

# Strategic analysis and sustainable territorial planning in the cities of Oaxaca, Mexico

## Análisis estratégico y planificación territorial sustentable en las ciudades de Oaxaca, México

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### *Abstract*

Strategic analysis is an essential tool for sustainable territorial planning. This article conducts a strategic analysis of 17 cities in the state of Oaxaca from 2000 to 2020, aiming to analyze how these factors have impacted territorial planning. It proposes the assumption that, from 2000 to 2020, weaknesses and threats outweighed strengths and opportunities. It uses a methodology that standardizes information from government institutions for the design and operationalization of the indices used. The results show that the hypothesis was partially accepted throughout the period and in most cities, providing relevant information for decision-making in territorial planning.

*Keywords:* Territorial planning; strategic analysis; sustainable development.

### *Resumen*

El análisis estratégico es una herramienta que se ha vuelto imprescindible en la planificación territorial con enfoque sustentable. En el presente artículo se realiza un análisis estratégico a 17 ciudades del estado de Oaxaca durante el periodo 2000-2020, con el objetivo de examinar la planificación territorial proponiendo el supuesto que, de 2000 a 2020, las debilidades y amenazas son más significativas que las oportunidades y fortalezas. Se aplica una metodología que estandariza la información de instituciones gubernamentales en su diseño así como en la operacionalización de los índices que se construyen. Los resultados arrojan que durante todo el periodo y en la mayoría de las ciudades, la hipótesis se acepta parcialmente, proporcionando información relevante para la toma de decisiones en materia de planificación territorial.

*Palabras clave:* Planificación territorial; análisis estratégico; desarrollo sustentable.

## INTRODUCTION

**S**trategic analysis studies began as a tool used by corporate entities; however, their importance has led them to be considered in other scientific disciplines such as medicine, innovation, technological development, and territorial planning. In the latter area, they represent a valuable tool for generating information related to the factors involved in territorial development with a multidimensional approach. This allows those responsible for territorial planning to support their decision-making with scientific rigor and greater certainty for achieving positive results (Vas, 2017).

Also known as SWOT analysis, it allows for the evaluation of the strengths, weaknesses, opportunities, and threats of organizational structures and has become one of the main tools used by planners for spatial projection. For its successful implementation, four main factors must be considered: democratic and active citizen participation; training of the stakeholders that make up local governments; the implementation of a strategy evaluation program; and that are designed based on the characteristics of the territory. Otherwise, strategic planning will be destined to fail to meet the expected parameters, continuing the lack of order in urban development (Delgadillo 2016).

Territorial planning unquestionably demands a sustainable approach, due to the negative environmental consequences generated by humans. The main objective is to build a controlled, inclusive, and environmentally balanced transformation process that allows for the efficient allocation of public resources and involves local governments as the primary stakeholders in the urbanization process. Therefore, this article aims to conduct a strategic analysis of 17 cities in the state of Oaxaca during the period 2000-2020, to examine how these factors have impacted the territorial planning of the cities studied, proposing the assumption that, from 2000 to 2020, their weaknesses and threats are more significant than their opportunities and strengths in their territorial planning process.

## THEORETICAL FRAMEWORK

### **Territorial development theory: conceptualization and current challenges**

Territorial analysis is a complicated, multidisciplinary task that is not limited to geography; it involves a high level of implications due to the spatial

relationships of all the areas in which human beings operate. For Hernández (2015), it is a concept originating in the disciplinary field of geography, used in various branches of geography, and exported to other disciplines, acquiring characteristics based on the changes imposed by globalization. It is a concept that allows us to interpret the dynamics between the spatial dimension established by human beings, as well as their relationships in the cultural, social, political, economic, and environmental spheres (Montero and Herrera, 2020).

The simplest definition of territory is that it is a proportion of the Earth's surface belonging to a nation, city, or region, with geographical conditions in which the life of a species or an animal or plant community develops (Agudelo, 2005). Likewise, territory is a product of the evolution of its historical transformations, and therefore can be defined as the political, economic, and cultural construction of a spatial entity that allows for multiple social structures related to the State (Zago, 2016). Therefore, territory is not a static entity; on the contrary, it is part of a spatial dynamic with multiple aspects.

This interpretation establishes that there are various factors related to multidimensional growth and development in territories. For Godoy (2022), this allows us to leverage all local resources in the process of designing solutions to address diverse socio-territorial problems. Consequently, he urges the incorporation of horizontal negotiation models that consider the participation of local actors, as well as all the factors linked to the emergence of productive systems at this level (Bustos and Carbajal, 2019).

Furthermore, although various planning models exist, the truth is that all have a guiding principle established in the theory of territorial development, which in turn constitutes their theoretical foundation and forms the core of territorial design. Various authors define this theory as the process by which territories use their set of humans, institutional, environmental, and economies of scale resources to generate their own development conditions (Fantone, 2004; Olivera et al., 2021; Bustos and Carbajal, 2019). Furthermore, it establishes that the success of its implementation is based on an adequate projection of territorial planning for the efficient use of endogenous development factors.

Another necessary aspect is deciphering the structure of territories, considering the different political visions, as well as the dynamics of the elements that are part of the local economy (Anché, 2013). This requires a multidimensional analysis in the process of evaluating all the dimensions that generate dysfunctionality in the territory. But at the same time, it con-

siders structural weaknesses to propose solutions that address the root of the problem (Ríos, 2020). Unfortunately, historical patterns of territorial spatial organization prioritize peripheral development, leading to the emergence of unplanned urban centers (Berdegué *et al.*, 2015).

This situation makes territorial planning an odyssey, considering all the challenges that must be considered and overcome. The exponential growth of informal urbanization areas is one of the main obstacles, especially because it generates territorial problems. In this regard, Delgadillo (2016) points out that studies conducted from different theoretical perspectives agree that tolerance by state institutions allows the emergence of these types of irregular settlements.

For Lucero *et al.* (2022) and Roy (2013), there are three causes that allow us to understand territorial informality: a limited vision of popular, formal, and informal urbanization; the economic rights that recognize informal settlements as part of the land and real estate markets; and the lack of a legal analysis that addresses the incorporation of informal urbanization as a consequence of the opacity of government institutions in the illegal regularization of deeds. These irregular human settlements bring with them multidimensional problems, disrupting the urban order and triggering social, institutional, political, and territorial chaos (Lucero *et al.*, 2022). This is a problem that is not exclusive to territories with a large percentage of the population living in poverty or extreme poverty, given that in many cases they are often the business of companies that, in collusion with public officials, carry out opaque processes to profit from land use (Delgadillo, 2016; Roy, 2013).

This situation is also fueled by a deficient land market, unequal income, the persistence of an overwhelmed state apparatus, high costs, and technological backwardness in the construction industry (Lozano, 2018). However, society's participation in implementing these types of irregularities is conditioned by putting their own well-being before the common good, even when they jeopardize their own social, economic, and property security (Rivera, Torres, & Lima, 2022; Zhou, Pickett, & Timon, 2021; Zhou, Chen, & Zhou, 2022).

Hernández (2015) points out that these irregular settlements increase the risk of socio-environmental disasters and increase the vulnerability of both the population that inhabits them and the ecosystems around them. These results are also a consequence of the lack of planning for the prevention and mitigation of the effects of natural and man-made disasters (Rivera, Torres, and Lima, 2022). Together, these factors impede adequate

study of these territories, both due to the lack of basic services and the lack of public funding to provide them.

In this regard, Roy (2013) highlights that the increase in informal settlements promotes the conditions for the emergence of less compacted cities, which translates into an environmental, economic and social disadvantage. This causes a latent risk in the face of constant natural disasters generated by human actions against the environment over the years. In this regard, the UN (2020) points out that the Latin American and Caribbean region is the second most prone to registering natural disasters in the world, which is alarming considering the high levels of inequality and poverty experienced by most of the countries that comprise it. In Mexico, according to a study conducted by the National Civil Protection Coordination (CNPC), the National Center for Disaster Prevention (CENAPRED), and the Secretariat of Citizen Protection, the damage suffered by public and private sector property in recent years as a result of natural disasters has focused on housing, public and private infrastructure, as well as social costs such as deaths or disappearances (CENAPRED, 2021). These damages and human losses are estimated, on average, at \$2,476.9 million over the last 15 years; in macroeconomic terms, this represented 0.2 per cent of the Gross Domestic Product (GDP), with Baja California Sur, Chiapas, Sonora, and Veracruz being the states with the highest amounts of losses due to natural disasters (CENAPRED, 2021).

However, the largest percentage of the population affected by disasters, primarily by phenomena such as hurricanes, storms, and earthquakes, has been concentrated in the states of Veracruz, Oaxaca, and Chiapas (Anaya, 2022). Historically, because of the complexity and richness of their territories, these states have experienced the highest number of disasters, with 371, 125, and 86 events, respectively (Ayala, 2019). These events have led to an increase in social vulnerability, an accelerated and inadequate urbanization process, and persistent inequity in income distribution (UN, 2020).

Although natural disasters directly impact the socioeconomic well-being of the entire population, their effects are felt in greater numbers and magnitude in territories where growth planning is lacking. Mainly because the population living in these types of urban settlements experiences high levels of multidimensional exclusion, including a weakened capacity to respond to the consequences of the various risks to which they are exposed (Ríos, 2020). For Dasí and Sánchez (2022), two urgent actions are needed in response to this problem. First, contain the emergence of these types of informal settlements. Second, for those that already exist, analyze the dy-

namics of the territorial system's structures to determine the risks of their threats and weaknesses.

Finally, a sustainable approach is fundamental in all territorial planning, primarily because the urban development process that did not allow the emergence of informal settlements, reduces the impact on the environment due to population growth, and ensures the efficient allocation of urban space. There is no doubt that, given population growth and the environmental damage generated for many years, the application of sustainable foresight in the territories is the greatest challenge of this century, since it faces strong resistance to changing orthodox planning models by the authorities in charge of the urbanization process, mainly in the Latin American region (Moreno *et al.*, 2023).

### **Territorial development with a sustainable approach**

Territorial development is the product of the implementation of development models that operate in conjunction with all the elements that make up a territory, promoting the generation of learning and feedback proposals for the continuous improvement of planning processes (Moreno *et al.*, 2023). Designing a territorial development model involves understanding the structures and processes, defining objectives, and generating mechanisms to evaluate the urbanization process, considering all possible factors, both internal and external (Lindert, 2016). Ordoñez and Cisneros (2020) add that territorial development requires planning that guides and adopts a comprehensive, sustainable logic for territories, institutionalizing the achievement of some of the objectives of the 2030 Agenda.

In this regard, Barrios (2017) argues that considering territorial development with a sustainable approach requires considering the role of local actors, local governments, the contributions of the private sector, and the main dimensions that shape territorial potential. There are various approaches to the main dimensions of sustainable territorial development. Sepúlveda (2008) and Olivera *et al.* (2023) propose a multidimensional model for measuring sustainable territorial development that considers social, territorial, economic, environmental, political, and cultural aspects.

Therefore, sustainable territorial construction must be based on a system of shared interests, the perception of needs and the potential to meet them, and a healthy relationship with the environment (Muñoz and Saldívar, 2017). However, since the second half of the 2010s, sustainable territorial planning has faced various challenges such as poverty, inequality, climate change, water supply, food security, and health, to name a few.

From this perspective, Rejón *et al.* (2017) assert that urban growth is the main factor disrupting sustainable planning, both in the territory where it originates and in the territories that suffer collateral damage because of migration. Today, the issue of sustainability in territorial development is one of the most urgent on international agendas, especially because population growth combined with excessive use of natural resources hinders damage control and subsequent resolution (Muñoz and Saldivar, 2017). For Álvarez (2016), the Latin American region faces the most complex challenges in achieving structural change toward social progress and sustainable territorial development. For Olivera *et al.* (2023), achieving sustainable development implies transparent management of public resources, having public servants trained in decision-making, and, above all, efficient citizen participation.

To address these challenges, it is necessary to put the common good before the interests of business or privileged groups. This entails a thorough understanding of the main characteristics of territorial structures to construct diagnoses, plans, and alternatives that consolidate public policies for the common good, in harmony with the environment, and thus trigger balanced territorial development. From this perspective, it is necessary to carry out analytical processes on strategic management in decision-making, integrated into the design of sustainable territorial planning models and based on all the specificities of each territory (Moreno *et al.*, 2023). In conjunction with the implementation of specific projects and programs, sustainable territorial planning must integrate the achievement, monitoring, and evaluation of small objectives to consolidate large results over the years.

### **From institutional theory to strategic management for local government decision-making**

Over time, public and private organizations have found it necessary to seek optimal operating mechanisms to achieve their objectives, prioritizing the efficient use of their resources, taking advantage of technological evolution and the development of new paradigms (Bañuelos, 2017). According to Bolívar (2019), territorial management is the direct responsibility of their local governments, as they are public sector organizations that have institutional obligations to obtain positive results for citizens. The participation of these institutions is essential to have government models that implement management principles for the public sector, through methodologies that lead to improved territorial growth and the well-being of its inhabitants

(Olivera *et al.*, 2021). For Pacheco (2019), the theoretical dimensions that support local governments in the implementation of public policies to improve territorial management are two: institutional theory and strategic planning. For this reason, an organizational change in the development of local government activities, which historically show conflictive situations, bureaucratic complexity, lack of modernization, a democratic deficit, and diminished credibility, is urgently needed (Pacheco, 2019). It is also necessary to implement institutional theory models, through which local governments gain social acceptance because of complying with regulations and implementing good practices in established procedures (Rotundo and Mirabal, 2011). This is crucial for the selection, supervision, and evaluation of governments' capacity to formulate and implement public policies with scientific rigor (Vas, 2017). In accordance with the above, it is necessary to prioritize the generation of data for decision-making in the design of techniques necessary for local governments to incorporate direct information into their land use plans (Pacheco, Fernández, and Guedez, 2017). Strategic management requires organizational analysis from a comprehensive perspective, formulating, implementing, and constantly evaluating decisions across the functions that enable it to achieve its objectives (Olmos, 2019). This guides the analysis with the use of statistical tools, proposing measures focused on building long-term territorial development, with important complements such as creativity (Moreno *et al.*, 2023). This type of approach provides added value by enabling rational resource management, avoiding imbalances, preserving sustainability, adjusting related to market expectations, and promoting continuous improvement (Vas, 2017).

Strategic planning also generates levels of territorial competitiveness; that is, it has a significant impact on the functioning of the other dimensions found in the territory, resulting in a virtuous circle (Flor, 2020). Lemus and De la Garza (2020) affirm that the additional value obtained through strategic planning lies in guiding, accelerating, and facilitating the integration of sustainability into territorial development, promoting the well-being of its inhabitants. But, at the same time, it allows the public apparatus, represented in local governments, to respond in a timely manner to the new challenges that the public administration faces, generating attention and conformity from the beneficiaries (Maquera, 2022).

According to Ortega (2011), the two main problems underlying poor strategic planning are the financial weakness of local governments and the institutional framework tainted by irregular procedures. Olivera *et al.* (2021) add that institutional complacency and resistance to change, not to

mention the lack of updating and incorporating innovation and technology into the performance of their activities, lead to stagnation in territorial management. These challenges force the State to promote the necessary legislation to reduce the negative effects of orthodox paradigms that no longer meet current needs, demands, and obstacles in territorial planning (Olivera *et al.*, 2023).

Faced with these challenges, planners must analyze the importance of rationalities in territorial planning, considering the action instruments of local authorities and all the resources at their disposal (Velasco, Martinez, & Cruz, 2021). For this reason, in addition to statistical tools for projecting a territory's planned long-term growth, intervention scales must be defined based on objectives, resident participation, and the initial conditions of each territory. In other words, a strategic analysis is necessary to understand the internal and external factors underlying territorial dynamics. It is also essential to evaluate the components available in the various territorial dimensions for use in planning the urbanization process.

### **Strategic analysis as a territorial planning tool**

The heterogeneity of realities, resources, and capabilities makes it difficult to establish a single model for designing strategic territorial planning processes with a sustainable approach, so the results will also vary markedly from country to country, city to municipality (Moreno *et al.*, 2023). Therefore, promoting the development of any territory must effectively foster social ownership of its space based on its geographic and economic characteristics, including the availability of its environmental resources (Güel, 2018). Failure to do so will lead to contradictions between planning designed from a desk and planning in the field, resulting in losses of economic and material resources (Olivera *et al.*, 2023). Additionally, it increases the likelihood that most projects will remain unfinished due to a lack of resources for monitoring, resulting in minimal efficiency (Olivera *et al.*, 2020). Given the many variations that may occur between regions, strategic planning requires models designed exclusively for the specific characteristics of the region to be planned, taking into account three guiding principles: environmental stewardship; balanced economic growth; and stewardship of local heritage (Olivera *et al.*, 2023; Ayala, 2019; Moreno *et al.*, 2023). For Quinzacara and Vargas (2016), strategic analysis is a dynamic process that allows for the identification of strengths and weaknesses in a competitive environment, with the goal of increasing the efficiency of available resources to maximize results. Also known as SWOT analysis, this analysis

is based on an assessment of current strengths and favorable opportunities for the future, as well as current weaknesses in the face of future threats. An ordinal rating scale is used to better assess each factor, enabling informed decision-making (Moreno *et al.*, 2023).

For Gil and Segovia (2017), every planning process requires the implementation of a strategic analysis that considers the fundamental networks between all the factors that interrelate in the spaces that make up the territory. This analysis, as stated in previous paragraphs, includes a unique design for each territory, implementing a continuous learning process that encourages the participation and dissemination of knowledge among all local stakeholders, public officials, and the private sector in each territory. This increases the likelihood of long-term success in managing the territorial urbanization process. However, to make the necessary adjustments in a timely manner and avoid potential future problems, it is necessary to promote a culture of periodic evaluation for each of the dimensions analyzed in the SWOT analysis, primarily the planning of long-term budgeted financial capital.

Although strategic analysis is a process that generates innovative proposals and action plans that provide a basic structure for planning a given organization, it has two main disadvantages. Patience, discipline, and persistence are required for its implementation. A long period of time from its inception to its completion with the presentation of the final report represents a high economic cost that can be an impediment for certain types of organizations (Novoa, 2021). Likewise, it must overcome challenges during the process, such as ensuring the quality and reliability of the information, having trained personnel for its implementation, a reliable feedback plan for self-assessment, the reliable participation of all local stakeholders, and preventing the influence of large corporations (Unceta, Castro, & García, 2017).

In short, from the perspective of sustainable territorial planning, there is a strong relationship between proper territorial management and the reduction of disaster risk factors to improve citizens' well-being (Ayala, 2019). However, in the combination of all territorial dimensions, the cornerstone of any development model is participation, combined with the ongoing training of local governments, primarily because they have the economic capital, infrastructure, and the constitutional obligation to promote, plan, execute, and evaluate territorial development processes (Barrios, 2017). Their importance also lies in the fact that these institutional entities possess direct knowledge and information about the characteristics of their territo-

ries, as well as their inhabitants, which represents an advantage in strategic analysis for the development of proposals. To address the disadvantages and challenges that strategic planning may face, it is necessary to consider the characteristics of each territory to obtain a planning model that is close to ideal.

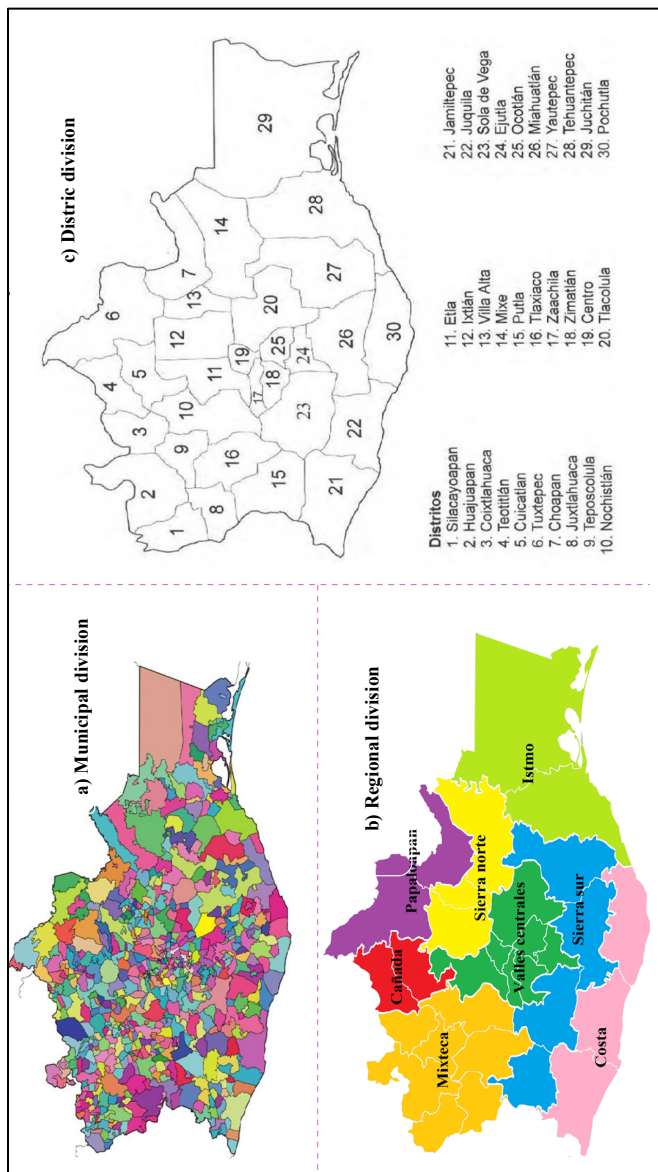
### **Multiculturality and territorial planning in the State of Oaxaca**

The state of Oaxaca is world-renowned for its multicultural richness, highlighted by its gastronomy, traditional festivals, and folklore. Furthermore, it is home to the greatest variety of indigenous groups, where 16 ethno-linguistic groups coexist: Zoque, Zapotec, Triqui, Nahuatl, Mixtec, Mixe, Mazatec, Ixcatec, Huave, Cuicatec, Chocho, Chontal, Chinantec, Chatino, Amuzgo, and Popoloca (Barbosa, 2018). Ninety percent of its territories have rugged terrain due to the intersection of the Sierra Madre del Sur, the Sierra Madre de Oaxaca, the Sierra Madre de Chiapas, and the Sierra Atravesada, which also results in a complex environmental heterogeneity with high levels of biodiversity, comprising more than 12,500 species of flora and fauna (Ordóñez and Rodríguez, 2008). These characteristics make Oaxaca a state with significant potential resources derived from its natural and environmental wealth and the development of activities linked to the local culture of its people. This also positions it as an entity with the greatest complexity in accessing its communities (Cortés and Delgadillo, 2018).

From a political perspective, its political-territorial division is one of the most complicated in all of Mexico (Map 1), as it is made up of 570 municipalities, 30 districts, and 8 regions, which hinders multi-level inter-institutional relations (Olivera *et al.*, 2021). This territorial condition hinders proper management for three main reasons. First, because the number of municipalities generates a greater division of public budgets. Second, geographical conditions represent a natural obstacle to the inclusion of technology in territorial planning. Finally, the diversity of political ideologies can lead to instability that affects projects in the long term (Becerra and Hernández, 2014). These asymmetries between the various actors and their territories, for the most part, result in scenarios of social conflict (Cortés and Delgadillo, 2018).

Taken together, the natural and man-made characteristics of the state of Oaxaca represent a significant challenge in terms of territorial planning. These factors validate the principle that each model for promoting sustainable territorial development in this state must be unique to each territory, making the most of its endogenous resources.

Map 1: Political-territorial division of the state of Oaxaca



Source: Taken from Olivera *et al.*, (2021).

Furthermore, this state is used as a transit point for migrants, primarily South Americans, on their way to the United States, which undoubtedly impacts its planning models. Although historically this migratory dynamic was centered in cities located on the Isthmus of Tehuantepec, during the course of 2023, the number of migrants stationed on central roads in the state capital and other major cities has increased alarmingly (Olivera, 2023). This situation, if not addressed effectively, can lead to problems such as the emergence of irregular urban settlements, as occurred in various Colombian cities, where migrants, primarily of Venezuelan origin, invaded lots to build their homes (Guzmán, 2019). This is a source of problems in public health, public safety, social instability, and urban mobility. These aspects impede efficient strategic analysis and diminish the participation of local stakeholders in the planning process, despite the use of public funds to address problems generated by external actors.

In short, strategic planning requires a thorough analysis of the conditions and characteristics of each territory during its urbanization process. The state of Oaxaca is no exception; its extraordinary natural conditions provide a stimulus for the design of a planning model that allows for sustainable territorial development. This model takes advantage of the strengths and opportunities of each territory, while also generating proposals to address threats and overcome its weaknesses. For this reason, it is important to conduct research that allows for the generation of information on the characteristics of Oaxacan territories in order to improve decision-making, prioritizing problem-solving and maximizing growth opportunities. Finally, based on all the above, the study has two objectives: to conduct a strategic analysis of the main cities in the state of Oaxaca and to answer the following question: How have strengths and opportunities influenced weaknesses and threats in the sustainable territorial planning of the cities studied?

## METHODOLOGY

Strategic analysis is a tool that aims to implement a controlled and inclusive demographic transformation process, yet in balance with the environment. It allows for the efficient use of public resources to strengthen the management of local governments to fulfill their responsibilities to their citizens. This is especially true in this era where chaos and a multidimensional crisis have begun to mark a trend in urbanization processes in various parts of the world. There is extensive research on this topic; however, for this article, five works were considered. Territorial planning processes for

development and the SDGs: comparison of local processes in La Pampa, Argentina, by Moreno et al. (2023), which provides data on the evaluation, construction, development, and results of the strategic plans of two Argentine cities. Another work is Strategic planning of cities: new instruments and processes, by Güel (2018), a study that demonstrates that strategic planning can be adapted to the conditions of any urbanization process, placing local governments as the main promoters of efficient planning. Governance and territorial economic development. The case of the association for the development of Patagones, by Diez (2020), which shows a specific case of territorial governance, as well as the implementation of public policies as a result of a strategic analysis. Methodology to estimate the level of sustainable development of territories, by Sepúlveda (2008), a work that studies territorial development framed in four dimensions: environmental, social, economic, and political-institutional. It proposes the analysis of information and its subsequent standardization with the aim of structuring indices to measure development levels. Finally, there is How much does local governance impact sustainable development? Case study of Oaxaca, Mexico, by Olivera *et al.*, (2023), a research that analyzes and demonstrates the relationship between local governments and sustainable development at the local level, with a model that highlights the cultural aspect.

This is a correlational and descriptive study of 17 cities in the state of Oaxaca, Mexico (Map 2). The objective of this study is to conduct a strategic analysis of these cities, given their distinct characteristics (Table 1). It proposes the hypothesis that the weaknesses and threats of the cities studied are more significant than their opportunities and strengths in the process of sustainable territorial development planning for the period 2000-2020. It is important to note that this work provides greater depth compared to the reference studies, increasing the number of variables and proposing a quantification of the strategic analysis for a better interpretation of the diagnosis. The study cities were chosen based on two criteria. On the one hand, eligibility criteria: cities with more than 8,000 inhabitants, which are an important socioeconomic region of the state. On the other hand, the exclusion criterion: cities with fewer than 8,000 inhabitants and lacking information. The classification of cities is according to the size of their population, a recognized methodology in urban planning, which orders them into small, medium and large cities (Avendaño *et al.*, 2020).

Map 2: Location of study cities

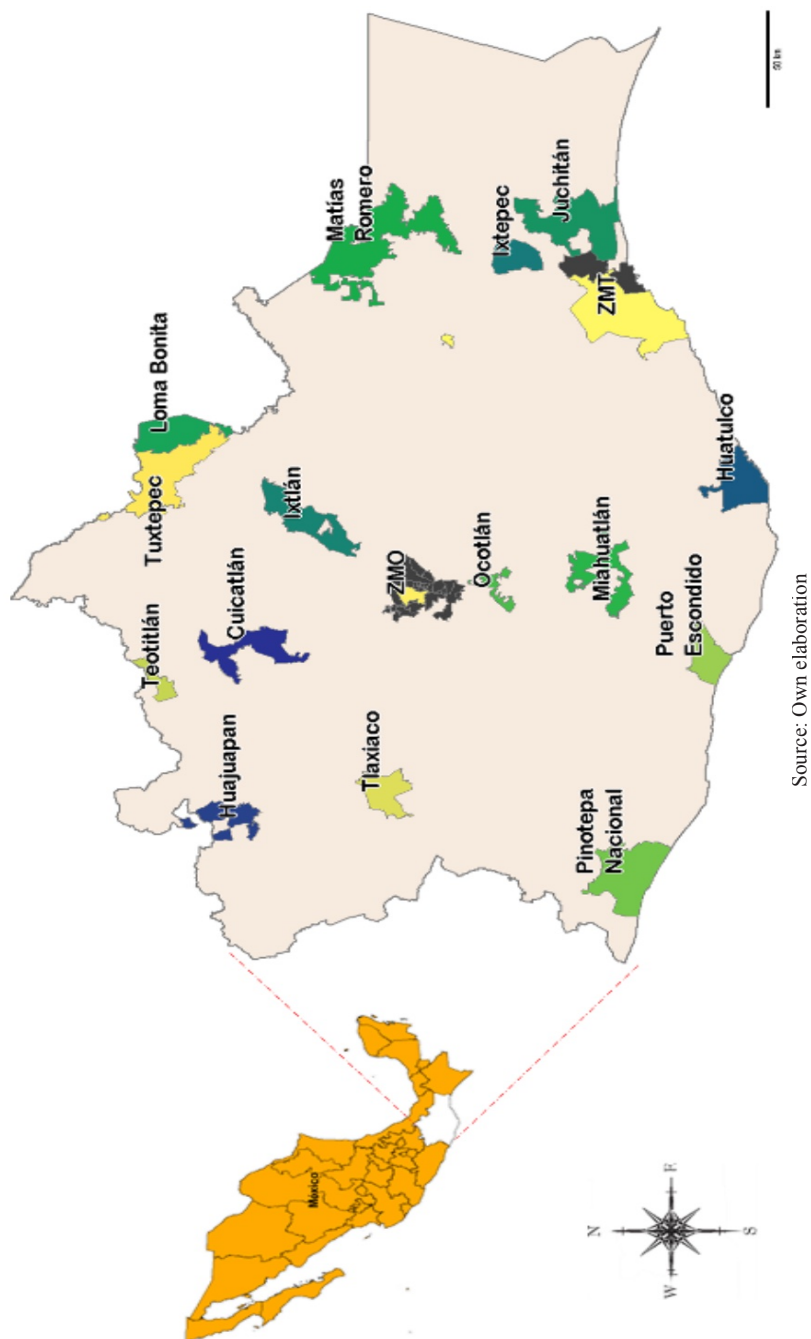


Table 1: Characteristics of the study cities

| Official Name                     | Everyday name | Abreviation | Population (year 2000) | % Native population (year 2000) | Region in Oaxaca | Classification according to size |
|-----------------------------------|---------------|-------------|------------------------|---------------------------------|------------------|----------------------------------|
| Ixtlán de Juárez                  | Ixtlán        | IXN         | 8,268                  | 61.88                           | Sierra Norte     | Small                            |
| San Juan Bautista Cuicatlán       | Cuicatlán     | CUI         | 9,945                  | 13.82                           | Cañada           |                                  |
| Teotitlán de Flores Magón         | Teotitlán     | TEO         | 9,876                  | 17.83                           | Cañada           |                                  |
| Ciudad Ixtepec                    | Ixtepec       | IXP         | 22,675                 | 21.05                           | Istmo            |                                  |
| Loma Bonita                       | Loma Bonita   | LOB         | 40,877                 | 2.56                            | Papaloapan       |                                  |
| Matías Romero Avendaño            | Matías Romero | MAR         | 40,709                 | 12.00                           | Istmo            | Median                           |
| Miahuatlán de Porfirio Díaz       | Miahuatlán    | MIA         | 32,555                 | 9.56                            | Sierra Sur       |                                  |
| Ocotlán de Morelos                | Ocotlán       | OCO         | 18,183                 | 3.65                            | Valles Centrales |                                  |
| Puerto Escondido                  | Puerto        | PES         | 32,471                 | 3.41                            | Costa            |                                  |
| Heroica Ciudad de Tlaxiaco        | Tlaxiaco      | TLX         | 29,026                 | 25.87                           | Mixteca          |                                  |
| Crucecita                         | Huatulco      | CRU         | 28,327                 | 4.25                            | Costa            |                                  |
| Santiago Pinotepa Nacional        | Pinotepa      | PIN         | 44,193                 | 19.04                           | Costa            |                                  |
| Huajuapán de León                 | Huajuapán     | HJP         | 53,219                 | 7.88                            | Mixteca          |                                  |
| Juchitán de Zaragoza              | Juchitán      | JUC         | 78,512                 | 57.49                           | Istmo            |                                  |
| San Juan Bautista Tuxtepec        | Tuxtepec      | TUX         | 133,913                | 13.42                           | Papaloapan       | Big                              |
| Zona Metropolitana de Tehuantepec | ZMT           | ZMT         | 145,567                | 12.75                           | Istmo            |                                  |
| Zona Metropolitana de Oaxaca      | ZMO           | ZMO         | 501,283                | 8.33                            | Valles Centrales |                                  |

Source: Own elaboration with data from Olivera et al., (2023)

Methodologically, the data are organized into six dimensions of the territory: political, economic, social, environmental, territorial, and cultural (Table 2). Each of these dimensions is structured with various indicators, which are assigned based on the recommendations of the literature reviewed, as well as considering the authors' knowledge of the study territories. These indicators were operationalized using descriptive statistical methods, allowing for the design of a database comprised of information obtained from various government institutions.

Table 2: Operationalization of indicators

| Dimension   | Indicator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Dimension     | Indicator                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Policy      | <ul style="list-style-type: none"> <li>-Federal municipal revenues (MFI)</li> <li>-Municipal own income (IMP)</li> <li>-Total vote for municipal president (VTM)</li> <li>-Type of Municipal Government (TGM)</li> <li>-Institutional Governance System (IGS)</li> <li>-Institutional Technology (IT)</li> <li>-Audits performed (AR)</li> <li>-Public Expenditures (GP)</li> <li>-Public debt (PD)</li> <li>-Women in the office of municipal president (MCP)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                               | Economic      | <ul style="list-style-type: none"> <li>-Economic units (EU)</li> <li>-GDP per capita income (CPI)</li> <li>-Inflation rate (TIF)</li> <li>-Interest Rate (TIS)</li> <li>-Unemployment rate (TD)</li> <li>-Minimum annual salary (SM)</li> <li>-Economically active population (EAP)</li> </ul>                                                                                                      |
| Social      | <ul style="list-style-type: none"> <li>-Migratory Intensity (MI)</li> <li>-Population growth (CP)</li> <li>-Incidence of crime (ID)</li> <li>-UNDP Health Index (HI)</li> <li>-Health personnel in clinics (PCS)</li> <li>-Population with access to health services (PASS)</li> <li>-Total health clinics (TCS)</li> <li>-UNDP Education Index (EI)</li> <li>-Number of schools (NE)</li> <li>-Number of teachers (ND)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                      | Environmental | <ul style="list-style-type: none"> <li>-Per capita potable water (APC)</li> <li>-Environmental Complaints (DA)</li> <li>-Forest Fires (FI)</li> <li>-Area affected by forest fire (SAI)</li> <li>-Reforested area (SR)</li> <li>-Wastewater treatment plants (WWTP)</li> <li>-Volume of treated wastewater (VTAR)</li> <li>-Solid waste (SW)</li> <li>-Waste collection vehicles (WRCVs)</li> </ul> |
| Territorial | <ul style="list-style-type: none"> <li>-Inhabited housing (VHA)</li> <li>-Dwellings with floor material other than earth (VPDT)</li> <li>-Dwellings with roofing material other than cardboard (VTDL)</li> <li>-Housing using gas for cooking (VGC)</li> <li>-Housing w/sanitary (VCS)</li> <li>-Housing w/electricity (VCE)</li> <li>-Housing w/drainage availability (VCD)</li> <li>-Housing w/piped water (VCA)</li> <li>-Buildings in the house (BEV)</li> <li>-Communal and ejido lands (TEC)</li> <li>-Commerce Units (CU)</li> <li>-Bank Branches (SB)</li> <li>-Drainage and sewerage systems (SDA)</li> <li>-Drinking Water Systems (SAP)</li> <li>-Agencies of the Public Prosecutor's Office (AMP)</li> <li>-Agents of the Public Prosecutor's Office (ASMP)</li> <li>-Length of the road network (LC)</li> <li>-Liconsa points of attention (PL)</li> </ul> | Cultural      | <ul style="list-style-type: none"> <li>-Population speaking indigenous language (PHLI)</li> <li>-Local gastronomy (GL)</li> <li>-Traditional festivals (FT)</li> <li>-Hospitalized tourists (TH)</li> <li>-Libraries (BS)</li> <li>-Casas de la cultura (CC)</li> <li>-Cultural Expression (CE)</li> </ul>                                                                                          |

Table 2: Continuation

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Sources | Bank of Mexico (BM); United Nations Development Program (UNDP); National Water Commission (Conagua); State Electoral Institute (IEEPCO); National Cultural Information System (SNIC); Ministry of Public Education (SEP); National Institute for Federalism and Municipal Development (INAFED); National Population Council (CONAPO); National Council for the Evaluation of Social Development Policy (CONEVAL); National Institute of Statistics, Geography and Informatics (INEGI). |  |  |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|

Source: Prepared by the authors based on Moreno *et al.* (2023); Güel (2018); Diez (2020); Sepúlveda (2008) and Olivera *et al.* (2023)

Subsequently, for the descriptive SWOT analysis using indices, the indicators are standardized using the Sepúlveda (2008) methodology. This methodology establishes that, according to the researcher’s criteria, Equation 1 is used for information that is considered to have a positive impact if growth is recorded throughout the study period; in contrast, Equation 2 is used when the impact is considered negative. The following scale is used to evaluate each index: 0.000 to 0.200 (very low); 0.210 to 0.400 (low); 0.410 to 0.600 (medium); 0.610 to 0.800 (high); and 0.810 to 1.000 (very high).

Ic = (VR-Vmin)/(Vmax-Vmin)

Equation 1

Ic = (VR-Vmax)/(Vmin-Vmax)

Equation 2

Where:

Ic = index of the component

VR = actual value in the year of study

Vmax = maximum value in the year of study

Vmin = minimum value in the year of study

Finally, to carry out the strategic analysis and test the proposed hypothesis, we return to what was proposed in the works of Moreno *et al.* (2023), Güel (2018), Diez (2020), Sepúlveda (2008) and Olivera *et al.* (2023). Likewise, the classification of the indices into the categories of strengths, opportunities, weaknesses, as well as threats, was carried out considering the experience of the territory by the authors as well as the theoretical information obtained. Subsequently, according to the classification accor-

ding to the size of the study cities, an average is obtained for the analysis of all the SWOT factors.

## **SOCIODEMOGRAPHIC CONTEXT OF THE STATE OF OAXACA**

The state of Oaxaca, located in southwestern Mexico, is the fifth largest state in the country with 93,757 km<sup>2</sup>, representing 4.8 per cent of the total Mexican territory. It was home to 4,132,148 inhabitants, according to the 2020 census, making it the tenth most populated state in the country (Olivera *et al.*, 2021). In addition to its diverse cultural characteristics, this state has historical aspects that reflect its stagnant development. According to CONEVAL (2022), the state of Oaxaca was ranked second in 2020, with a very high level of social backwardness. In another report, called “Poverty Measurement 2022”, also by CONEVAL (2022), Oaxaca recorded alarming social outcomes in 2022. It ranks third nationally in terms of population living in poverty (58.4 per cent) and extreme poverty (20.2 per cent). 65.7 per cent of its population lacks access to healthcare services, and 28.6 per cent lacks access to nutritious, quality food, which is related to the 61.6 per cent of its population living in working poverty (INEGI, 2023).

Regarding public safety, the state of Oaxaca also records various problems. It is estimated that, during 2022, public safety was the third most concerning issue for 41.9 per cent of the population, and 74.4 per cent reported that they consider living in their surroundings, neighborhoods, or towns to be unsafe (INEGI, 2023). Additionally, ATMs on public roads, banks, and highways are the three main public and private spaces where people feel unsafe. To make matters worse, the alarming number of femicides in the state of Oaxaca has been reported. From January to September 2023, 34 such crimes were recorded, placing the state in sixth place nationwide (SESNSP, 2023).

Likewise, in environmental matters, it warns of complex challenges. Since October 8, 2022, the city of Oaxaca de Juárez, the state capital, has experienced one of its most recent crises regarding waste disposal. This is due to the closure of the sanitary landfill located in the municipality of Villa de Zaachila, which had been operating for 20 years, exceeding its useful life. In this regard, on October 18, 2023, the state government announced the start of construction on the Comprehensive Urban Solid Waste Reclamation Center, which will store and treat the approximately 500 tons of waste generated on average daily in the capital city alone, along with that of the other 28 municipalities (Universal, 2023). This situation, although a problem that affects the municipalities belonging to the Oaxaca Metro-

litan Zone, signals a call to attention for other cities to develop their solid waste strategies. Another problem facing the state of Oaxaca is the drought, a situation that will worsen in 2023, as the number of municipalities in this situation will increase four times compared to 2022 (CONAGUA, 2023). This problem is compounded by another environmental issue, namely the pollution of various hydrological systems, such as rivers, streams, and lagoons, resulting from the increased discharge of wastewater into these tributaries (Ballesteros *et al.*, 2020). This, combined with the lack of natural rainwater harvesting centers, not only in urban centers but also in semi-urban areas, creates a high likelihood of drinking water shortages in the capital of the state of Oaxaca, as well as in nearby municipalities (Pozas, 2017). The presentation of this general context for the state of Oaxaca aims to provide information on various socioeconomic dimensions, relevant to any state, and also to relate the results of each city to the state's overall picture. According to the data, Oaxaca faces increasingly serious multidimensional problems, a consequence of years of neglect by state and municipal governments. Recently, a different political party than the one that historically governed the state has assumed power; however, during its administration, it will have to confront the consequences of difficulties that were not addressed at the time. Consequently, studies are needed to generate information banks that allow for better decision-making, focusing on problem-solving, with the goal of efficiently leveraging all resources—economic, human, and infrastructure. Success will depend on the ability of the state and local governments to engage all local stakeholders in improving land use planning.

## RESULTS

To present and compare the results, management elements are organized to provide a quantitative assessment using indicators that are an active part of the study cities. Using criteria such as clarity, relevance, and feasibility, a strategic SWOT analysis is developed to identify strengths, opportunities, weaknesses, and threats. Table 3 shows the composite analysis of 62 indicators, which indicate that the study cities have a significant number of strengths (27), primarily the total vote for municipal president (VTM), the number of economic units (UE), and their economically active population (EAP). This indicates a solid local political system, as well as economic dynamics. Regarding opportunities (20), the analyzed cities stand out in aspects such as federal municipal revenue (IMF), local gastronomy (GL),

traditional festivals (FT), cultural expression (EC), trade units (UC), and commercial branches (SC).

In contrast, the study cities also have weaknesses (8), although with few reagents, they are significant, especially the type of municipal government (TGM), the municipal government system (SGM), public debt (DP), areas affected by forest fires (SAI) and the increasing crime incidence (ID). Regarding threats (7), the inflation rate (TI), the interest rate (TIS), forest fires (IF), the minimum wage (SM), as well as population growth (CP), are the main indicators in the study cities. On average, it is established that the study cities register characteristics that, through adequate territorial planning, would expect a balanced sustainable territorial development in the long term.

Table 3: Strategic analysis of the study cities

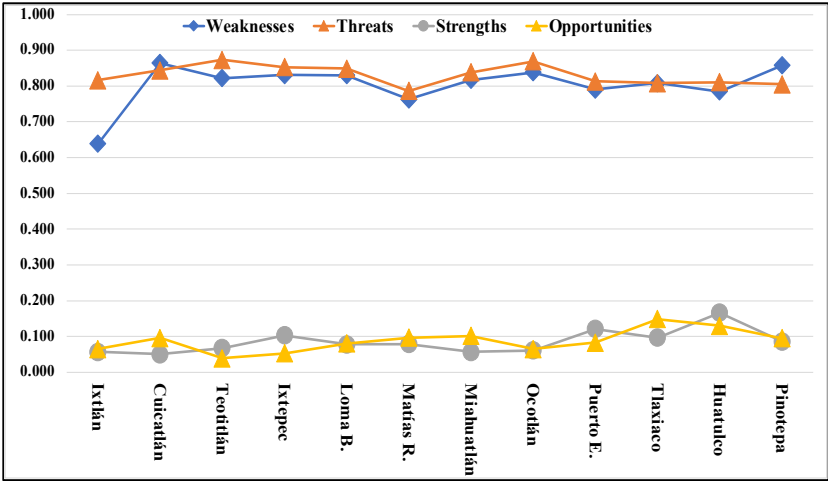
| Strengths (+) |     |      |      | Opportunities (+) |     |      | Weaknesses (-) |     | Threats (-) |     |
|---------------|-----|------|------|-------------------|-----|------|----------------|-----|-------------|-----|
| APC           | IMP | VRR  | ASMP | MCP               | VA  | SB   | TGM            | RS  | TIF         | SM  |
| PTAR          | VTM | VPDT | BS   | TI                | VCD | PL   | SGM            | MI  | TIS         | TEC |
| TCS           | AR  | VTDL | PCS  | IMF               | BEV | EC   | DP             | ID  | DA          | CP  |
| VTAR          | UE  | VCS  | PASS | GP                | FT  | LC   | TD             | SAI | IF          |     |
| SDA           | IPC | VCE  | IE   | SM                | GL  | PHLI |                |     |             |     |
| SAP           | PEA | VCA  | ND   | UC                | UC  | CC   |                |     |             |     |
| AMP           | VGC | NE   |      | SR                |     | TH   |                |     |             |     |

Source: Prepared by the authors. The meaning of the acronyms is found in Table 2.

Once the strategic analysis is completed, a comparative study of the cities is conducted by size. Figure 1 shows the small cities, which report high levels of threats and weaknesses; except for Ixtlán de Juárez, which has a medium level of weaknesses. In contrast, the strengths and opportunities of all the small cities are very low, with a few exceptions such as Huatulco, Tlaxiaco, and Puerto Escondido, which present a slight difference with the rest.

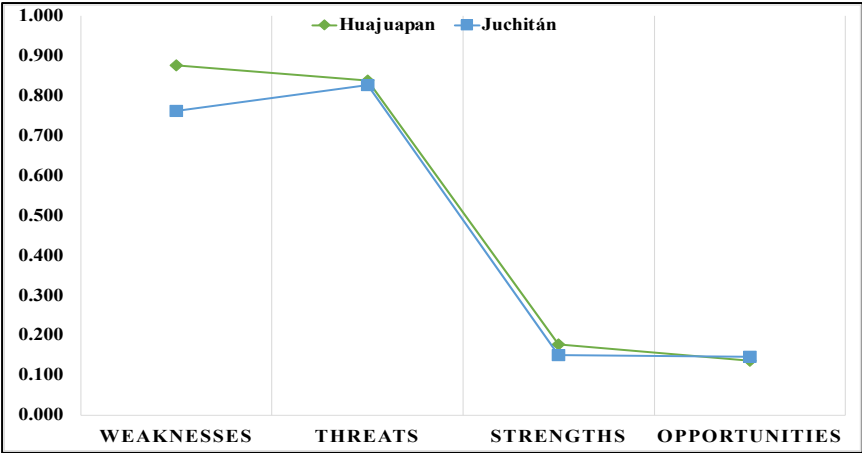
Figure 2 shows the dynamics of Huajuapán de León and Juchitán de Zaragoza, medium-sized cities, where the weaknesses and threats are very high, which contrasts with the low levels of their strengths and opportunities. Their main weaknesses and threats include increased crime; population growth; lack of potable water supply; saturation of the healthcare system; inadequate solid waste treatment; and low voter turnout. Regarding strengths and opportunities, these cities share similar characteristics, such as: a vast public budget; high educational levels; being centers of commercial exchange; and, in the case of Juchitán, being part of the strategic plan for the Isthmus of Tehuantepec interoceanic corridor.

Figure 1: Strategic analysis in the small study cities



Source: Prepared by the authors based on Table 2.

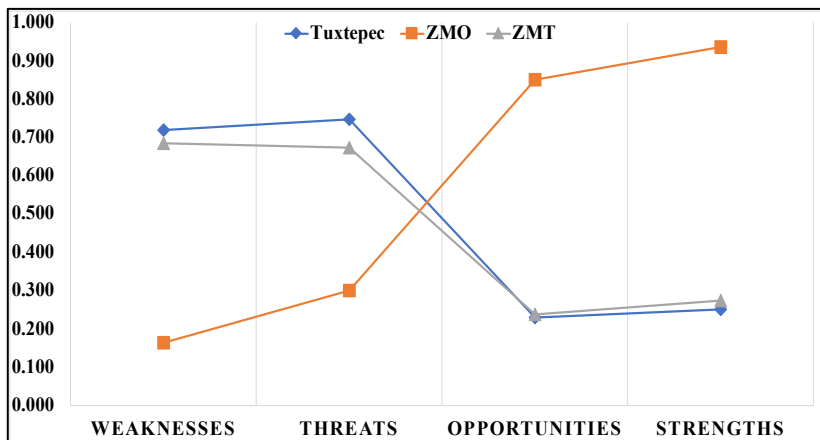
Figure 2: Strategic analysis in medium-sized cities



Source: Prepared by the authors based on Table 2.

Regarding the analysis of large cities, including Metropolitan Areas (Chart 3), Tuxtepec and the Metropolitan Area of Tehuantepec (ZMT) stand out as having high levels of weaknesses and threats, but average levels of strengths and weaknesses. This is interesting considering that the ZMT has a larger territory than Tuxtepec. These cities also have similar weaknesses and threats, mainly: lack of drinking water supply; drought; increased crime; low voter turnout; migration; and the growth of irregular human settlements. Furthermore, their main strengths and opportunities include proximity to other states in the country for commercial exchange; a large expanse of land for primary activities; a vast public budget; and, in the case of the ZMT, being part of the Isthmus of Tehuantepec interoceanic corridor.

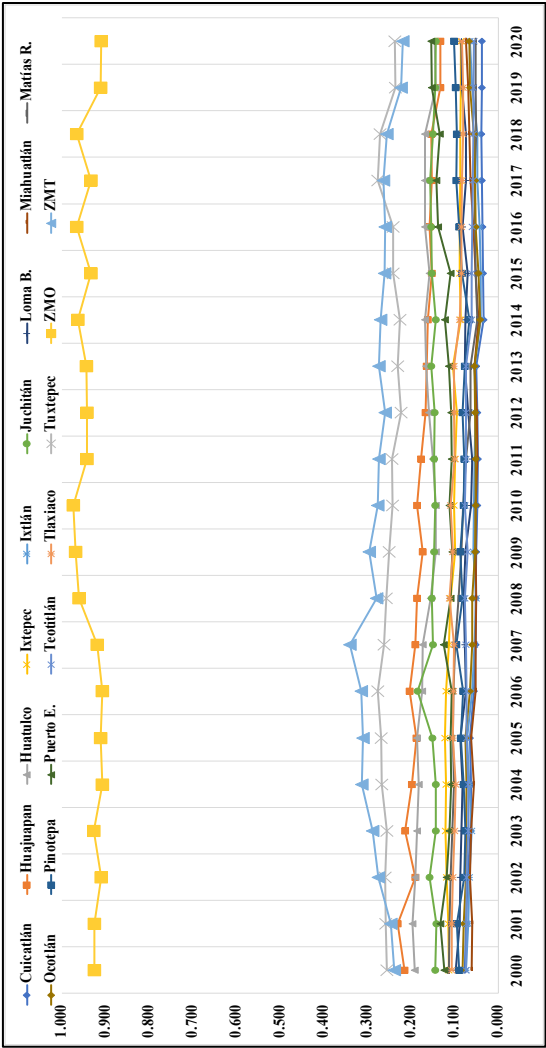
Figure 3: Strategic analysis of large cities and Metropolitan Areas



Source: Prepared by the authors based on Table 2.

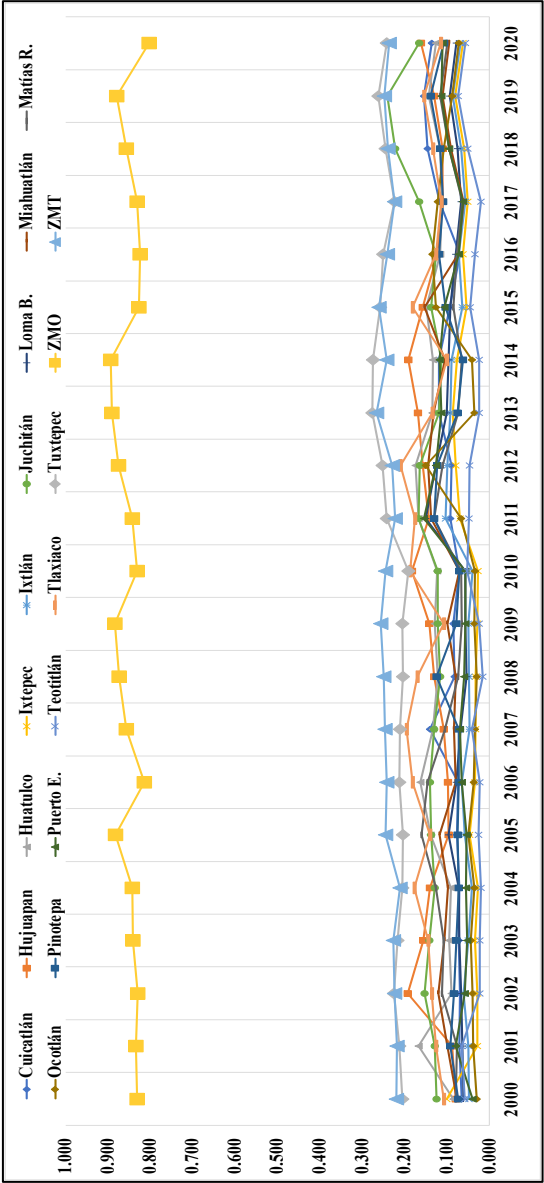
For its part, the Oaxaca Metropolitan Area (ZMO) is the exception compared to all the cities analyzed because its level of strengths and opportunities is very high, while its level of weaknesses and threats is low. This makes sense considering that it concentrates important cities such as Oaxaca de Juárez (the state capital), Santa Lucía del Camino, and Santa Cruz Xoxocotlán, which have a high economic dynamic. Added to this is the region's tourist attractions and the concentration of infrastructure for goods and services. However, it currently faces four problems that, if not resolved in the short term, could affect the trend of the results. These problems are: poor storage and treatment of solid waste; increasing public safety; unemployment; and gentrification.

Figure 4: Strengths index of the study cities, 2000-2020



Source: Prepared by the authors based on Table 2.

Figure 5: Opportunity index, 2000-2020



Source: Prepared by the authors based on Table 2.

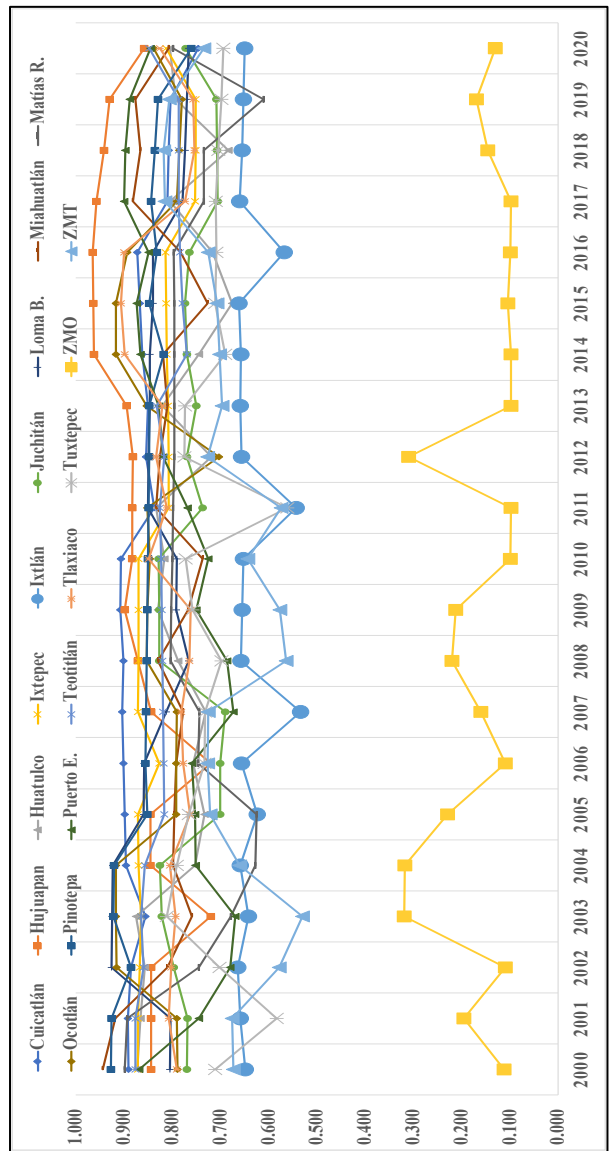
Regarding the strengths index (Chart 4), it shows that the Oaxaca Metropolitan Zone (ZMO) registers very high levels, in contrast to the rest of the cities that register low to very low levels. The Tehuantepec and Tuxtepec Metropolitan Zone stands out with a better level compared to the rest of the cities that present critical levels in this aspect in their territory. Meanwhile, the opportunities index (Chart 5) also places the Oaxaca Metropolitan Zone with a very high level, noting its best results in 2005 and 2009; with worse results in 2006, 2015 and 2020, although in these years it maintained its very high level. In contrast, the rest of the cities show that their index ranges from low to very low, and, in the case of Tuxtepec and the Tehuantepec Metropolitan Area, during 2004, from 2009 to 2012 and in 2020, their index registers a very low level, on par with the rest of the cities studied.

The weaknesses index (Chart 6) shows that the Oaxaca Metropolitan Zone has a very low level from 2000 to 2002, during 2006, 2007, 2010 and 2011, and from 2013 to 2020; with a low level, from 2003 to 2005, from 2008 to 2009 and in 2012. For Tuxtepec and the Tehuantepec Metropolitan Zone (ZMT), the index has a medium level during 2001, 2004, 2005, 2011 and 2019. For the rest of the cities analyzed, it records that the index for all has a high level and; in the case of Huajuapán, from 2014 to 2017 its level is very high.

For its part, the threat index (Chart 7) records the Oaxaca Metropolitan Zone (ZMO) at a low level during 2000 and 2001, with a medium level from 2002 to 2020. As for the Tehuantepec Metropolitan Zone (ZMT), it reports slight variations in its index, with a medium level in most of the study years, except for 2009, 2015 and 2016, in which the index level was very high. For the rest of the cities, the index ranges from high to very high in 2003, 2004, 2011, and from 2013 to 2016, with a similarity in the dynamics of its index in most of the study years; with exceptions in Tuxtepec.

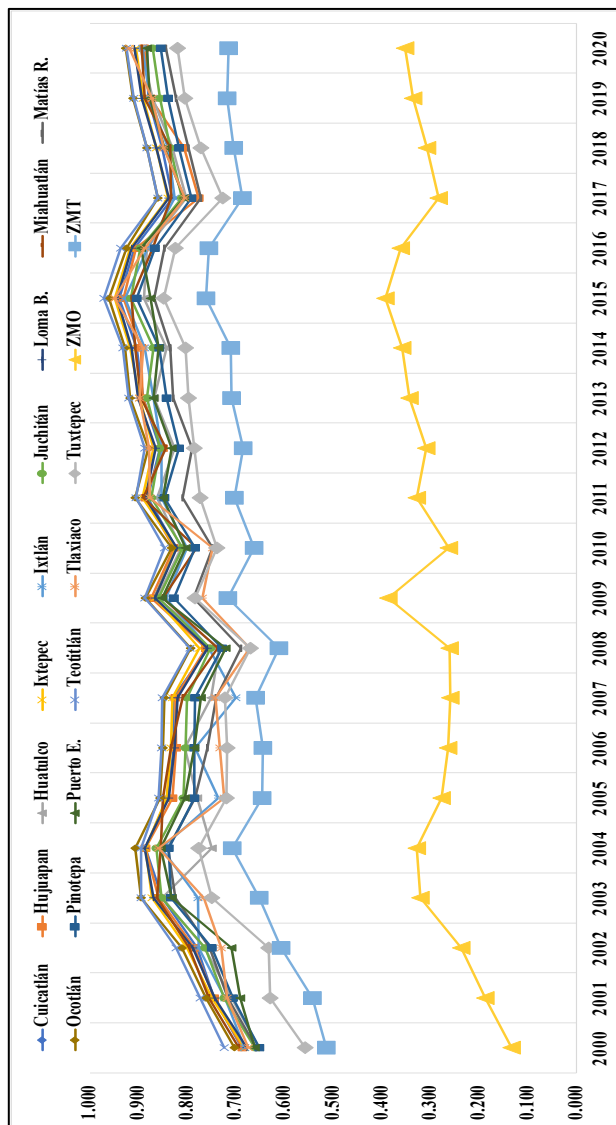
From this perspective, after analyzing all the factors comprising the SWOT analysis of the study cities, it is evident that the levels of the weaknesses and threats index are, by far, higher than the strengths and opportunities index in most of the study cities. This dynamic can be best appreciated in Figure 8, which shows the result of the operation of the sum of the strengths and opportunities index minus the sum of the weaknesses and threats index. The study shows that, except for the Oaxaca Metropolitan Area (OMA), the cities registered negative results.

Figure 6: Weaknesses index, 2000-2020



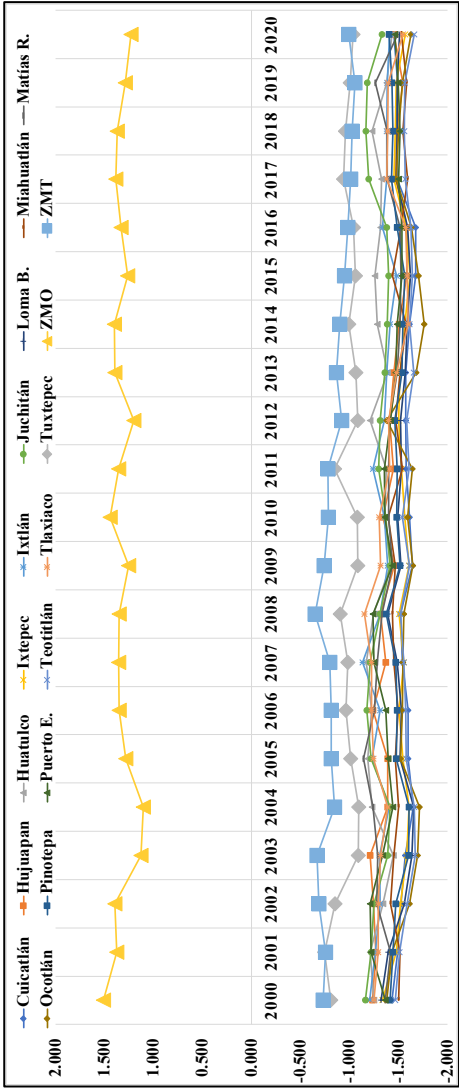
Source: Prepared by the authors based on Table 2.

Figure 7: Threat index, 2000-2020



Source: Prepared by the authors based on Table 2.

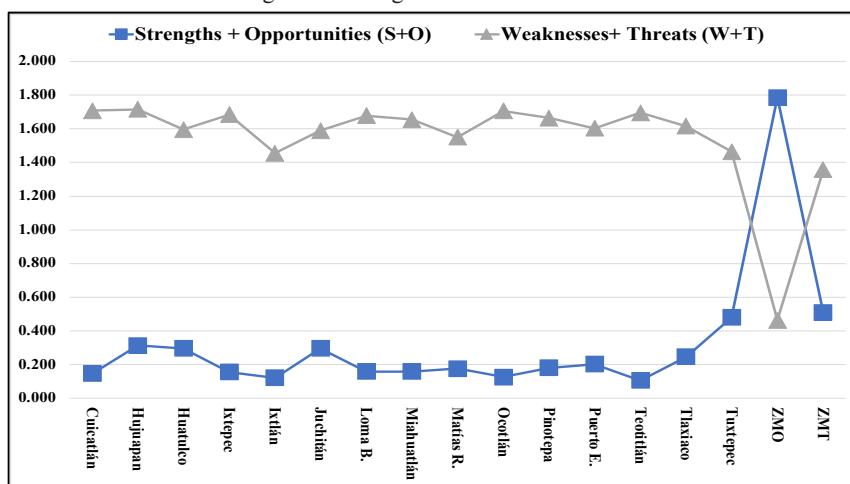
Figure 8: Contrast of the hypothesis



Source: Prepared by the authors based on Table 2.

Finally, Chart 9 shows the average of the sums of the strengths plus opportunities index (S+O) and the weaknesses plus threats index (W+T) over the study period. This is intended to provide a better understanding for testing the hypothesis that, from 2000 to 2020, the weaknesses and threats of the study cities are more significant than their strengths and opportunities. The results confirm that the weaknesses and threats are more significant than their strengths and opportunities, with the sole exception of the Oaxaca Metropolitan Area (OMA). This information highlights the importance of not only focusing on decision-making but also improving the efficient use of public resources in the design of sustainable territorial planning strategies.

Figure 9: Average of the sum of indexes



Source: Prepared by the authors based on Table 2.

## CONCLUSIONS AND DISCUSSIONS

This research addresses the topic of strategic analysis as a tool for sustainable territorial planning in 17 cities in the state of Oaxaca, spanning the period from 2000 to 2020. The objective was to conduct a SWOT analysis for these cities and test the hypothesis that, during the period analyzed, the weaknesses and threats outweighed the opportunities and strengths. This hypothesis was accepted after conducting the corresponding analyses. The only exception is the Oaxaca Metropolitan Zone (OMZ), whose results show that both its opportunities and strengths have outweighed its

weaknesses and threats throughout the study period. This situation has a possible explanation given that the Oaxaca Metropolitan Zone (OMZ) is home to the largest concentration of infrastructure for goods and services in the state of Oaxaca, coupled with the fact that it has the main tourist attractions, which undoubtedly improves the territorial conditions. However, over the last ten years, it has begun to identify five major problems that will undoubtedly affect its planning: the lack of solid waste treatment; population growth; increased crime; and the lack of access to drinking water.

Overall, the results show that, regardless of whether cities have had good management, the advances in orderly urbanization have failed to mitigate the effects of both their weaknesses and their threats. For this reason, it is recommended that cities design their planning models based on their characteristics. They should also seek intergovernmental relationships with other cities to develop joint projects, improving resource efficiency and achieving a network of territorial planning with nearby territories with similar characteristics. It is essential that local governments, as they are primarily responsible for promoting sustainable development in their territories, conduct their own strategic analysis or revisit the model proposed here. It is essential to generate information that allows for improved design of territorial development strategies that leverage their strengths and opportunities, as well as mitigate the negative aspects of threats and weaknesses.

Finally, two complementary measures must be considered to increase the efficiency of territorial planning. On the one hand, implementing a monitoring and control system as part of the local government structure is essential. On the other hand, it is vital that each public official who makes up the city council has the minimum training to conduct a strategic analysis. Finally, in the case of large cities, it is necessary and urgent to design strategies to address the main problems they face in their territories, such as adequate water management, solid waste collection, and the lack of green urban mobility infrastructure.

## REFERENCES

Álvarez, A. M. (2016). “Retos de América Latina: Agenda para el Desarrollo Sostenible y Negociaciones del siglo XXI”. En *Problemas del Desarrollo. Revista Latinoamericana de Economía*, 47(186), 9-30. <https://doi.org/10.1016/j.rpd.2016.08.002>

- Aché, D. B. (2013). "Teoría que explican la formación de desigualdades territoriales". En *Revista Geográfica Venezolana*, 54(2), 79-194. <https://doi.org/10.53766/RGV>
- Agudelo, L. C. (2005). "Sobre la noción de territorio en la planificación". En *Gestión y Ambiente*, 8(2), 39-48.
- Anaya, D. D. (2022). "Esto le cuesta a México el cambio climático". En *Expansión*. Disponible en <https://expansion.mx/opinion/2022/04/01/esto-cuesta-mexico-cambio-climatico>
- Avendaño, J. M., Miguel Velasco, A. E., Pérez Pérez, M., Martínez Olivera, C. y Martínez García, K. (2020). "Desigualdades territoriales de las ciudades multiculturales. El caso del estado de Oaxaca, México". En *Economía, sociedad y territorio*, 20(64), 601-631. <https://doi.org/10.22136/est20201570>
- Ayala, I. A. (2019). "Desastres en México: mapas y apuntes sobre una historia inconclusa". En *Investigaciones geográficas* (100), 1-17. <https://doi.org/10.14350/rig.60025>
- Ballesteros, A. C., Ortega Escobar, H. M., Sánchez Bernal, E. I., y Can Chulim, A. (2020). "Indicadores de calidad físico-química de las aguas residuales del estado de Oaxaca, México". En *Terra Latinoamericana*, 18(2), 361-375. <https://doi.org/10.28940/terra.v38i2.610>
- Bañuelos, M. N. (2017). "Aportes teóricos a la gestión organizacional: la evolución en la visión de la organización". En *Ciencias Administrativas* (10), 65-74. <https://doi.org/10.24215/23143738e013>
- Barbosa, M. B. (2018). *Geografía económica de Oaxaca*, Málaga, Eumed.
- Barrios, J. C. (2017). "Gestión del talento territorial para el desarrollo: territorios que aprenden". En *Visión Gerencial* (1), 87-102. <https://doi.org/10.53766/VIGEREN>
- Becerra, J. J., y Hernández García, M. A. (2014). "Los retos del gobierno electrónico municipal en el estado de Oaxaca". En *RECAI. Revista de estudios en contaduría, administración e informática*, 3(6), 121-144.
- Berdegúé, J., Carriazo, F., Jara, B., Modrego, F., y Soloaga, I. (2015). "Cities, territories, and inclusive growth: unraveling urban-rural linkages in Chile, Colombia, and Mexico". In *World Development*, 73, 56-71. <https://doi.org/10.1016/j.worlddev.2014.12.013>
- Bolívar, Z. (2019). "La planificación y gestión de la ciudad: las transformaciones urbanas del siglo XX y los desafíos del siglo XXI". En *Revista Iberoamericana de gobierno local*, (13), 1-9.
- Bustos, J. L., y Carbajal Suárez, Y. (2019). "Factores que determinan el desarrollo de un territorio". En *Economía Coyuntural*, 4(1), 81-115.
- CENAPRED (2021). *Impacto Socioeconómico de los Desastres en México durante 2014*. <https://www.cenapred.unam.mx/es/Publicaciones/archivos/325-NO.16-RESUMENEJECUTIVOIMPACTO2014.PDF>

CONAGUA (2023). *Monitor de Sequía de México*. SMN. Recuperado el 10 de octubre de 2023 de <https://smn.conagua.gob.mx/es/climatologia/monitor-de-sequia/monitor-de-sequia-en-mexico>

CONEVAL (2022). *Medición de la pobreza en México*. CONEVAL. Recuperado el 11 de julio de 2022 de [https://www.coneval.org.mx/Medicion/MP/Paginas/Pobreza\\_2022.aspx](https://www.coneval.org.mx/Medicion/MP/Paginas/Pobreza_2022.aspx)

Cortés, J. L., y Delgadillo Macías, J. (2018). “El potencial territorial como factor del desarrollo. Modelo para la gestión rural”. En *Agricultura, sociedad y desarrollo*, 15(2), 191-213. <https://doi.org/10.22231/asyd.v15i2.802>

Dasí, J. F., y Sánchez Manjavacas, E. P. (2022). “Entorno, paisaje y patrimonio: la matriz territorial vivible sobre la que proyectar futuros”. En *Cuadernos de Geografía*, 109(2), 675-694. <https://doi.org/10.7203/CGUV.109.23830>

Delgadillo, V. (2016). “Ciudades iletradas: orden urbano y asentamientos populares irregulares en la Ciudad de México”. En *Territorios*, (35), 81-99. <https://doi.org/10.12804/territ35.2016.04>

Diez, J. I., Zgaib, Y. y Pong, C. (2020). “Gobernanza y desarrollo económico territorial. El caso de la asociación para el desarrollo de Patagones”. En *Revista Universitaria de Geografía*, 29(2), 164-181. <https://doi.org/10.52292/j.rug.2020.29.2.0012>

Flor, C. R. (2020). “La planificación estratégica como método de gestión pública: experiencias en la administración española”. En *Gestión y Análisis de Políticas Públicas*, (23), 167-171. <https://doi.org/10.24965/gapp.i23.10777>

Fantone, F. (2004). “Relaciones teóricas de la ordenación del territorio y el paradigma de desarrollo de abajo hacia arriba”. En *Tierra Nueva Etapa*, 20(29), 87-105.

Güel, J. F. (2018). *Planificación estratégica de ciudades: nuevos instrumentos y procesos*, Barcelona, Reverté.

Gil, M. O., y Segovia Cuevas, M. C. (2017). “Análisis de las relaciones de los actores estratégicos con los recursos poblacionales del Campo de Gibraltar”. En *Revista Hispana para el Análisis de Redes Sociales*, 28(2), 31-43. <https://doi.org/10.5565/rev/redes.668>

Godoy, D. M. (2022). “Dificultades y futuros del Desarrollo Territorial. Una reflexión desde el caso Andino en Ecuador”. En *Horizontes Territoriales*, 2(4), 1-24. <https://doi.org/10.31644/HT.02.04.222.A21>

Guzmán, E. (12/03/2019). “Anuncian desalojo masivo de venezolanos en Cali”. En *Pulzo*. Recuperado de <https://www.pulzo.com/nacion/desalojaran-400-venezolanos-que-invaden-terrenos-cali-PP621605>

Hernández, I. E. (2015). “Identificación de asentamientos irregulares y diagnóstico de sus necesidades de infraestructura en Ciudad Juárez, Chihuahua, México”. En *Investigaciones Geográficas*, (87), 88-101. <https://doi.org/10.14350/rig.41793>

INEGI (2023a). *Encuesta Nacional de Ocupación y Empleo*. 1 de mayo de 2023. Recuperado de <https://www.inegi.org.mx/programas/enoe/15ymas/#tabulados>

INEGI. (2023b). *Encuesta Nacional de Victimización y Percepción sobre Seguridad Pública*. 2 de junio de 2023. Recuperado de <https://www.inegi.org.mx/programas/envipe/2023/#documentacion>

Lemus, J. A., y De la Garza Carranza, M. T. (2020). “La creación de valor a través de la planeación estratégica en microempresas emprendedoras”. En *Contaduría y administración*, 65(3), 1-23. <https://doi.org/10.22201/fca.24488410e.2020.2312>

Lindert, P. V. (2016). “Rethinking urban development in Latin America: A review of changing paradigms and policies”. In *Habitat International*, 54(3), 253-264. <https://doi.org/10.1016/j.habitatint.2015.11.017>

Lozano, G. O. (2018). “Continuidad de la urbanización informal en los espacios de pobreza metropolitanos, rémora del desarrollo y déficit de la política de vivienda: Cuernavaca, México”. En *Territorios*, (39), 97-133. <https://doi.org/10.12804/revistas.urosario.edu.co/territorio>

Lucero, M. d., Guevara Romero, M. L., y Silverio, J. C. (2022). “Movilidad marginal en los asentamientos irregulares en la Zona Metropolitana Puebla-Tlaxcala. El caso de Cuicatláhuac”. En *EURE*, 48(145), 1-22. <https://doi.org/10.7764/EURE.48.145.07>

Maquera, M. W. (2022). “Efectividad de la gestión pública a través de la planificación estratégica”. En *Ciencia Latina. Revista Multidisciplinar*, 6(6), 97-115. [https://doi.org/10.37811/cl\\_rcm.v6i6.3473](https://doi.org/10.37811/cl_rcm.v6i6.3473)

Montero, L. H., y Herrera Montero, L. (2020). “Territorio y territorialidad: teorías en confluencia y refutación”. En *UNIVERSITAS. Revista de Ciencias Sociales y Humanas de las Universidad Politécnica Salesiana*, (32), 99-120. <https://doi.org/10.17163/uni.n32.2020.05>

Moreno, S. F., Pérez, S., Mariano, R. Luján González, R. (2023). “Proceso de planificación territorial para el desarrollo y los ODS: comparación de procesos locales en la Pampa, Argentina”. En *EUTOPIA*, (23), 124-145. <https://doi.org/10.17141/eutopia.23.2023.5902>

Muñoz, A. A., y Saldivar Moreno, A. (2017). “De Reclus a Harvey, la resignificación del territorio en la construcción de la sustentabilidad”. En *Región y Sociedad*, 29(68), 223-257. <https://doi.org/10.22198/rys.2017.68.a874>

Novoa, R. I. (2021). “Desarrollo de estrategia colectiva indígena: una visión teórica y práctica desde la gestión moderna para el desarrollo territorial”. En *Revista territorios y regionalismos*, (5), 1-15. <https://doi.org/10.29393/rtr5-2DERB10002>

Olivera, C. M., Miguel Velasco, A. E., Castillo Leal, M., y Ojeda Aquino, M. S. (2023a). “¿Qué tanto incide la gobernanza local en el desarrollo sustentable? Estudio de caso de Oaxaca, México”. En *Quivera. Revista de estudios territoriales*, 25(2), 181-203. <https://doi.org/10.36677/qret.v25i2.19692>

- Olivera, C. M. (2023b). “Migración y los latentes problemas para la capital Oaxaqueña”. En *Primera Línea*, 21/08/2023. Recuperado de <https://www.primeralinea.mx/2023/08/20/migracion-y-los-latentes-problemas-para-la-capital-oaxaqueña/>
- Olivera, C. M., Ken Rodríguez, C. A., y Miguel Velasco, A. E. (2021a). “Economía creativa y rezago social. El caso del estado de Oaxaca, México, 2000-2020”. En *Economía Creativa*, (16), 151-187. <https://doi.org/10.46840/ec.2021.16.06>
- Olivera, C. M., Miguel Velasco, A. E., Martínez García, K. A., y Moreno Aven-  
daño, J. (2021b). “Gobierno local y desarrollo sustentable. Caso de las ciudades  
de Oaxaca, México”. En *Cuaderno Urbano. Espacio, cultura, sociedad*, 30(30),  
139-157. <https://doi.org/10.30972/crn.30304931>
- Olivera, C. M., Martínez García, K. A., Martínez Sánchez, L. A., y Miguel Velas-  
co, A. E. (2020). “Relación entre la gestión pública y el desarrollo local sustenta-  
ble de las ciudades de Oaxaca, 2000-2017”. En *RIEM*, 11(22), 155-187. <https://doi.org/10.32457/riem.vi22.512>
- Olmos, J. A. (2019). “Las nuevas tendencias de la administración estratégica. Un  
enfoque basado en la orientación a las competencias centrales, al mercado o a las  
actividades estratégicas”. En *Perspectivas*, 22(43), 135-148.
- ONU (2020). *Mirada global. Noticias ONU, mirada global*. 12/09/2020. Recupe-  
rado de <https://news.un.org/es/story/2020/01/1467501>
- Ordoñez, C. G., y Cisneros Corrales, E. P. (2020). “Estudio prospectivo: escena-  
rios para Santo Domingo como territorio sostenible al año 2040”. En *Tsafiqui: re-  
vista científica en ciencias sociales*, (14), 37-54. <https://doi.org/10.29019/tsafiqui.v14i1.672>
- Ordóñez, M., y Rodríguez, P. (2008). “Oaxaca, el estado con mayor diversidad  
biológica y cultural de México, y sus productos rurales”. En *Ciencias*, (91), 54-64.
- Ortega, P. P. (2011). *Gestión municipal y coordinación intergubernamental en Mé-  
xico. Un estudio de caso*, Guadalajara, Universidad de Guadalajara.
- Pacheco, G. B. (2019). “La gestión urbana sostenible: perspectivas para una ciu-  
dad posible en el marco de la teoría institucional”. En *Compendium*, 22(43).
- Pacheco, G. B., Fernández, J., y Guedez, J. (2017). “Las organizaciones públicas  
desde las perspectivas institucional y capacidades dinámicas”. En *Compendium*,  
20(39).
- Pozas, O. T. (2017). “El abasto de agua potable en la ciudad de Oaxaca de Juárez a  
finales del siglo XIX y principios del XX”. En *Pueblos y fronteras digital*, 12(24),  
136-162. <https://doi.org/10.22201/cimsur.18704115e.2017.24.319>
- Quinzacara, E. C., y Vargas Delgado, I. (2016). “Evaluación ambiental estretégica  
y planificación territorial. Análisis ante su regulación legal, reglamentria y la juris-  
prudencia administrativa”. En *Revista Chile de Derecho*, 43(3), 1031-1056. <http://dx.doi.org/10.4067/S0718-34372016000300011>

Rejón, E. H., Adame Martínez, S. y Cadena Varga, E. (2017). “Los retos de la sustentabilidad urbana en México. Reflexiones sobre su evaluación a través de la metodología ICES DEL BID”. En *Quivera*, 19(1), 85-97.

Ríos, C. (2020). “Fragilidad urbana: una lectura del desastre desde los habitantes menos protegidos”. En *Quivera. Revista de Estudios Territoriales*, 22(1), 57-74. <https://doi.org/10.36677/qret.v22i1.12798>

Rivera, O. R., Torres Vega, P., y Torres Lima, P. (2022). “Políticas de gestión de riesgos de desastres e inclusión-exclusión de asentamientos informales. Una evaluación para la ciudad de México”. En *Gestión y Análisis de Políticas Públicas*, (30), 163-179. <https://doi.org/10.24965/gapp.10963>

Rotundo, G. Z., y Mirabal Martínez, A. (2011). “El cambio en la organización: un estudio teórico desde la perspectiva de control externo”. En *Estudios gerenciales*, 27(119), 79-98. [https://doi.org/10.1016/S0123-5923\(11\)70158-9](https://doi.org/10.1016/S0123-5923(11)70158-9)

Roy, A. (2013). “Las metrópolis del Siglo XXI. Nuevas geografías de la teoría”. En *Andamios*, 10(22), 149-181. <https://doi.org/10.29092/uacm.v10i22.271>

Sepúlveda, S. (2008). *Metodología para estimar el nivel de desarrollo sostenible de territorios*, San José, IICA.

SESNSP (2023). *Información sobre violencia contra las mujeres*. 3 de noviembre de 2023. Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública (SESNSP). Recuperado de <https://www.gob.mx/sesns/articulos/informacion-sobre-violencia-contra-las-mujeres-incidencia-delictiva-y-llamadas-de-emergencia-9-1-1-febrero-2019>

Unceta, A., Castro Spila, J., y García Fronti, J. (2017). “The three governances in social innovation”. In *Innovation: the European Journal of Social Science Research*, 30(4), 406-420. <https://doi.org/10.1080/13511610.2017.1279537>

Universal (2023). “A un año de la crisis de la basura en Oaxaca, anuncian construcción de centro de revalorización en Totolápan”. 1/12/2023. En *El Universal*. Recuperado de <https://oaxaca.eluniversal.com.mx/estatal/un-ano-de-la-crisis-de-basura-en-oaxaca-anuncian-construccion-de-centro-de-revalorizacion-en>

Vas, M. (2017). “Aplicación de los principios de la planificación estratégica al turismo. Análisis de un proceso de escala regional”. En *Cuadernos geográficos*, 56(1), 265-289.

Velasco, A. E., Martínez Olivera, C., y Santamaría Cruz, E. (2021). “Las racionalidades sociales en la ordenación territorial de las ciudades. El caso de Oaxaca, México”. En *Territorios y regionalismos*, (6), 1-19. <https://doi.org/10.29393/RTR6-6RSAE10006>

Zago, O. S. (2016). “Espacio, territorio y territorialidad: una aproximación teórica a la frontera”. En *Revista Mexicana de Ciencias Políticas y Sociales*, 61(228), 27-55. [https://doi.org/10.1016/S0185-1918\(16\)30039-3](https://doi.org/10.1016/S0185-1918(16)30039-3)

Zhou, W., Pickett, S., y Timon, M. (2021). “Conceptual frameworks facilitate integration for transdisciplinary urban science”. In *npj Urban Sustainability*, 1, <https://doi.org/10.1038/s42949-020-00011-9>

Zhou, Y., Chen, G., y Zhou, W. (2022). "Sustainable urban systems: from landscape to ecological". In *Ecological Processes*, 11(26). <https://doi.org/10.10.1186/s13717-022-00371-3>

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