook of megaproject management* (First edition, pp. 339–361). Oxford University Press.

Worsley, L. M. (2020). *Stakeholder-led Project Management, Second Edition: Changing the Way We Manage Projects* (2nd ed.). Business Expert Press.

Xue, J., Shen, G. Q. P., Yang, R. J., Wu, H., Li, X., Lin, X., & Xue, F. (2020). Mapping the knowledge domain of stakeholder perspective studies in construction projects: A bibliometric approach. *International Journal of Project Management*, *38*(6), 313–326. https://doi.org/10.1016/j.ijproman.2020.07.007

Yang, R. J., Shen, G. Q. P., Bourne, L., Ho, C. M., & Xue, X. (2011). A typology of operational approaches for stakeholder analysis and engagement. *Construction Management and Economics*, *29*(2), 145–162. https://doi.org/10.1080/01446193.2010.521759

Yang, R. J., Shen, G. Q. P., & Ho, M. (2009). An overview of previous studies in stakeholder management and its implications for the construction industry. *Journal of Facilities Management*, *7*(2), 159–175. https://doi.org/10.1108/14725960910952532

Yang, J., Shen, G. Q., Ho, M., Drew, D. S., & Chan, A. P. C. (2009). Exploring Critical Success Factor for Stakeholder Management in Construction Projects. *Journal of Civil Engineering and Management. 15*(4), 337–348. https://doi.org/10.3846/1392-3730.2009.15.337-348

Yang, R. J., Shen, G. Q. P., Ho, M., Drew, D. S., & Xue, X. (2011). Stakeholder management in construction: An empirical study to address research gaps in previous studies. *International Journal of Project Management*, *29*(7), 900–910. https://doi.org/10.1016/j.ijproman.2010.07.013

Yang, R. J., Wang, Y., & Jin, X.-H. (2014). Stakeholders' Attributes, Behaviors, and Decision-Making Strategies in Construction Projects: Importance and Correlations in Practice. *Project Management Journal*, *45*(3), 74–90. https://doi.org/10.1002/pmj.21412

Yang, X., Wang, L., Zhu, F., & Müller, R. (2022). Prior and governed stakeholder relationships: The key to resilience of inter-organizational projects. *International Journal of Project Management*, *40*(1), 64–75. https://doi.org/10.1016/j.ijproman.2021.10.001

Yin, R. K. (2016). *Qualitative research from start to finish* (Second edition). The Guilford Press.

Yin, R. K. (2018). *Case study research and applications: Design and methods* (Sixth edition). SAGE.

Young, M., Frigotto, M. L., & Pinheiro, R. (2022). Chapter 12: Towards Resilient Organisations and Societies? Reflections on the Multifaceted Nature of Resilience. In R. Pinheiro, M. L. Frigotto, & M. Young (Eds.), *Towards Resilient Organizations and Societies: A Cross-Sectoral and Multi-Disciplinary Perspective* (pp. 307–331). Springer International Publishing. https://doi.org/10.1007/978-3-030-82072-5

Zhang, S., Zhang, F., Xue, B., Wang, D., & Liu, B. (2023). Unpacking resilience of project organizations: A capability-based conceptualization and measurement of project resilience. *International Journal of Project Management*, *41*(8), 102541. https://doi.org/10.1016/j.ijproman.2023.102541

**Title Page photo:** Dylag, J. (2018a, May 26). *Gray metal building frame near tower crane during daytime*. Unsplash. https://unsplash.com/photos/gray-metal-building-frame-near-tower-crane-during-daytime-nhCPOp4A2Xo

# APPENDIX | A – INTERVIEW PROTOCOL

## Interview Protocol - Internal Stakeholders

### INTRODUCTION

- First of all, thank you for your availability and willingness to participate in the interview.
- I would like to reiterate that the interview is 100% for academic purposes and will be completely anonymous.
- My University takes very seriously the issue of Ethics and the handling of information and processes related to research. Therefore, I am sharing with you a document on consent for your review. If you have any questions, please feel free to ask. Also, during the interview if there are things you don't feel comfortable sharing or you wish to stop the interview at any time is possible.
- In a general sense my aim is to understand what happened to the project during the execution in relation to unforeseen events or circumstances that challenged the project.
- During the interview pleas assume that I have no knowledge whatsoever about the project.

### QUESTIONS

**Introduction**

- Who are you?

**Identify the interviewee's participation and the phase of the project in which he/she began his/her participation.**

- What has been your participation in the project?
- *Follow-up:* Since when or from when were you involved in the project?

**Identify specific cases of undesired events caused by external stakeholders and their consequences.**

- What happened in the project?
- Follow-up: Can you recall any specific problems caused by people outside/external to the project?
- *Follow-up:* What happened as a result of this event and who were these outsiders?

**Explore what strategies were used to Manage External Influences and whether they were effective (e.g. were they reactive or proactive).**

- When these events occurred, what measures did the organization take to deal with them? Are there any particular examples?

**Questions related to: Before or leading up to the event(s).**

- Do you consider that the project was prepared to deal with unforeseen events?
- *Follow-up:* Was there a process in place to deal with contingencies?

- Were there plans in place, were they effective, and what would have facilitated a better response?
- Can you recall a specific case where yes/no?
- *Follow-up:* What would have made it easier for them to be better prepared?
- Do you consider that the organization's response was reactive or proactive?

### Questions related to: During the event(s).

- Once an unexpected event occurred, what made it difficult to deal and/or solve them?
- Was there was a joint participation with the government? Who decided which actions were to be taken (the government, the company?)

### Questions related to: After the event(s).

- In which cases were the problems solved? Did anything change afterwards (lessons learned)? What worked? What did not work?
- What do you think were the project's strengths in dealing with these unforeseen events?
- *Follow-up:* Do you have an Example?

## CONCLUSION

- In retrospect and based on your experience, what could have been done better in dealing with outsiders in the future?
- And in general, is there anything you would do differently today?

## Interview Protocol - External Stakeholders

INTRODUCTION

- First of all, thank you for your availability and willingness to participate in the interview.
- I would like to reiterate that the interview is 100% for academic purposes and will be completely anonymous.
- My University takes very seriously the issue of Ethics and the handling of information and processes related to research. Therefore, I am sharing with you a document on consent for your review. If you have any questions, please feel free to ask. Also, during the interview if there are things you don't feel comfortable sharing or you wish to stop the interview at any time is possible.
- In a general sense my aim is to understand what happened to the project during the execution in relation to unforeseen events or circumstances that challenged the project.
- During the interview pleas assume that I have no knowledge whatsoever about the project.

QUESTIONS

**Introduction.**

- Who are you?

**Identify the interviewee's participation and the phase of the project in which he/she began his/her participation.**

- What has been your participation in the project?
- *Follow-up:* Since when or from when were you involved in the project?

**Questions related to: Before or leading up to the event(s)**

**Understand their perception of the project and the situations that occurred.**

- What happened in the project?
- *Follow-up:* Please explain how the project(organization) was involved with you (were there meetings, mailings, calls, contact persons)?
- *Follow-up:* Who do you consider was leading this process with you towards you (the Government or the Company)?
- *Follow-up:* How do you consider the process of involving them in the project went (was it early or late, with sufficient dialogue and information)?
- *Follow-up:* Did you feel included in the process?

**Explore the perspective of external parties on the strategies employed by the project to manage them.**

- How do you consider the ways and processes of the construction company to attend them?
- *Follow-up*: What about those of the government?

- *Follow-up*: Do you consider that the construction company and the government were in the same channel?

### Questions related to: During the event(s).

- When a problem occurred. Do you think the company handled it well? Did the company have a quick, proactive, reactive response? Do you have any examples?
- How did you perceive the management of these measures by the Project organization and/or the State Government?
- Of the problems that were resolved, what would you attribute that facilitated their resolution?
- Of the issues that were not resolved, to what would you attribute that could not be resolved?

### Questions related to: After the event(s).

- Do you consider that the organizers of the Project learned from the issues that were occurring?
- Follow-up: Do you believe that they take into account your observations, needs or comments?

## CONCLUSION

- What do you think would have been a better way for the company and/or the government to address your needs or demands?
- *Follow-up*: Do you have any specific examples?
- What suggestions would you give to the Project Organization (Company/Government) when addressing environmental, social and economic issues?

# CONSENT FORM:

**The following document has been prepared based on the Human Research Ethics (HREC) guidelines of Inform Consent from the TU Delft.**

## Part 1: Participant Information Sheet

**Overview and purpose of the research**

You are being invited to participate in a research study titled *"Aligning Projects and People: Bridging the gap in External Stakeholder Management"*. This study is conducted by Pedro Garcia, a Master's student from the faculty of Civil Engineering and Geosciences at the Delft University of Technology (TU Delft) in the Netherlands.

The purpose of the research study is gaining insights into how infrastructure projects can create resilient responses against the unexpected events involving external stakeholders. The data gained from the interview process will be used to enhance the researchers understanding of what challenges, strategies, barriers and lessons learnt can be retrieved from the impact of undesired and unexpected external circumstances meet a project.

**Your Participation:**

Participation in this study is entirely voluntary and you can withdraw at any time. If you decide to participate, you will be invited to an online interview using Microsoft Teams lasting about 30 to 45 minutes. During this conversation, we will pose a series of questions, structured in a way that allows for both open-ended and closed responses, all cantered around your involvement and experiences in the "Tunel Diamante" project.
With your permission, the interview will be recorded and subsequently transcribed into text. The only purpose of this is to facilitate the analysis of your responses to the questions.

**Handling Your Information:**

To the best of our ability your answers and personal information will remain confidential and safe. We will minimize any risks by takin the following steps:

- You have the choice to decide whether your camera is on during the interview.
- Recordings and personal data (name, email, organization) will be securely stored during the research period.
- Access to the interview recordings and full transcriptions will be limited to the researcher: Pedro Garcia.
- Video or audio recordings will be deleted once transcribed.
- Personal information (PI), including but not limited to names and contact details, will remain private, using anonymization throughout the research and its outcomes (hence, final deliverable).
- All other information provided during the interview will be deleted at the end of the research.

**What information will be shared in the thesis document?**

If applicable, any relevant quote, related to your answers. But anonymized. Only if appropriate, the organisation will be provided.
If required by the graduation committee of the researcher, the anonymized transcripts will be provided as appendix on the final deliverable. However, for the publicly available document, the transcripts will not be published.

**Are there any risks/inconveniences?**

While every effort will be made to mitigate risks, as with any online activity, breaches are possible.
We acknowledge the potential discomfort of online interviews. If, at any point, you feel uneasy, the interview can be paused and deleted, with the option to reschedule.
Feel free to refrain from answering any questions that may cause discomfort from personal, professional, or legal perspectives.

## Part 2: Consent Form

| PLEASE TICK THE APPROPRIATE BOXES | Yes | No |
|---|---|---|
| **A: GENERAL AGREEMENT – RESEARCH GOALS, PARTICPANT TASKS AND VOLUNTARY PARTICIPATION** | | |
| 1. I have read and understood the study information dated January-2024 or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction. | ☐ | ☐ |
| 2. I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason. | ☐ | ☐ |
| 3. I understand that taking part in the study involves: a video or audio recorded interview which will be then transcribed into text and anonymized. Once transcribed the video or audio recording will be destroyed. | ☐ | ☐ |
| **B: POTENTIAL RISKS OF PARTICIPATING (INCLUDING DATA PROTECTION)** | | |
| 4. I understand that taking part in the study involves the following risks: (1)breach of your information, and (2)discomfort. I understand that these will be mitigated by (1)safeguarding all personal information, and (2) I can stop at any point the interview and my involvement in the research with no impact. | ☐ | ☐ |
| 5. I understand that taking part in the study also involves collecting specific personally identifiable information (PII) such as name, email, and organization, with the potential risk of my identity being revealed. | ☐ | ☐ |
| 6. I understand that the following steps will be taken to minimise the threat of a data breach, and protect my identity in the event of such a breach:<br>• The personal information collected about me will not be shared beyond the researcher: Pedro Garcia and his main thesis supervisor.<br>• The (identifiable) personal data I provide will be destroyed once anonymized.<br>• All personal information and data will be stored and safeguarded in accordance to the authorized Data Management plan. | ☐ | ☐ |
| **C: RESEARCH PUBLICATION, DISSEMINATION AND APPLICATION** | | |
| 7. I agree that my responses, views, or other input can be quoted anonymously in research outputs. | ☐ | ☐ |

**Signatures**

| Name of participant [printed] | Signature | Date |
|---|---|---|
| | | |

I, as researcher, have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands to what they are freely consenting.

| P.J. GARCIA | Signature | Date |
|---|---|---|
| | | |

Study contact details for further information: p.j.garciaalva@student.tudelft.nl

Responsibly researcher (1st Supervisor). Dr. Johan Ninan j.ninan@tudelft.nl

# INTERVIEW TRANSCRIPTS

**Removed for confidentiality**

# APPENDIX | B – NEWS ARTICLES

| News | Citation |
|---|---|
| N-1 | El Economista. (2012, November 7). ICA construirá autopista de peaje en Acapulco. El Economista. Retrieved January 7, 2024, from https://www.eleconomista.com.mx/empresas/ICA-construira-autopista-de-peaje-en-Acapulco-20121107-0018.html |
| N-2 | Galarce, K. (2013, January 3). Ya hay amparos contra la Escénica Alterna, afirma líder de vecinos de Joyas de Brisamar - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 8, 2024, from https://suracapulco.mx/impreso/4/ya-hay-amparos-contra-la-escenica-alterna-afirma-lider-de-vecinos-de-joyas-de-brisamar/ |
| N-3 | Labastida, M. (2013, January 31). Convocan ejidatarios de El Cayaco a asamblea para destituir al comisariado - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 8, 2024, from https://suracapulco.mx/impreso/4/convocan-ejidatarios-de-el-cayaco-a-asamblea-para-destituir-al-comisariado/ |
| N-4 | Álvarez, D. & Obras por Expansion. (2013, February 11). Acapulco se reinventa con proyectos de infraestructura. Obras. Retrieved January 8, 2024, from https://obras.expansion.mx/construccion/2013/02/08/acapulco-se-reinventa-con-proyectos-de-infraestructura |
| N-5 | Serna, S. (2013b, August 24). "Grupo de choque" ataca a cetemistas en la planta de Cemex y deja seis lesionados - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved February 1, 2024, from https://suracapulco.mx/impreso/4/grupo-de-choque-ataca-a-cetemistas-en-la-planta-de-cemex-y-deja-seis-lesionados/"https://suracapulco.mx/impreso/4/grupo-de-choque-ataca-a-cetemistas-en-la-planta-de-cemex-y-deja-seis-lesionados/ |
| N-6 | Gascon, V. (2013, September 12). Acusan extorsion megaconstructoras. Reforma. Retrieved February 6, 2024, from https://busquedas.gruporeforma.com/reforma/Libre/VisorNota.aspx?id=402840%7CArticulosCMS&md5=8908cfcf7fbb9b92b4be9c9ccd345ed6 |
| N-7 | Juarez, A. (2013, October 29). Edifican en Acapulco con permiso vencido. *Reforma*. Retrieved January 7, 2024, fromhttps://busquedas.gruporeforma.com/reforma/Libre/VisorNota.aspx?id=1473591%7CArticulosGC_Reforma&md5=60bee93d046df5ee734c851309281ce3# |
| N-8 | Juárez, A. (2013, October 30). Alertan de obra en zona inundable. *Reforma*. Retrieved January 7, 2024, from https://busquedas.gruporeforma.com/reforma/Libre/VisorNota.aspx?id=5011687%7CInfodexTextos&md5=d155fc1fffdf93ad9eb63a6d0f051e14 |
| N-9 | Harrison, A. (2013, November 7). *Corroborar que el Macrotúnel no causará inundaciones, pide Walton al gobierno estatal | El Sur de Acapulco I Periódico de Guerrero*. El Sur De Acapulco I Periódico De Guerrero. Retrieved January 7, 2024, from https://suracapulco.mx/archivoelsur/archivos/118298 |
| N-10 | Restrepo, I. (2013, November 11). La Jornada: Irregularidades en Acapulco. La Jornada. Retrieved January 7, 2024, from https://www.jornada.com.mx/2013/11/11/opinion/026a2pol |
| N-11 | Galarce Sosa, K. (2013, November 24). Se hizo una segunda reunión sobre la modificación en el proyecto del Macrotúnel: delegado de Semarnat - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 26, 2024, from https://suracapulco.mx/impreso/4/se-hizo-una-segunda-reunion-sobre-la-modificacion-en-el-proyecto-del-macrotunel-delegado-de-semarnat/ |
| N-12 | Galarce Sosa, K. (2014, January 12). Incumple ICA con el MIA en la obra del Macrotúnel, acusa Carlos Reyes Paris - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 26, 2024, from https://suracapulco.mx/impreso/4/incumple-ica-con-el-mia-en-la-obra-del-macrotunel-acusa-carlos-reyes-paris/ |
| N-13 | Trujillo, J. (2014, January 25). Inician obras de Macrotúnel con detonaciones en Acapulco. Grupo Milenio. Retrieved January 26, 2024, from https://www.milenio.com/estados/inician-obras-de-macrotunel-con-detonaciones-en-acapulco |
| N-14 | Galarce Sosa, K. (2014b, February 8). Suspende Profepa un predio en Diamante que recibía escombro |

| | |
|---|---|
| | del Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur, https://suracapulco.mx/impreso/4/suspende-profepa-un-predio-en-diamante-que-recibia-escombro-del-macrotunel/ |
| N-15 | Briseño, H. (2014, February 18). Afectados por el Macrotúnel reclaman pago. La Jornada. Retrieved January 26, 2024, from https://www.jornada.com.mx/2014/02/18/estados/027n3est |
| N-16 | Labastida, M. (2014, February 27). Inician huelga trabajadores de la obra; les debe 4 millones la empresa encargada, acusan - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 26, 2024, from https://suracapulco.mx/impreso/4/inician-huelga-trabajadores-de-la-obra-les-debe-4-millones-la-empresa-encargada-acusan/ |
| N-17 | Labastida, M. (2014b, February 28). Pago de adeudos y contratar empresas locales, piden sindicatos a ICA - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 26, 2024, from https://suracapulco.mx/impreso/4/pago-de-adeudos-y-contratar-empresas-locales-piden-sindicatos-a-ica/ |
| N-18 | Trujillo, J. (2014b, February 26). Afectados por Macrotúnel en Acapulco amenazan con parar obras. Grupo Milenio. Retrieved January 26, 2024, from https://www.milenio.com/estados/afectados-macrotunel-acapulco-amenazan-parar-obras |
| N-19 | Galarce. (2014, March 1). Sin visos de solución, la huelga de trabajadores de la obra, señala líder - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur, https://suracapulco.mx/impreso/4/sin-visos-de-solucion-la-huelga-de-trabajadores-de-la-obra-senala-lider/ |
| N-20 | Juarez, A. (2014, March 5). Termina paro en obra de Macrotunel. Reforma. Retrieved January 26, 2024, from https://busquedas.gruporeforma.com/reforma/Libre/VisorNota.aspx?id=1500136%7CArticulosGC_Reforma&md5=7cfce1c3104176ea3a24eca5f815be64# |
| N-21 | Trujillo, J. (2014c, March 6). Levantan la huelga del Macrotúnel de Acapulco. Grupo Milenio. Retrieved January 26, 2024, from https://www.milenio.com/estados/levantan-la-huelga-del-macrotunel-de-acapulco |
| N-22 | Rodiguez, J. (2014, March 13). El Noticiero - Aún no les pagan a transportistas en el Macrotúnel [Video]. Noticieros Televisa Guerrero. https://www.youtube.com/watch?v=XzZMm5dOSIU |
| N-23 | Miden por segunda ocasión terreno de la Ex Hacienda El Coloso afectado por el Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. (2014, March 14). El Sur Acapulco, https://suracapulco.mx/impreso/4/miden-por-segunda-ocasion-terreno-de-la-ex-hacienda-el-coloso-afectado-por-el-macrotunel/ |
| N-24 | Labastida, M. (2014, March 19). No paga sindicato 4 millones que debe a la CROM y CTM por obras del Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco, https://suracapulco.mx/impreso/4/no-paga-sindicato-4-millones-que-debe-a-la-crom-y-ctm-por-obras-del-macrotunel/ |
| N-25 | Briseño, H. (2014b, March 22). Nueva huelga de transportistas que participan en obras del macrotúnel. *La Jornada*. Retrieved January 26, 2024, from https://www.jornada.com.mx/2014/03/22/estados/027n2est |
| N-26 | Trujillo, J. (2014d, March 21). Paran obras en el Macrotúnel de Acapulco. *Grupo Milenio*. Retrieved January 29, 2024, from https://www.milenio.com/estados/paran-obras-en-el-macrotunel-de-acapulco |
| N-27 | Villagómez/Corresponsal, E. (2014, March 25). Adeudo de ICA con trabajadores paraliza obra en Acapulco. *El Financiero*. Retrieved January 29, 2024, from https://www.elfinanciero.com.mx/sociedad/adeudo-de-ica-con-trabajadores-paraliza-obra-en-acapulco/ |
| N-28 | Trujillo, J. (2014e, March 24). Mantienen transportistas huelga en el Macrotúnel. *Grupo Milenio*. Retrieved December 1, 2023, from https://www.milenio.com/estados/mantienen-transportistas-huelga-en-el-macrotunel |
| N-29 | Labastida, M. (2014d, March 28). *Esta semana debe resolverse la huelga para no afectar la programación, advierte la Cicaeg - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero*. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/esta-semana-debe-resolverse-la-huelga-para-no-afectar-la-programacion-advierte-la-cicaeg/ |
| N-30 | Trujillo, J. (2014f, April 1). Levantan huelga en Macrotúnel de Acapulco. *Grupo Milenio*. Retrieved January 29, 2024, from https://www.milenio.com/estados/levantan-huelga-en-macrotunel-de-acapulco |
| N-31 | Labastida, M. (2014e, April 1). *Termina la huelga de transportistas del Macrotúnel; acuerdan el pago de adeudos \| El Sur de Acapulco I Periódico de Guerrero*. Digital Archive \| El Sur. Retrieved January 29, 2024, from https://suracapulco.mx/archivoelsur/archivos/136915 |
| N-32 | Galarce, K. (2014b, April 4). *Con amparo de un juez toman 50 personas posesión del predio de Ex Hacienda El Coloso -* |

| | |
|---|---|
| | *El Sur Acapulco suracapulco I Noticias Acapulco Guerrero*. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. https://suracapulco.mx/impreso/4/con-amparo-de-un-juez-toman-50-personas-posesion-del-predio-de-ex-hacienda-el-coloso/ |
| N-33 | Labastida, M. (2014f, April 5). *Niega Salgado Gómez que copropietarios se instalaran en predio de Ex Hacienda El Coloso - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero*. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/niega-salgado-gomez-que-copropietarios-se-instalaran-en-predio-de-ex-hacienda-el-coloso/ |
| N-34 | Salmerón, A. (2014, April 7). Tramita comisario de El Cayaco amparo para suspender las obras del Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/tramita-comisario-de-el-cayaco-amparo-para-suspender-las-obras-del-macrotunel/ |
| N-35 | Galarce Sosa, K. (2014c, April 8). Limpian propietarios de Ex Hacienda El Coloso el predio que reclaman al Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/limpian-propietarios-de-ex-hacienda-el-coloso-el-predio-que-reclaman-al-macrotunel/ |
| N-36 | Galarce Sosa, K. (2014d, April 12). Ninguna autoridad ha negociado con ellos, dicen afectados de Ex Hacienda El Coloso - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/ninguna-autoridad-ha-negociado-con-ellos-dicen-afectados-de-ex-hacienda-el-coloso/ |
| N-37 | Galarce Sosa, K. (2014e, April 15). Entran 50 camiones al predio en disputa por el macrotúnel; se viola un amparo, dice la abogada - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/principal/entran-50-camiones-al-predio-en-disputa-por-el-macrotunel%E2%80%88se-viola-un-amparo-dice-la-abogada/ |
| N-38 | Salmerón, A. (2014b, May 8). De nuevo protestan cetemistas en Cemex; no hay respuesta al asunto del contrato - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/de-nuevo-protestan-cetemistas-en-cemex-no-hay-respuesta-al-asunto-del-contrato/ |
| N-39 | Salmerón, A. (2014c, May 10). Sigue el bloqueo en Cemex; aún no hay respuesta al contrato colectivo, dicen choferes - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/sigue-el-bloqueo-en-cemex-aun-no-hay-respuesta-al-contrato-colectivo-dicen-choferes/ |
| N-40 | Salmerón, A. (2014d, May 15). Desde el martes levantaron transportistas el bloqueo en Cemex tras reunión con directivos - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/desde-el-martes-levantaron-transportistas-el-bloqueo-en-cemex-tras-reunion-con-directivos/ |
| N-41 | Trujillo, J. (2014g, May 17). Inician obras de 'Macrotunel' en Guerrero. Grupo Milenio. Retrieved January 29, 2024, from https://www.milenio.com/estados/inician-obras-de-macrotunel-en-guerrero |
| N-42 | Contreras, K. (2014, May 18). Accede Aguirre a demandas de vecinos afectados por obras del macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/1/accede-aguirre-a-demandas-de-vecinos-afectados-por-obras-del-macrotunel/ |
| N-43 | Salmaron, A. (2014, May 9). Sigue la contratación de foráneos por parte de ICA, que hace el Macrotúnel: cetemistas - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/sigue-la-contratacion-de-foraneos-por-parte-de-ica-que-hace-el-macrotunel-cetemistas/ |
| N-44 | Pigeoutt, V. (2015, July 31). Explosión de macrotúnel deja cuatro lesionados en Acapulco. El Universal. Retrieved January 29, 2024, from https://archivo.eluniversal.com.mx/estados/2014/explosion-de-macrotunel-deja-4-lesionados-en-acapulco-1021345.html |
| N-45 | Labastida, M. (2014g, July 6). Explosión en la obra del Macrotúnel lesiona oídos de cuatro trabajadores y daña viviendas - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/explosion-en-la-obra-del-macrotunel-lesiona-oidos-de-cuatro-trabajadores-y-dana-viviend |

| | |
|---|---|
| N-46 | Galarce Sosa, K. (2014f, June 18). No hay acercamiento con autoridades, acusan copropietarios de Ex Hacienda El Coloso - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/no-hay-acercamiento-con-autoridades-acusan-copropietarios-de-ex-hacienda-el-coloso/ |
| N-47 | Labastida, M. (2014h, July 8). Vigilan soldados las obras del Macrotúnel en Joyas de Brisamar tras la explosión - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/principal/vigilan-soldados-las-obras-del-macrotunel-en-joyas-de-brisamar-tras-la-explosion-2/ |
| N-48 | Televisa Guerrero. (2014, July 11). El Noticiero - Preocupan explosiones por Macrotúnel [Video]. YouTube. Retrieved February 3, 2024, from https://www.youtube.com/watch?v=L1-ZcSCGeZg |
| N-49 | Harrison, A. (2014, July 14). Sí ha verificado Protección Civil municipal las obras del Macrotúnel, dice Efrén Valdés - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero*. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/si-ha-verificado-proteccion-civil-municipal-las-obras-del-macrotunel-dice-efren-valdes/ |
| N-50 | Salmeron, A. (2014, July 24). Protestan y piden indemnización por obras del Macrotúnel dueños del predio Ex Hacienda El Coloso - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/protestan-y-piden-indemnizacion-por-obras-del-macrotunel-duenos-del-predio-ex-hacienda-el-coloso/ |
| N-51 | Labastida, M. (2014g, August 3). Tiene ICA hasta el 15 de agosto para presentar su plan de protección civil en obras del Maxitúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero*. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/tiene-ica-hasta-el-15-de-agosto-para-presentar-su-plan-de-proteccion-civil-en-obras-del-maxitunel/ |
| N-52 | Galarce Sosa, K. (2014g, August 8). Denuncian propietarios de Ex Hacienda El Coloso hostigamiento del gobierno estatal - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/denuncian-propietarios-de-ex-hacienda-el-coloso-hostigamiento-del-gobierno-estatal/ |
| N-53 | Galarce Sosa, K. (2014h, August 14). Sigue sin cambios el trazo del Macrotúnel, dice el nuevo delegado de la Semarnat - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/sigue-sin-cambios-el-trazo-del-macrotunel-dice-el-nuevo-delegado-de-la-semarnat/ |
| N-54 | Galarce Sosa, K. (2014h, August 15). Pago de 800 mil pesos por sus viviendas, exigen afectados de la Colosio a autoridades - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero*. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/pago-de-800-mil-pesos-por-sus-viviendas-exigen-afectados-de-la-colosio-a-autoridades/ |
| N-55 | Galarce Sosa, K. (2014i, October 20). No les han pagado sus predios, reclaman dueños de Ex Hacienda El Coloso a Humberto Salgado - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/no-les-han-pagado-sus-predios-reclaman-duenos-de-ex-hacienda-el-coloso-a-humberto-salgado/ |
| N-56 | Galarce Sosa, K. (2014k, October 25). Temen vecinos de la Colosio que sigan las inundaciones por las obras del Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. https://suracapulco.mx/impreso/4/temen-vecinos-de-la-colosio-que-sigan-las-inundaciones-por-las-obras-del-macrotunel/ |
| N-57 | Salmeron, A. (2014b, November 7). Concede juez amparo para que se suspendan las obras del Macrotúnel en El Cayaco - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/concede-juez-amparo-para-que-se-suspendan-las-obras-del-macrotunel-en-el-cayaco/ |
| N-58 | Salmeron, A. (2014c, November 19). Recorren ejidatarios y directivos de ICA la zona afectada por el Macrotúnel en El Cayaco - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/recorren-ejidatarios-y-directivos-de-ica-la-zona-afectada-por-el-macrotunel-en-el-cayaco/ |
| N-59 | Salmeron, A. (2014d, November 22). Cierran ejidatarios dos cementaras que suministran material para obras del Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/cierran- |

| | |
|---|---|
| | ejidatarios-dos-cementaras-que-suministran-material-para-obras-del-macrotunel/ |
| N-60 | (Editor) Sin respuesta, las quejas de vecinos de Joyas de Brisamar por anomalías de los trabajos: Reyes Paris - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. (2014, November 24). El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 29, 2024, from https://suracapulco.mx/impreso/4/sin-respuesta-las-quejas-de-vecinos-de-joyas-de-brisamar-por-anomalias-de-los-trabajos-reyes-paris/ |
| N-61 | Salmerón, A. (2014e, November 26). *Hoy se evaluarán los daños del Macrotúnel en el ejido de El Cayaco, informa el comisariado - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero*. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/hoy-se-evaluaran-los-danos-del-macrotunel-en-el-ejido-de-el-cayaco-informa-el-comisariado/ |
| N-62 | Salmerón, A. (2014g, December 7). Afectaron obras del Macrotúnel mil 900 metros del ejido, con valor de 6 millones de pesos - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/afectaron-obras-del-macrotunel-mil-900-metros-del-ejido-con-valor-de-6-millones-de-pesos/ |
| N-63 | Salmerón, A. (2014h, December 13). No asisten del gobierno estatal a audiencia por el conflicto con el ejido de El Cayaco por el Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/no-asisten-del-gobierno-estatal-a-audiencia-por-el-conflicto-con-el-ejido-de-el-cayaco-por-el-macrotunel/ |
| N-64 | Salmerón, A. (2014i, December 17). Tomarán carreteras si no les pagan, advierten ejidatarios afectados por obras del Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/tomaran-carreteras-si-no-les-pagan-advierten-ejidatarios-afectados-por-obras-del-macrotunel/ |
| N-65 | Salmerón, A. (2014j, December 18). Por segunda ocasión se suspende audiencia sobre tierras afectadas en El Cayaco - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/por-segunda-ocasion-se-suspende-audiencia-sobre-tierras-afectadas-en-el-cayaco/ |
| N-66 | Velázquez, D. (2014, December 18). Por el bloqueo en obras del Macrotúnel adeuda el estado 54 millones a la constructora, dice Ortega - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/por-el-bloqueo-en-obras-del-macrotunel-adeuda-el-estado-54-millones-a-la-constructora-dice-ortega/ |
| N-67 | Salmerón, A. (2014k, December 26). Levantan ejidatarios el plantón en obras del Macrotúnel; el gobierno estatal los indemnizará - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/levantan-ejidatarios-el-planton-en-obras-del-macrotunel-el-gobierno-estatal-los-indemnizara/3 |
| N-68 | Salmeron, A. (2014e, December 28). Advierten afectados por el Macrotúnel que o les pagan o retomarán el plantón en la obra - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/advierten-afectados-por-el-macrotunel-que-o-les-pagan-o-retomaran-el-planton-en-la-obra/ |
| N-69 | Galarce, K. (2014c, December 30). Se unen el ejido de El Cayaco y copropietarios de Ex Hacienda El Coloso contra el Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/se-unen-el-ejido-de-el-cayaco-y-copropietarios-de-ex-hacienda-el-coloso-contra-el-macrotunel/ |
| N-70 | Salmerón, A. (2015, January 7). Aún no presenta el gobierno estatal su informe sobre el conflicto por el Macrotúnel: ejidatarios - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/aun-no-presenta-el-gobierno-estatal-su-informe-sobre-el-conflicto-por-el-macrotunel-ejidatarios/ |
| N-71 | Salmerón, A. (2015b, January 11). Denuncian colonos de Joyas de Brisamar que aumentan afectados por Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/denuncian-colonos-de-joyas-de-brisamar-que-aumentan-afectados-por-macrotunel/ |
| N-72 | Morales, J. (2015, January 13). *Bloqueo de ejidatarios en la vía Cayaco-Puerto Marqués; exigen pago de sus tierras - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero*. El Sur Acapulco I Noticias Acapulco Guerrero. |

| | |
|---|---|
| | Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/bloqueo-de-ejidatarios-en-la-via-cayaco-puerto-marques-exigen-pago-de-sus-tierras/ |
| N-73 | Trujillo, J. (2015, January 19). Ejidatarios amenazan con tomar carreteras de Acapulco. Grupo Milenio. Retrieved January 30, 2024, from https://www.milenio.com/estados/ejidatarios-amenazan-con-tomar-carreteras-de-acapulco |
| N-74 | Salmerón, A. (2015c, January 19). El martes se presentará una propuesta "seria" a afectados por el Macrotúnel: abogada - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/el-martes-se-presentara-una-propuesta-seria-a-afectados-por-el-macrotunel-abogada/ |
| N-75 | Agencia Red Noticias. (2015, January 21). Crispin Castillo Ortiz Comisario Ejidal de Cayaco [Video]. YouTube. https://www.youtube.com/watch?v=YGmifxqXF0w |
| N-76 | Salmerón, A. (2015d, January 21). Instalan ejidatarios de El Cayaco plantón indefinido en la carretera a Puerto Marqués - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/instalan-ejidatarios-de-el-cayaco-planton-indefinido-en-la-carretera-a-puerto-marques/ |
| N-77 | Salmerón, A. (2015d, January 21). Instalan ejidatarios de El Cayaco plantón indefinido en la carretera a Puerto Marqués - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/instalan-ejidatarios-de-el-cayaco-planton-indefinido-en-la-carretera-a-puerto-marques/ |
| N-78 | Salmerón, A. (2015f, January 24). Se reúnen ejidatarios de El Cayaco con David Cienfuegos para ver el pago de sus tierras - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/se-reunen-ejidatarios-de-el-cayaco-con-david-cienfuegos-para-ver-el-pago-de-sus-tierras/ |
| N-79 | Salmerón, A. (2015g, January 28). Indemnizarlos con obras y programas, propone el gobierno estatal a afectados por el Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/indemnizarlos-con-obras-y-programas-propone-el-gobierno-estatal-a-afectados-por-el-macrotunel/ |
| N-80 | Labastida, M. (2015, February 3). Concedió juez amparo para detener obras del Macrotúnel en la Escénica, informa Reyes Paris - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/concedio-juez-amparo-para-detener-obras-del-macrotunel-en-la-escenica-informa-reyes-paris/ |
| N-81 | Salmerón, A. (2015h, February 11). No libera Finanzas el dinero para afectados por el Macrotúnel, acusa la abogada - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/no-libera-finanzas-el-dinero-para-afectados-por-el-macrotunel-acusa-la-abogada/ |
| N-82 | Galarce Sosa, K. (2015, March 3). Denuncian líderes transportistas que sindicato del estado de México los excluye de obras - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/5/denuncian-lideres-transportistas-que-sindicato-del-estado-de-mexico-los-excluye-de-obras/ |
| N-83 | Salmerón, A. (2015i, March 5). Indemnizar a ejidatarios de El Cayaco afectados por el Macrotúnel, exigen comisarios al gobierno estatal - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/indemnizar-a-ejidatarios-de-el-cayaco-afectados-por-el-macrotunel-exigen-comisarios-al-gobierno-estatal/ |
| N-84 | Galarce Sosa, K. (2015b, March 13). Se pospone una semana más la huelga de los trabajadores del Macrotúnel, informa la CROC - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/se-pospone-una-semana-mas-la-huelga-de-los-trabajadores-del-macrotunel-informa-la-croc/ |
| N-85 | SinEmbargo MX. (2015, April 1). Líder sindical de la CTM es asesinado a balazos en Acapulco; su hijo resulta herido. SinEmbargo MX. Retrieved January 30, 2024, from https://www.sinembargo.mx/31-03-2015/1299428 |
| N-86 | Galarce Sosa, K. (2015c, April 9). Detiene la CTM las obras en el Macrotúnel ante una amenaza de huelga de la CROC - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/5/detiene-la-ctm-las-obras-en-el-macrotunel-ante-una-amenaza-de-huelga-de-la-croc/ |

| | |
|---|---|
| N-87 | Salmerón, A. (2015j, April 19). Los ejidatarios no permitirán el avance del Macrotúnel hasta que paguen, advierte su abogada - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/los-ejidatarios-no-permitiran-el-avance-del-macrotunel-hasta-que-paguen-advierte-su-abogada/ |
| N-88 | Galarce Sosa, K. (2015d, April 25). Exige líder de transportistas de la CTM el esclarecimiento del asesinato de Ranferi Bahena Gómez - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/exige-lider-de-transportistas-de-la-ctm-el-esclarecimiento-del-asesinato-de-ranferi-bahena-gomez/ |
| N-89 | Galarce Sosa, K. (2015d, April 25). Clausura la Fiscalía General del estado parte de las obras del Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/clausura-la-fiscalia-general-del-estado-parte-de-las-obras-del-macrotunel/ |
| N-90 | Salmerón, A. (2015k, May 25). Presentó el gobierno estatal nueva propuesta a afectados por el Macrotúnel, informa abogada - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/presento-el-gobierno-estatal-nueva-propuesta-a-afectados-por-el-macrotunel-informa-abogada/ |
| N-91 | Labastida, M. (2015b, June 4). Ya no negociarán afectados de El Cayaco por el Macrotúnel con el gobierno estatal: abogada - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/ya-no-negociaran-afectados-de-el-cayaco-por-el-macrotunel-con-el-gobierno-estatal-abogada/ |
| N-92 | Salmerón, A. (2015l, June 9). Sigue la obra del Macrotúnel en la Escénica a pesar de la clausura - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/sigue-la-obra-del-macrotunel-en-la-escenica-a-pesar-de-la-clausura/ |
| N-93 | Briseño, H. (2015, June 10). La Jornada: Mal proyectadas, las obras del Macrotúnel. *La Jornada*. Retrieved January 30, 2024, from https://www.jornada.com.mx/2015/06/10/estados/031n2est |
| N -94* | Labastida, M. (2015d, June 14). Permiten autoridades a la empresa ICA continuar con la obra del Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/permiten-autoridades-a-la-empresa-ica-continuar-con-la-obra-del-macrotunel/ |
| N-95 | Labastida, M. (2015d, June 14). Permiten autoridades a la empresa ICA continuar con la obra del Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 30, 2024, from https://suracapulco.mx/impreso/4/permiten-autoridades-a-la-empresa-ica-continuar-con-la-obra-del-macrotunel/ |
| N-96 | Labastida, M. (2015e, June 17). Ejidatarios afectados por el Macrotúnel retoman el diálogo con el gobierno estatal - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/ejidatarios-afectados-por-el-macrotunel-retoman-el-dialogo-con-el-gobierno-estatal/ |
| N-97 | Labastida, M. (2015f, July 24). Niega abogada de afectados por el Macrotúnel que se cedieran terrenos al gobierno estatal - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/niega-abogada-de-afectados-por-el-macrotunel-que-se-cedieran-terrenos-al-gobierno-estatal/ |
| N-98 | Corresponsal, E. V. /. (2015, July 8). Denuncian afectaciones por obra de ICA-Carso en Acapulco. *El Financiero*. Retrieved January 31, 2024, from https://www.elfinanciero.com.mx/empresas/denuncian-afectaciones-por-obra-de-ica-carso-en-acapulco/ |
| N-99 | Trujillo, J. (2015b, July 8). Impiden ejidatarios acceso a obra de Macrotúnel en Acapulco. *Grupo Milenio*. Retrieved January 31, 2024, from https://www.milenio.com/estados/impiden-ejidatarios-acceso-obra-macrotunel-acapulco |
| N-100 | ANewsMX. (2015, July 9). *El Macrotúnel está afectando a viviendas de Joyas de Brisamar: Carlos Reyes Paris* [Video]. YouTube. Retrieved January 31, 2024, from https://www.youtube.com/watch?v=l4cdJOyEImo |
| N-101 | Labastida, M. (2015f, July 12). Hace dos meses, el gobierno estatal ofreció 8 millones a ejidatarios de El Cayaco, revelan - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. https://suracapulco.mx/impreso/4/hace-dos-meses-el-gobierno-estatal-ofrecio-8- |

| | |
|---|---|
| | millones-a-ejidatarios-de-el-cayaco-revelan/ |
| N-102 | Labastida, M. (2015g, July 12). Ya se pagó a ejidatarios de El Cayaco y no se les debe nada, afirma Cienfuegos - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/ya-se-pago-a-ejidatarios-de-el-cayaco-y-no-se-les-debe-nada-afirma-cienfuegos/ |
| N-103 | Labastida, M. (2015h, July 13). El principal problema del Macrotúnel es que no tiene proyecto ejecutivo: profesionistas - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/el-principal-problema-del-macrotunel-es-que-no-tiene-proyecto-ejecutivo-profesionistas/ |
| N-104 | Labastida, M. (2015i, July 14). No se ha comunicado el gobierno estatal con los ejidatarios y condóminos afectados por el Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/no-se-ha-comunicado-el-gobierno-estatal-con-los-ejidatarios-y-condominos-afectados-por-el-macrotunel/ |
| N-105 | Labastida, M. (2015e, June 14). Si ICA cumple con la normatividad que exige Conagua no hay riesgo de inundaciones: Humberto Gastélum - El Sur Acapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/si-ica-cumple-con-la-normatividad-que-exige-conagua-no-hay-riesgo-de-inundaciones-humberto-gastelum/ |
| N-106 | Conteras, K. (2015, July 24). Los ejidatarios, corresponsables si hay daños en el túnel, señala Raúl Miliani - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/los-ejidatarios-corresponsables-si-hay-danos-en-el-tunel-senala-raul-miliani/ |
| N-107 | Labastida, M. (2015l, July 31). No llegó nadie del gobierno ni de ICA a la audiencia por el Macrotúnel: ex comisariado - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/no-llego-nadie-del-gobierno-ni-de-ica-a-la-audiencia-por-el-macrotunel-ex-comisariado/ |
| N-108 | Labastida, M. (2015m, August 9). Sin avance el conflicto entre ejidatarios de El Cayaco y constructores del Macrotúnel tras amenazas - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero*. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/sin-avance-el-conflicto-entre-ejidatarios-de-el-cayaco-y-constructores-del-macrotunel-tras-amenazas/ |
| N-109 | Salmerón, A. (2015m, August 23). Piden al gobernador que firme el convenio para indemnizar a ejidatarios afectados por el Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco I Noticias Acapulco Guerrero*. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/piden-al-gobernador-que-firme-el-convenio-para-indemnizar-a-ejidatarios-afectados-por-el-macrotunel/ |
| N-110 | Juarez, A. (2015, August 28). Clausuran obra de Macrotunel en Acapulco. *Reforma*. Retrieved January 31, 2024, from https://busquedas.gruporeforma.com/reforma/Libre/VisorNota.aspx?id=1357154%7CArticulosCMS&md5=ea3cf4db2326898e8b6b1dcfa011436b |
| N-111 | Trujillo, J. (2015c, August 28). Clausuran obras del Macrotúnel en Acapulco. *Grupo Milenio*. Retrieved January 31, 2024, from https://www.milenio.com/estados/clausuran-obras-del-macrotunel-en-acapulco |
| N-112 | Bautista, K. (2015, August 28). *CONAGUA clausura temporalmente trabajos del Macro-Túnel Acapulco – Agua.org.mx*. Agua.org.mx. Retrieved January 31, 2024, from https://agua.org.mx/conagua-clausura-temporalmente-trabajos-del-macro-tunel-acapulco/ |
| N-113 | Galarce, K. (2015, September 13). Continúa ICA los trabajos en el Macrotúnel a pesar de la clausura de Conagua - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero*. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/continua-ica-los-trabajos-en-el-macrotunel-a-pesar-de-la-clausura-de-conagua/ |
| N-114 | Galarce, K. (2015b, September 17). Reconsiderar la clausura de las obras del Macrotúnel, pide el gobierno estatal a la Conagua - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco Suracapulco I* |

| | |
|---|---|
| | *Noticias Acapulco Guerrero*. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/reconsiderar-la-clausura-de-las-obras-del-macrotunel-pide-el-gobierno-estatal-a-la-conagua/ |
| N-115 | Labastida, M. (2016, January 4). Por errores en el proyecto ejecutivo se retrasará y costará más el Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero*. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/por-errores-en-el-proyecto-ejecutivo-se-retrasara-y-costara-mas-el-macrotunel/ |
| N-116 | Labastida, M. (2016b, January 5). El sobrecosto del Macrotúnel se pudo evitar, dicen arquitectos y el Consejo Ciudadano - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/el-sobrecosto-del-macrotunel-se-pudo-evitar-dicen-arquitectos-y-el-consejo-ciudadano/ |
| N-117 | Salmerón, A. (2016, January 6). No hay convenio para dar paso a camiones en el Macrotúnel, dice la apoderada de El Cayaco - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/no-hay-convenio-para-dar-paso-a-camiones-en-el-macrotunel-dice-la-apoderada-de-el-cayaco/"https://suracapulco.mx/impreso/4/no-hay-convenio-para-dar-paso-a-camiones-en-el-macrotunel-dice-la-apoderada-de-el-cayaco/ |
| N-118 | Labastida, M. (2016c, January 6). Aceptarán ejidatarios obras a cambio de los predios que les debe el gobierno del estado - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/aceptaran-ejidatarios-obras-a-cambio-de-los-predios-que-les-debe-el-gobierno-del-estado/ |
| N-119 | Labastida, M. (2016d, January 21). No les entregaron el dictamen de daños a las viviendas en Joyas de Brisamar, dice líder de vecinos - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/no-les-entregaron-el-dictamen-de-danos-a-las-viviendas-en-joyas-de-brisamar-dice-lider-de-vecinos/ |
| N-120 | Labastida, M. (2016e, February 17). Se desisten ejidatarios del amparo contra el Macrotúnel a cambio de obras - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/se-desisten-ejidatarios-del-amparo-contra-el-macrotunel-a-cambio-de-obras/ |
| N-121 | Salmerón, A. (2016b, February 19). Entregan ejidatarios de El Cayaco predios para el Macrotúnel tras el plantón de más de un año - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/entregan-ejidatarios-de-el-cayaco-predios-para-el-macrotunel-tras-el-planton-de-mas-de-un-ano/ |
| N-122 | Televisa Guerrero. (2016, March 4). *Clausuran taludes en Macrotunel* [Video]. YouTube. Retrieved January 31, 2024, from https://www.youtube.com/watch?v=61lvYHdbusU |
| N-123 | Labastida, M. (2016f, March 9). Vecinos de Joyas de Brisamar demandarán a ICA-Carso por no parar obra del Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/vecinos-de-joyas-de-brisamar-demandaran-a-ica-carso-por-no-parar-obra-del-macrotunel/ |
| N-124 | Labastida, M. (2016f, March 9). Vecinos de Joyas de Brisamar demandarán a ICA-Carso por no parar obra del Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero*. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/vecinos-de-joyas-de-brisamar-demandaran-a-ica-carso-por-no-parar-obra-del-macrotunel/ |
| N-125 | Labastida, M. (2016g, April 13). Autoriza la Conagua el retiro de 450 mil toneladas de piedra del Macrotúnel que hacían dique en Llano Largo - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. *El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero*. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/autoriza-la-conagua-el-retiro-de-450-mil-toneladas-de-piedra-del-macrotunel-que-hacian-dique-en-llano-largo/ |
| N-126 | Televisa Guerrero. (2016b, April 19). Siguen sin indemnizar 60 viviendas en Joyas de Brisamar. [Video]. YouTube. Retrieved January 31, 2024, from https://www.youtube.com/watch?v=zvfSijZqVHs |
| N-127 | Labastida, M. (2016h, April 24). Planta de nuevo perito del Macrotúnel a vecinos de Joyas de Brisamar afectados por la obra - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco |

| | |
|---|---|
| | Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/planta-de-nuevo-perito-del-macrotunel-a-vecinos-de-joyas-de-brisamar-afectados-por-la-obra/ |
| N-128 | Labastida, M. (2016i, April 29). Ya se entregan los dictámenes de daños a afectados por el Macrotúnel en Joyas de Brisamar: CICAEG - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/ya-se-entregan-los-dictamenes-de-danos-a-afectados-por-el-macrotunel-en-joyas-de-brisamar-cicaeg/ |
| N-129 | Harrison, A. (2016, May 12). Se indemnizó a dueños de tres casas de Joyas de Brisamar dañadas por el Macrotúnel: Taja - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/se-indemnizo-a-duenos-de-tres-casas-de-joyas-de-brisamar-danadas-por-el-macrotunel-taja/ |
| N-130 | Televisa Guerrero. (2016d, May 26). Avance del 50% en el Macrotunel [Video]. YouTube. Retrieved January 31, 2024, from https://www.youtube.com/watch?v=gq0_pzJP_cg |
| N-131 | Martínez, C. L. E. (2016, May 25). Túnel más largo de México operará en junio de 2017. El Financiero. Retrieved January 31, 2024, from https://www.elfinanciero.com.mx/empresas/tunel-mas-largo-de-mexico-operara-en-junio-de-2017/ |
| N-132 | Notimex. (2016, May 26). Macrotúnel de Acapulco estará listo en junio de 2017: Astudillo. Obras. Retrieved January 31, 2024, from https://obras.expansion.mx/construccion/2016/05/26/macrotunel-de-acapulco-estara-listo-en-junio-de-2017-astudillo |
| N-133 | El Economista. (2013, June 7). Guerrero da banderazo a MacroTúnel Acapulco. El Economista. https://www.eleconomista.com.mx/politica/Guerrero-da-banderazo-a-MacroTunel-Acapulco-20130606-0151.html |
| N-134 | Labastida, M. (2016j, August 3). No afectará la carretera que conectará al Macrotúnel a Llano Largo, responde la CICAEG - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/no-afectara-la-carretera-que-conectara-al-macrotunel-a-llano-largo-responde-la-cicaeg/ |
| N-135 | Salmeron, A. (2016, August 24). No ha cumplido el gobierno estatal el convenio por las tierras para el Macrotúnel: abogada - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/no-ha-cumplido-el-gobierno-estatal-el-convenio-por-las-tierras-para-el-macrotunel-abogada/ |
| N-136 | Televisa Guerrero. (2016e, August 25). Obras de Macrotunel ha afectado alrededor de 67 casas [Video]. YouTube. Retrieved January 31, 2024, from https://www.youtube.com/watch?v=rbCGtkFLSXM |
| N-137 | Labastida, M. (2016k, September 22). No ha entregado el estado el informe de casas dañadas por el Macrotúnel, señala Reyes Paris - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved January 31, 2024, from https://suracapulco.mx/impreso/4/no-ha-entregado-el-estado-el-informe-de-casas-danadas-por-el-macrotunel-senala-reyes-paris/ |
| N-138 | Televisa Guerrero. (2016f, September 6). Infracciones a vehículos de la constructora del Macrotunel [Video]. YouTube. Retrieved February 3, 2024, from https://www.youtube.com/watch?v=PKqjL2cz5cs |
| N-139 | Galarce Sosa, K. (2016, October 9). Reconoce la aseguradora de ICA que hay 67 casas afectadas por obras del Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved February 1, 2024, from https://suracapulco.mx/impreso/5/reconoce-la-aseguradora-de-ica-que-hay-67-casas-afectadas-por-obras-del-macrotunel/ |
| N-140 | Labastida, M. (2016l, December 13). No han recibido los dictámenes de daños en Joyas de Brisamar por el Macrotúnel, señala Reyes Paris - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved February 1, 2024, from https://suracapulco.mx/impreso/4/no-han-recibido-los-dictamenes-de-danos-en-joyas-de-brisamar-por-el-macrotunel-senala-reyes-paris/ |
| N-141 | Labastida, M. (2017, February 16). A mediados de mayo iniciará operaciones el Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved February 1, 2024, from https://suracapulco.mx/impreso/grafico/a-mediados-de-mayo-iniciara-operaciones-el-macrotunel/ |
| N-142 | Vásquez, A. (2017, March 28). Vende ICA Tunel Diamante y autopista. Reforma. Retrieved February 1, 2024, from |

| | |
|---|---|
| | https://busquedas.gruporeforma.com/reforma/Libre/VisorNota.aspx?id=2310368%7CArticulosCMS&md5=780e2364f654d7742de03668c62536b3# |
| N-143 | Guerrero, R. D. (2017, April 6). Viviendas afectadas por el Macrotúnel serán reparadas por el gobierno del estado. Digital Guerrero. https://www.digitalguerrero.com.mx/acapulco/viviendas-afectadas-por-el-macrotunel-seran-reparadas-por-el-gobierno-del-estado/ |
| N-144 | Televisa Guerrero. (2017, April 12). Entrega de macrotúnel se pospone para después de Semana Santa [Video]. YouTube. https://www.youtube.com/watch?v=k-kB4Q2W2lQ |
| N-145 | Notimex. (2017, April 17). Inicia operación del Macrotúnel Acapulco. El Economista. Retrieved February 1, 2024, from https://www.eleconomista.com.mx/empresas/Inicia-operacion-del-Macrotunel-Acapulco-20170417-0072.html |
| N-146 | Reyes, L. (2017, April 18). Acapulco estrena parte del túnel más largo de México. Expansión. Retrieved February 1, 2024, from https://expansion.mx/nacional/2017/04/17/acapulco-estrena-parte-del-tunel-mas-largo-de-mexico |
| N-147 | Universal, R. E. (2017, April 18). Acapulco ya tiene macrotúnel, el más grande del país. El Universal. Retrieved February 1, 2024, from https://www.eluniversal.com.mx/articulo/estados/2017/04/18/acapulco-ya-tiene-macrotunel-el-mas-grande-del-pais/ |
| N-148 | Labastida, M. (2017b, April 19). No resuelve el Macrotúnel la movilidad porque no está concluido, señala Nucico - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved February 1, 2024, from https://suracapulco.mx/impreso/4/no-resuelve-el-macrotunel-la-movilidad-porque-no-esta-concluido-senala-nucico/ |
| N-149 | Martínez, E. (2017, April 21). Estas son las 5 autopistas más caras de México. El Financiero. Retrieved February 1, 2024, from https://www.elfinanciero.com.mx/empresas/estas-son-las-autopistas-mas-caras-de-todo-mexico/ |
| N-150 | Villagómez , C. E. (2017, June 14). Para la infraestructura en carreteras de Acapulco recibirá 800 mdp: Astudillo. El Financiero. Retrieved February 1, 2024, from https://www.elfinanciero.com.mx/nacional/para-la-infraestructura-en-carreteras-de-acapulco-recibira-800-mdp-astudillo/ |
| N-151 | El Economista. (2017, June 19). Se ampliará obra del Macrotúnel en Acapulco. El Economista. Retrieved February 1, 2024, from https://www.eleconomista.com.mx/estados/Se-ampliara-obra-del-Macrotunel-en-Acapulco-20170618-0087.html |
| N-152 | González, P. E. R. (n.d.). Será inaugurada segunda etapa de Macrotúnel por Astudillo y EPN. El Sol De Acapulco \| Noticias Locales, Policiacas, Sobre México, Guerrero Y El Mundo. Retrieved February 1, 2024, from https://www.elsoldeacapulco.com.mx/local/estado/sera-inaugurada-segunda-etapa-de-macrotunel-por-astudillo-y-epn-1115883.html |
| N-153 | El Sur. (2018, March 10). Hablé con el presidente de la continuación del Macrotúnel y de la seguridad: Astudillo - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco I Noticias Acapulco Guerrero. Retrieved February 1, 2024, from https://suracapulco.mx/impreso/1/hable-con-el-presidente-de-la-continuacion-del-macrotunel-y-de-la-seguridad-astudillo/ |
| N-154 | Harrison, A. (2019, June 27). Sin ser indemnizados aún, 41 vecinos de Joyas de Brisamar afectados por el Macrotúnel, denuncian - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved February 1, 2024, from https://suracapulco.mx/impreso/4/sin-ser-indemnizados-aun-41-vecinos-de-joyas-de-brisamar-afectados-por-el-macrotunel-denuncian/ |
| N-155 | De Acapulco, J. T. M. \|. E. S. (n.d.). Suspendidas las tarjetas del Macrotunel para residentes. El Sol De Acapulco \| Noticias Locales, Policiacas, Sobre México, Guerrero Y El Mundo. Retrieved February 1, 2024, from https://www.elsoldeacapulco.com.mx/local/suspendidas-las-tarjetas-del-macrotunel-para-residentes-acapulco-empresas-economia-4502021.htm |
| N-156 | De Acapulco, P. E. R. G. \|. E. S. (n.d.). Por tercera ocasión aumentan tarifas del Macrotúnel de Acapulco, denuncian usuarios. El Sol De Acapulco \| Noticias Locales, Policiacas, Sobre México, Guerrero Y El Mundo. https://www.elsoldeacapulco.com.mx/local/por-tercera-ocasion-aumentan-tarifas-del-macrotunel-de-acapulco-denuncian-usuarios-economia-acapulco-4734860.html |
| N-157 | De Acapulco, C. C. C. \|. E. S. (n.d.). Piden transportistas descuento a peaje de Macrotúnel. El Sol De Acapulco \| Noticias Locales, Policiacas, Sobre México, Guerrero Y El Mundo. https://www.elsoldeacapulco.com.mx/local/piden-transportistas-descuento-a-peaje-de-macrotunel-acapulco-transporte-publico-guerrero-estado-nacional-5071171.html |
| N-158 | Vazquez, D. (2022, August 23). Propone el Ayuntamiento que las pipas que llevan combustible circulen por el Macrotúnel - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved February 1, 2024, from https://suracapulco.mx/impreso/4/propone-el- |

| | |
|---|---|
| | ayuntamiento-que-las-pipas-que-llevan-combustible-circulen-por-el-macrotunel/ |
| N-159 | De Acapulco, A. C. |. E. S. (2023, January 16). Sube tarifa del Macrotúnel Acapulco. El Sol De Acapulco \| Noticias Locales, Policiacas, Sobre México, Guerrero Y El Mundo. Retrieved February 1, 2024, from https://www.elsoldeacapulco.com.mx/local/sube-tarifa-del-macrotunel-acapulco-de-70-a-75-pesos-9475763.html |
| N-160 | Morales Antonio, J. (2023, March 4). Slim no está satisfecho con la inversión del Macrotúnel, dice el alcalde de San Marcos - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved February 1, 2024, from https://suracapulco.mx/impreso/5/slim-no-esta-satisfecho-con-la-inversion-del-macrotunel-dice-el-alcalde-de-san-marcos/ |
| N-161 | De Acapulco, H. N. |. E. S. (2023, January 23). Automovilistas desdeñan el Macrotúnel. El Sol De Acapulco \| Noticias Locales, Policiacas, Sobre México, Guerrero Y El Mundo. Retrieved February 1, 2024, from https://www.elsoldeacapulco.com.mx/local/automovilistas-desdenan-el-macrotunel-9489238.html |
| N-162 | Agencia Cotino Noticias. (2014, January 21). Ing. Juan Manuel Tinoco Reyna. Director General del CICAEG-Entrevista [Video]. YouTube. Retrieved February 5, 2024, from https://www.youtube.com/watch?v=66AwHBsTv8s |
| N-163 | Televisa Guerrero. (2014a, February 28). Huelga de transportistas en obra del Macrotúnel [Video]. YouTube. Retrieved February 5, 2024, from https://www.youtube.com/watch?v=v1fnfU0sa_M |
| N-164 | Televisa Guerrero. (2014c, April 1). El Noticiero - Levantan huelga en el Macrotúnel [Video]. YouTube. Retrieved February 5, 2024, from https://www.youtube.com/watch?v=pO2ZI17gp4g |
| N-165 | Televisa Guerrero. (2014c, April 1). *El Noticiero - Levantan huelga en el Macrotúnel* [Video]. YouTube. Retrieved February 5, 2024, from https://www.youtube.com/watch?v=pO2ZI17gp4g |
| N-166 | Labastida, M. (2013a, January 4). Sin problemas legales, el proyecto de la escénica alterna, dice Humberto Salgado \| El Sur de Acapulco I Periódico de Guerrero. *El Sur*. Retrieved February 16, 2024, from https://suracapulco.mx/archivoelsur/archivos/59534 |
| N-167 | Labastida, M. (2013b, January 16). Incumplió el gobierno estatal con la reunión para aclarar dudas, acusa Reyes París - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved February 16, 2024, from https://suracapulco.mx/impreso/4/incumplio-el-gobierno-estatal-con-la-reunion-para-aclarar-dudas-acusa-reyes-paris/ |
| N-169 | Afectarán el inicio de las obras de la Escénica Alterna las protestas de inconformes: SDUOP - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. (2013, January 16). El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved February 16, 2024, from https://suracapulco.mx/impreso/4/afectaran-el-inicio-de-las-obras-de-la-escenica-alterna-las-protestas-de-inconformes-sduop/ |
| N-170 | Galarce Sosa, K. (2015f, June 10). Mal diseñadas e irregulares las obras de Macrotúnel y La Quebrada, acusan urbanistas - El Sur Acapulco suracapulco I Noticias Acapulco Guerrero. El Sur Acapulco Suracapulco I Noticias Acapulco Guerrero. Retrieved March 20, 2024, from https://suracapulco.mx/impreso/4/mal-disenadas-e-irregulares-las-obras-de-macrotunel-y-la-quebrada-acusan-urbanistas/ |