

Transborder cooperation for the development of sustainable cities and communities in the Tijuana - San Diego border region. Review of institutions¹

Cooperación transfronteriza para el desarrollo de ciudades y comunidades sostenibles en la región fronteriza Tijuana - San Diego. Revisión de instituciones

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ABSTRACT

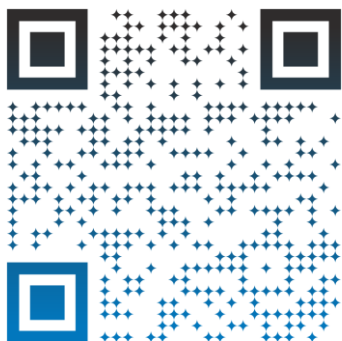
The United Nations states that more than half of the world's population lives in cities and the number is expected to increase to 60% by 2030. A metropolitan area that has experienced an accelerated population increase is the Tijuana - San Diego region. These cities are considered twin cities due to their high interaction, joint development and interdependence. This region has a population of more than five million inhabitants, therefore the use of resources and urban needs increase with it. Sustainable development is presented as the best option to face the use of resources in a balanced way without compromising the capacity of future generations. This work has the objective of analyzing the role of transborder cooperation as a fundamental tool for the institutions that are responsible for the sustainable development of cities and communities in the Tijuana - San Diego region, through the binational activity of the institutions in the creation and implementation of urban planning instruments in the region. With the use of the qualitative method of longitudinal character. A classification of urban planning instruments in the region is made from the year 2015 and if they comply with the sustainable and binational approach.

Keywords: Inclusive cities, institutions, sustainable development, transborder cooperation, twin cities, urban planning.

RESUMEN

Las Naciones Unidas afirman que más de la mitad de la población mundial vive en ciudades y se espera que el número aumente a 60% para el 2030. Un área metropolitana que ha experimentado un aumento acelerado de población es la región de Tijuana - San Diego. Estas ciudades se consideran ciudades gemelas debido a su alta interacción, desarrollo conjunto e interdependencia. Esta región tiene una población de más de cinco millones de habitantes, por lo que el uso de recursos y las necesidades urbanas aumentan con ella. El desarrollo sostenible se presenta como la mejor opción para afrontar el uso de los recursos de forma equilibrada sin comprometer la capacidad de las generaciones futuras. Este trabajo tiene como objetivo analizar el papel de la cooperación transfronteriza como herramienta fundamental para las instituciones que tienen a su cargo el desarrollo sustentable de las ciudades y comunidades de la región Tijuana - San Diego, a través de la actividad binacional de las instituciones en la creación e implementación de instrumentos de planificación urbana en la región. Con la utilización del método cualitativo de carácter longitudinal. Se realiza una clasificación de los instrumentos de planificación urbana en la región a partir del año 2015 y si cumplen con el enfoque sostenible y binacional.

Palabras claves: Ciudades gemelas, ciudades inclusivas, cooperación transfronteriza, desarrollo sostenible, instituciones, urbanismo



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1. - INTRODUCTION

Tijuana and San Diego have taken action to encourage sustainable development. The promotion of sustainable practices addresses social and environmental issues in the area. Given their shared border and interdependent economic relationships, Tijuana and San Diego make an intriguing case study for examining sustainable development. Although both cities have seen significant growth and development over the past few decades, achieving sustainable development presents particular difficulties for both.

The multifaceted approach of transnational cooperation for the growth of sustainable cities is a crucial part of regional and international collaboration for urban sustainability. The strategy entails a number of institutions and actors from various nations, each with their own capabilities and interests, cooperating to achieve favorable results for the cities they all share. Using this strategy, it is possible to forge strong alliances that can promote the development of sustainable cities while also giving the local population access to better services, more employment options, and better environmental conditions. Building bridges between various nations and regions, and utilizing their complementary strengths to forge combined efforts that can result in new opportunities and benefits for the cities involved, are the main goals of the multifaceted transborder cooperation approach. The various actors must engage in meaningful communication, cooperation, and sharing of resources and expertise. Additionally, it necessitates the creation of plans and strategies that support sustainable urban growth, as well as the inclusion of various stakeholders.

Sustainable development is related to the capacity for growth and expansion from a balanced way in a biologically sane, socially healthy, and economically solid environment. Cities have become centers for growth (Brenner, 1999). According to UN estimates, the future of most of the people will be from the urban space. This will generate an exponential growth of cities that will bring with it new challenges for governments and the international community, which could affect global challenges such as eradicating poverty, stopping climate change, clean water and sanitation, health, and well-being, among others. One solution is to integrate sustainable development into life in the city, in accordance with Goal 11 of the 2030 Agenda for Development: Make cities inclusive, safe, resilient and sustainable.

Despite efforts by governments, this situation has exceeded its scope, especially in the local environment. Studying this phenomenon from the San Diego - Tijuana border region gives us a perspective on where the study of sustainable cities is headed. It is necessary to rethink the importance of increasing international cooperation to achieve the different goals established in the Sustainable Development Goals. Tijuana and San Diego are the perfect example of two cities that have common characteristics and share the so-called floating population, but still have a high urbanization gap. It is necessary to analyze the role of transborder cooperation within the institutions that develop sustainable planning programs and policy in the region.

In order to state the importance of cross-border cooperation for the development of sustainable cities, the methodology is divided into four sections. The first section makes a theoretical review of three key concepts that allow sustainable development in a cross-border region: Transborder cooperation, Sustainable development, and Transborder Metropolis and a review of the urban planning theory. The second section presents the proposal of UN-Habitat and the New Urban Agenda, considering the new challenges and aspirations facing urban development under the current parameters for more sustainable and adequate urban development. The third section shows a brief description of the importance of the space at the border for the Mexican society and how it has become part of their identity through the

process of development. The fourth section presents a detailed review of the binational activity from the year 2015⁴ from the agencies in charge of sustainable urban development through their productivity (Planning and application), this with the purpose of having a broader and more accurate vision of the interaction that exists between governments and institutions as part of cross-border cooperation for the development of sustainable cities, this section is made up of a review of both the institutions and the development, management, and implementation of plans that promote a sustainable urban development in the border region Tijuana - San Diego, with the provision of tables and charts that synthesize the active participation of governments and institutions. The review of these sections leads to the concluding ideas aimed at substantiating the importance of cross-border cooperation for the development of sustainable cities in the Tijuana - San Diego region.

2.-CONCEPTUAL FRAMEWORK

Transborder cooperation

Transborder cooperation is the collaboration between neighboring areas on both sides of a border. However, it is important to understand it not only as a consequence of political boundaries between States, but also as socio-territorial realities. In the book *Transborder Cooperation for Development*, Bandelac and Ramirez (2019) argue that the fact of transcending the borders between states to address the development of adjacent territories is one of the main elements of both transborder cooperation and international cooperation for development. Transborder regions are spaces that give a new identity to the territories that, in general, maintain a close character according to the State to which they belong. The transborder region generates intense material and intangible flows and increases opportunities for innovation and development (Bandelac & Ramirez, 2019). In this sense, it can be said that the variation in institutional or poverty gaps that may exist on the edges, in bordering or border areas, can be used as elements for development.

Bandelac mentions that there are four stages in the cross-border cooperation process:

1. Information, in which the institutions of the two territories know and “evaluate” each other.
2. Mutual consultation before implementing policies or measures at the local level that may directly or indirectly have an impact on the other side of the border.
3. Harmonization of laws and regulations.
4. Integration of the territories as a single space (integration cannot be implemented in one or more areas without previously going through the three previous stages).

Anthony and Khanna (2011) examine the transborder cooperation between the United States and Mexico and discuss how it is beneficial for both parties. They emphasize how the cooperation effort can be used to boost economic competitiveness and the effects on the border. The multifaceted strategy for cross-border cooperation, has shown that a successful transborder cooperation through increased business opportunities, improved infrastructure, and jobs creation, all of which have had a positive economic impact. Socially, the cooperation has increased mutual respect and tolerance between the two nations and facilitated cultural interactions and events. Transborder cooperation leads the way to a new aspect for local development, beyond the political divisions and creates new spaces that do not coincide

with the perspective of the State. The multifaceted approach to transborder cooperation between Mexico and the United States has produced a number of advantageous outcomes.

There is, however, a series of difficulties that appear under new administrative mechanisms generated by the collaboration effort. The disapproval of local and central governments; the difficulty in managing capacity at different levels, or divergences in the degree of centralization of the institutions are just a few examples. Despite the obstacles, local governments build effective cooperation networks that provide stability and continuity in time and form. On the Mexico-United States border, the agencies focus on the management of border aspects and seek to develop an instrument that measures the degree of collaboration. According to Anthony and Khanna (2011), the work done in the region serves as a paradigm for the other border regions.

On the same train of thought, Hewitt (2018) discusses how transborder cooperation can be used to foster a sustainable urban future, focusing on the potential of multidimensional approaches. The author examines multidimensional approaches to transborder cooperation and how they can be used to create a more sustainable urban future. The potential of transborder cooperation as a tool for sustainable urban development, looking at the economic, social, cultural, and environmental aspects of the relationship between two cities are essential for creating sustainable cities. Hewitt provides an overview of the various frameworks that have been developed to guide transborder cooperation, such as the World Bank's Multi-Country Action Plan and the European Union's Cohesion Policy. It explains that cooperation between cities can lead to the development of better infrastructure, the sharing of resources, and the promotion of economic development.

This cooperation is conceived as an enhancer of territorial cohesion that contributes to the establishment of a sense of belonging, which is a fundamental factor for effective social cohesion. Border areas develop a feeling of belonging that goes beyond limits (Bandelac & Ramirez, 2019). On many occasions, populations of municipalities that border the counties or political demarcations of neighboring countries, share more common aspects from the cultural point of view, than with their fellow citizens from municipalities or provinces further from the border (Gómez & Santome, 2019) which is appropriate in the case of the Tijuana - San Diego region. The population perceives itself as border people, with the culture and traditions of a population with dynamics and shares more than geographic elements.

Effective cooperation among nations revolves around the function of governance frameworks even in the absence of a transnational government or central authority; the emergence of a governance that respects the jurisdictional frameworks of governments, but that the effectiveness of cooperation has transnational results (Karns & Mingst, 2009). An important difference between government and governance is that the former is an established institution, supported by laws and formal authority, while the latter is based on shared goals and convergence of interests, especially on norms and rules that emanate from social practices.

The theory of cooperation allows studying the way in which conceptual policy frameworks are established, which facilitate the resolution of differences and conflicts, and advance in common goals. Throughout history, common resources have been a source of border conflicts between neighbors. Countries at an early stage in the nation-state formation process struggle to create property rights to fixed or finite resources; in particular, on those that have an exchange value, such as minerals and hydrological, among others. The establishment of collective decision mechanisms to manage common natural

resources is a cross-cutting or general dilemma at all borders, and the United States-Mexico border is no exception (Peña, 2011).

Sustainable development

In the late 20th century, there was an increasing global concern about the interdependence between economic and social development and their impact on the natural environment. The concept of sustainable development emerged as a response to this growing awareness. (Gomez, 2015). Sustainable development refers to the capacity to fulfill the present needs without jeopardizing the potential of future generations to fulfill their own needs. To achieve sustainable development, targeted endeavors are imperative in constructing an all-encompassing, sustainable, and sturdy future for both humankind and the planet. (FAO, 2019) To attain sustainable development, it is critical to reconcile three fundamental components: economic progress, societal inclusivity, and ecological preservation. These components are interconnected and integral to promoting the welfare of individuals and communities. (UNESCO, 2019)

According to the United Nations, the eradication of poverty in all its forms and dimensions is an indispensable condition for achieving sustainable development. That is why, sustainable, inclusive, and equitable economic growth must be promoted, because it creates greater opportunities for all, reduces inequalities, improves basic living standards, fosters equitable and inclusive social development, and promotes the integrated and sustainable management of natural resources and ecosystems. On September 25th, 2015, global leaders endorsed a collection of universal objectives with the aim of eradicating poverty, safeguarding the environment, and securing the prosperity of all individuals, constituting a novel sustainable development agenda. (UN, 2015)

The multifaceted approach of transnational cooperation for the growth of sustainable cities is a crucial part of regional and international collaboration for urban sustainability. The strategy entails several institutions and actors from various nations, each with their own capabilities and interests, cooperating to achieve favorable results for the cities they all share. Using this strategy, it is possible to forge strong alliances that can promote the development of sustainable cities while also giving the local population access to better services, more employment options, and better environmental conditions.

Aarts (2015) discusses how transborder cooperation for the development of sustainable cities involves dialogue, cooperation, and sharing of resources and expertise between the different actors, and the potential benefits of such an approach for local populations. Building bridges between various nations and regions and utilizing their complementary strengths to forge synergies that can result in new opportunities and benefits for the cities involved, are the main goals of the multifaceted transborder cooperation approach. Various actors engage in meaningful communication, cooperation, and sharing of resources and expertise. Additionally, it necessitates the creation of plans and strategies that support sustainable urban growth, as well as the inclusion of various stakeholders. The trans-border area between cities can be a source of cooperation, leading to sustainable development for both cities involved. This paper looks at the multidimensional approach to trans-border cooperation, and how it can be used to promote the development of sustainable cities. The paper explains that trans-border cooperation is an essential component of achieving sustainable development. It provides opportunities for knowledge sharing, the development of better infrastructure, and the creation of new economic opportunities. In this context, a multidimensional approach to trans-border cooperation is necessary to ensure that the development is sustainable. The paper also discusses the potential of trans-border cooperation as a tool

for developing sustainable cities. It explains how a multidimensional approach can be used to facilitate the coordination of infrastructure and services, as well as to promote environmental sustainability. Moreover, trans-border cooperation can also be used to create economic opportunity and to reduce poverty. Overall, this paper has shown that a multidimensional approach to trans-border cooperation is an essential component of sustainable development. It can be used to promote economic opportunity, reduce poverty, and facilitate the coordination of infrastructure and services between cities. Thus, trans-border cooperation is an important tool for the development of sustainable cities.

The concept of sustainable development is the pursuit of economic, social, and environmental well-being while not jeopardizing the capacity of coming generations to meet their own needs. In order to build a sustainable future for everyone, it aims to strike a balance between economic growth, social advancement, and environmental protection. The necessity of striking a balance between economic expansion and environmental protection is one of the fundamental tenets of sustainable development. This entails making sure that environmental protection does not suffer as a result of economic growth. For instance, if a nation heavily relies on fossil fuels to fuel its economic expansion, this could result in environmental deterioration and harm to human health. However, if the nation makes investments in renewable energy sources, like wind or solar energy, it can experience economic growth while also preserving the environment.

Assuring social progress is a key component of sustainable development. This implies that social welfare, including access to healthcare, education, and fundamental human rights, should not be sacrificed in the name of economic growth. For instance, social inequality and unrest may result if a nation experiences economic growth but makes insufficient investments in its social infrastructure, such as healthcare and education. But if the nation makes investments in infrastructure and social programs, it can advance socially and economically.

The Sustainable Development Goals (SDGs) are presented as set of objectives designed by the United Nations (UN) with the goal of achieving sustainable development by 2030. The UN estimates that yearly investments totaling \$5–7 trillion would be necessary to achieve the SDGs. The SDGs' achievement would, however, bring about a significant economic benefit. For instance, a report by the Business and Sustainable Development Commission estimates that by 2030, attaining the SDGs could result in \$12 trillion in new business opportunities and 380 million new jobs.

In addition, there is evidence that sustainable business practices can promote long-term economic stability. A World Economic Forum report claims that companies that give sustainability a high priority outperform their competitors financially. According to the study, businesses that place a high priority on sustainability saw a return on investment of 4 points 8 percent as opposed to 1 points 7 percent for their competitors.

Sustainable development also refers to the concept of achieving economic, social, and environmental well-being without compromising the capacity of future generations to meet their own needs. To achieve this, it is necessary to strike a balance between economic growth, social advancement, and environmental preservation. Hard data indicates that sustainable development can produce significant economic gains and long-term economic stability in addition to being essential for a sustainable future.

The Sustainable Development Agenda's 11th objective aims to achieve inclusive, safe, resilient, and sustainable cities and human settlements. Currently, there are 828 million individuals residing in slums, and this number is increasing. Urban areas' energy consumption and pollution levels are also concerning. Despite cities only covering 3% of the planet's surface, they consume between 60% to 80% of the world's energy and produce 75% of carbon emissions. (UN, 2015).

While these data offer a global picture, Tijuana and San Diego are cities that are constantly growing and match the descriptions above. The population concentration in Tijuana and San Diego must be analyzed from a global perspective on the mobility of people. As one of the biggest challenges, local governments must adapt to the idea of population growth and, with it, the number of relocations. The displacement of millions of inhabitants in the transborder region is a variant in their quality of life and faces the challenges of governance and strength in institutions. In the Tijuana - San Diego transborder region, it is necessary to take into account all the targets of Goal 11 and use the available resources to achieve the objective of sustainable cities, using cross-border cooperation as the best alternative for the creation of instruments, plans, and strategies that help create a sustainable future.

Transborder Metropolis

The population residing on the Mexico-United States border is mainly concentrated in nearby cities like Tijuana and San Diego. In literature, research, politics, and media, these cities are called twin cities since they are the pairs of cities that face each other and are separated by a border (Gonzalez, 2016). By this term it could be interpreted that they are cities that share an equal development. However, the term does not refer to any situation of equality, but rather of interdependence and cooperation. In the case of cities or regions along the border between Mexico and the United States, Tijuana and San Diego is the one that has received the most attention, mainly due to the amount of population that shares the region, totaling 5.46 million inhabitants according to (INEGI, 2020) and (SANDAG, 2020).

The social structure of the region has been studied so much by means of different indicators of social development, which show how much similarity exists between both cities, but they also show the differences, mainly in terms of urban and economic development. Even taking these differences into account, something that cannot be ignored is the population they share, mainly the floating population, (Alegria, 2009) which travels daily from one city to another and develops both socially and economically between the two cities. To conceptualize the term transborder region, Alegria defines the transboundary region based on three main ideas: 1) the “border region” is binational; 2) such a region has a single social structure across the border; 3) both sides of the border have similar economic and social processes.

What is observed empirically is a large transborder exchange of goods and services, which makes sense of a binational economic space, but does not define a transborder region. The region is an objective social construction, it is the spatial form of a social subset (Coraggio, 1979). In this sense, the cities of Tijuana and San Diego can be considered as a binational urban unit, mainly due to the continuous urbanization and interdependence between both urban areas (Alegria, 2009).

According to Herzog, the construction of a definition of a transborder metropolis has two types of opposite functions. The first divides two cultures and two urban structures, which are reproduced on the border, as well as in national patterns. The second would be the vision of structurally and socially unifying both sides of the border. These unifying elements constitute the phenomenon of a transborder

metropolis (Herzog, 2003). Then, the second function of the border adopts a unifying role, which, although it seems a functional option, is difficult to achieve due to the political contexts of both countries. Border permeability is materialized by the flows of people, goods, capital and environmental elements between the binational pairs of neighboring cities, which occur mainly due to cross-border proximity. Proximity is the main catalyst for integration.

Effective transborder planning must include policy aspects that involve the State and its responsibility to the population. It must analyze in detail the local contexts that, in turn, are found in an international and globalization context. In this context of interdependence, designs of government strategies are required that take into account international changes and use tools and instruments of international character (Healey, 2006). Taking this into account is how public policies are generated and established. A border is a space where different agents and authorities, with specific mandates, act simultaneously. This results in the need to have strong institutions with a high degree of formalization. Their enforcement power is efficient enough to implement quality policies that have impact on both sides of the border.

Un-Habitat and The New Urban Agenda

UN-Habitat is the UN body tasked with advancing human settlements and urban development in a manner that is socially and environmentally sustainable. Its mission is to ensure that everyone has access to sufficient housing by encouraging the development of livable towns and cities.

The objectives of UN-Habitat are:

1. Identify key themes and focus areas for UN-Habitat normative and policy work.
2. Review the main trends related to human settlements and urbanization.
3. Examine world norms and standards in human settlements and sustainable urbanization.
4. Adopt resolutions, declarations, recommendations, formal decisions, reports and other documents related to the strategic vision and political orientation in accordance with its mandate.
5. Recommend strategies for the coherent implementation of the urban and human settlements dimensions of the 2030 Agenda, the New Urban Agenda and other global agendas, including the work of the United Nations System.
6. Review and approve the UN-Habitat strategic plan, to be prepared by the Executive Board.
7. Review the quadrennial report of the Secretary General on the implementation of the New Urban Agenda (Habitat, 2013).

The way in which UN-Habitat seeks to positively impact the countries where it has scope is through analysis instruments, created specifically to identify the urban weaknesses of fast-growing cities, also taking into account the objectives of the Urban Agenda. Tijuana is one of the cities selected by UN-Habitat to carry out this type of diagnosis. The result is the Prosperous Cities Index (Habitat, 2013).

Meanwhile, the New Urban Agenda, developed by UN-Habitat, serves as a framework to outline a shared vision for a more sustainable future that prioritizes equal rights and access to resources for all individuals. The goal is for urban areas to provide benefits and opportunities that foster development

while the global community reexamines urban systems and physical structures to achieve this. The New Urban Agenda acknowledges the link between good urbanization and progress and aims to assist urban planning authorities in creating cities and human settlements that uphold fundamental freedoms and offer equal opportunities for all, in accordance with the principles of the UN Charter and international law (UN, 2015).

Urban planning theory

Urban planning has the function of mediating the system of relationships and interests of a population through the development and infrastructure of a city, uniting the disciplines of architecture, civil engineering with others such as sociology, economics, health, etc. According to CEPAL, urban planning consists of understanding the urban phenomenon in order to optimize its use and achieve cities with sustainable development, through the joint efforts of public and private management. Study and understand the spatial distribution of all human activities and decision making that affect urban space at different scales (CEPAL,2018).

One of its functions is to create comprehensive and analytical diagnoses of urban situations, and then summon experts to propose interventions through plans and projects that improves and facilitates decision-making for the institutions or personalities with the faculty to do so. To this end, it articulates the capacities, interests, and needs of the various social actors involved, be they communities and private and public agents, balancing principles of equity, efficiency and sustainability. All this, to guarantee the common good and improve the quality of life of the people who live in cities.

Analyzing the complex concept of urban planning, it can be said that its process fulfills the function of describing, analyzing and evaluating the needs of cities for their optimal functioning as a space for the development of their inhabitants and visitors. It seeks to generate proposals for design, development, structure, strategies and instruments that serve as a guide for analysis, evaluation and implementation in cities. projects that make it possible to regulate the urban and environmental dynamics of the entire city and attend to existing anomalies between its conditions of economic, social and spatial development (Madariaga, 2008) within a period of time that requires well-defined programming, monitoring and control (Osorio, 1974).

It is relevant to consider that urban planning is part of a whole city development methodology to obtain implementation and development alternatives under the responsibility of incorporating priority factors, the compatibility of the population with the objectives and selecting the most efficient elements (Ahumada, 1966).

Planning is not only the process of preparing a document called a plan or program, since this is only the beginning of the process, implementation is the next step and the response of society to the application of new public policies is often expected (Ornes, 2009). However, the methodology and theory of urbanization can be considered as changeable as cities since each city changes and adapts to the new needs and interests of its inhabitants. Therefore, urban planning and its theory are also in a process of constant evolution. (Garcia, Arredondo 2017) in “Urban mobility as a way for sustainable development: Case of Nuevo León” bring up the relationship between urban mobility and sustainable development. The authors state that efficient and sustainable urban mobility should be a key component of urban planning and public policy.

Initially, urban planning was considered as a platform for regulation and restriction of practices in infrastructure and equipment of the city, responding to an environment of unhealthiness and population and functional agglomeration characteristic of the cities of the mid-nineteenth century. Later, towards the end of the 19th century and the beginning of the 20th century, the role of urban planning focused on meeting the demand for housing and achieving a more structured model that, beyond isolated interventions, achieved urban plans with an integral vision of different axes and needs of the population. In this way, the functions of a city are delimited and the aesthetic and, in turn, functional attention is a commitment to urban innovation that transforms spaces with the most optimal characteristics that a city needs. This gives rise to the integration of different disciplines to achieve the maximum objectives of urbanization, social welfare, and the development of sustainable cities (Ornes, 2009).

In this sense, all planning can be analyzed as the intervention of the State on the dimensions and relationships between the economic, social, ideological, and political aspects of the city or territory, with the aim of maximizing the production and wealth of the city and its local actors. Urban planning must be the spatial expression of the national project of social and economic development (Castells, 1977). This allows us to analyze the following sentence: urban planning is not a mechanism that works in isolation but is integrated and responds to a political consensus between government and society (Bazant, 2001).

The space in which the inhabitants develop goes from being a spatial and physical figure to a part of the collective identity of the population, therefore the essential domain of urban planning originates in the intersection of socio-spatial processes that together they produce the urban habitat (Friedman, 1959). Therefore, it is important to highlight that from these processes, the city must be analyzed and evaluated in an integral and interrelated way, recognizing all the interests and scope of the different actors that execute it and they implement it. Urban planning becomes “a negotiating and mediating activity in the complex system of relationships established between the administration and the community, which operates in a social, economic and political environment that varies over time (Ornes, 2009). The concentration of people, economic activities, social and cultural interactions, as well as the impact on the environment and human welfare, are becoming more prevalent in urban areas. This trend creates significant challenges for sustainability, particularly in areas such as housing, infrastructure, essential services, food security, health, education, employment, safety, and natural resources. (Closs, 2017).

According to CONAPO data in 2015, the municipality of Tijuana had 96.2% of urban population, and 3.8% of rural population. According to the official data from the National Institute of Statistics and Geography (INEGI) of Mexico, as of the last population and housing census conducted in 2020, the city of Tijuana has a population of approximately 1.9 million people, with a growth rate of around 1.36% per year (INEGI, 2022). It is worth noting that Tijuana is a rapidly growing city, and urbanization has been a significant trend in the region in recent years. This has led to an increase in the city's population density and a higher demand for housing, infrastructure, and public services. Based on census data, Tijuana has a low percentage of rural population (less than 1%) in relation to its total population, indicating that the urban population significantly surpasses the rural population. The trend of urbanization is predicted to continue and intensify, according to a projection by CONAPO in 2015 for the year 2030.

According to the official data from the United States Census Bureau (USCB), as of the last ten-year census conducted in 2020, the population of San Diego was approximately 3.3 million people, with a growth rate of around 6.9% since the previous census in 2010 (USCB, 2022). This growth rate was higher than the national average for the same period, which was around 7.4%. While San Diego is a large and growing city, the growth rate has slowed somewhat in recent years, in part due to constraints on land

availability and housing affordability. However, the city remains a popular destination for both domestic and international migrants, and its economy is driven by a diverse mix of industries, including biotechnology, defense, tourism, and higher education (California Department of Finance, 2022). Overall, the population growth in San Diego is likely to continue in the coming years, albeit at a somewhat slower pace, as the city continues to attract new residents and businesses from around the world.

San Diego and Tijuana have different rates of population growth. According to the most recent population and housing censuses, which were conducted in 2020, San Diego's population was approximately 3 point 3 million, with a growth rate of 6.9 percent since the previous census, which was conducted in 2010 (USCB, 2022). In the meantime, Tijuana had a population of about 1.9 million people and was growing at a rate of 1.36 percent annually (INEGI, 2022). This shows that San Diego has a much bigger population than Tijuana and is growing much faster. San Diego's growth rate is also higher than the national average for the United States, whereas Tijuana's growth rate is a little bit lower than the national average for Mexico.

However, it is important to keep in mind that San Diego and Tijuana are two separate cities with different political structures, economic structures, and social environments. As a result, even though population growth is a significant indicator of a city's progress, it is not the only one. The towns increase their population and with this the urbanization needs. As a result of the unequal urban growth, both cities depend on the theory of urban planning, which is carried out based on a comprehensive analysis of the cities to be planned, considering all the elements that characterize it and the main needs of the population. In the case of the region, Tijuana's urban planning and public policy depend on the urban planning and decision-making process of San Diego, and vice versa. This leads towards the need to develop an instrument that concentrates and shows the institutional action from a dual perspective. The following section shows an attempt to explore the possibility of building such an instrument that will analyze and, in the near future, evaluate the transborder collaboration efforts for urban planning between San Diego and Tijuana.

The Northern Border of Mexico, Socio-Spatial and Economic Context

Defining the border region

The definition of the border goes beyond the physical aspect, it also represents a cultural starting point, it initiates the development of the identity of the population of a country, its customs, its language, landscapes and infrastructure, therefore Harvey, (2006) speaks of the border as a physical referent, a situation that is tangible, and that can be measured, for example the distance in kilometers from the entire northern border of Mexico can be measured in kilometers and refer to a number, but throughout that way, social phenomena also occur, it has manifestations such as highways, bridges, borders, streets, mountains, corridors, nodes, etc. In short, it is made up not only of a physical length but also of elements that delimit it and physical references that define it and mark it as unique. Graham & Healey (1999) coined the term "Euclidean" to refer to a conception of planning that prioritizes the physical relationship between space and objects. This approach suggests solutions based on physical considerations, such as object separation or use zoning, to address planning challenges.

From the absolute perception of space, the practice of cross-border planning focuses on issues related to physical-geographical aspects such as limits, borders, demarcations, topography and rivers, among others. With this vision, spaces can be dynamic, and their position can be strengthened or weakened as technological changes influence the time-space relationship, as well as those that occur in the spatial restructuring of economic activities, as is the case with globalization. In this sense, the cross-border space from a relative perspective focuses on flows of goods, people and investments, created by agglomeration economies (Alegria, 2009).

Castells states that space is something socially constructed, that tries to understand urban imaginaries as a product of social relations such as power, class, gender and race, how social actors use it and appropriate it. In this sense, the urban space that makes up the borders is defined by the appropriation of those who use it. This conception of space goes hand in hand with urban planning. In a collaborative way, if we refer to a cross-border region where the population is in constant mobility, and this will be reflected in the development of the area, collaborative planning is one of the main elements of a planning based on the relational space, which leads to a change in paradigms (Castells, 2000). The processes, structures and contexts that frame the debates are at the center of planning.

For Mexico, the border, among other functions, is of great importance: its economic function: the income of the State comes, in large part, from actions and taxes on foreign trade; border customs these acquire a strategic importance from the moment in which the North-South railway communications between Mexico and the United States became relevant (whose works were carried out between 1880-1980) and multiply their exchanges. During the Mexican Revolution, the existing border posts were disputed by the armies, since each faction sought to ensure control of customs revenues and access to the supply of weapons from the United States (Mouroz, 1984).

Fueled by the flows of refugees from revolutionary and religious struggles, by the new agricultural settlers and by labor migrants, the urban border populations establish a local economic system to respond to an original demand from North American consumers. The Second World War favored the expansion of these activities in the region by concentrating large volumes of military populations in the United States at its border bases (San Diego, El Paso; Nuevo Laredo), at the same time favoring the smuggling of rationed products in this country (Mouroz, 1984).

On this set of marginal activities, local merchants base their economic success, which will later be consolidated in import-export activities, the banking business, industry and real estate, and this will give way to economic development, a fluid migration towards the border and practically along with migration, the process of urbanization of the border cities begins. Starting in 1942, with the Bracero Program (temporary Mexican migrants recruited to replace mobilized North American workers), the function of all that process for Mexican migrants to the United States increases the dynamism of border cities. From this moment it is possible to speak of a border in the process of urbanization.

Tijuana's population owes much of its growth to migratory flows from the north and central west of the country. Border cities experienced significant population growth during the mid-20th century, with triple the population in the 1940s and doubling it again in the following decade. Following this pattern of growth, Tijuana emerged as one of the largest cities in the region and a prime destination for individuals seeking the American dream by crossing the US border (Mouroz, 1984).

In response to the United States' cancellation of the Bracero Program, the government of Mexico started the Border Industrialization Program (PIF) in 1965, which marked the true beginning of the maquiladora industry (Douglas & Hansen, 2003). By the early 1970s, the maquiladoras had a significant impact on manufacturing in Mexico's northern border, initially focusing on the assembly of electronic components and clothing production (Douglas & Hansen, 2003). The sector was marked by little production diversity and growing specialization in electronic products. In the 1980s, the government recognized the significance of the maquiladoras in the economy of the border areas and implemented policies to support these companies (González-Romero, 2018). During this time, the maquiladoras shifted to producing higher value-added products to stay competitive and differentiate from other countries (García y Griego, 2003).

Today, the maquiladora industry remains crucial to the economy of the northern border, with a broad impact on economic agreements with the neighboring country (Douglas & Hansen, 2003; Peña & Drucker, 2019). Cultural and political factors have shaped the development of the maquiladora industry, as explored in García y Griego's (2003) "Cultural encounters: The United States and the making of the maquiladora industry". The region has also adapted to changing needs, including economic activities such as services, commerce, medical tourism, and real estate.

3.- METHODOLOGY, SAMPLE PERIOD AND DATA USED

The present article employs a non-experimental empirical-analytical/qualitative methodology to examine the role of cross-border cooperation as a pivotal instrument for sustainable planning in the Tijuana - San Diego region. The study's objective is to observe and analyze the phenomena in their context, without any manipulation or influence on the variables. This longitudinal investigation collects data over specific time periods, whereby the effects of the observed phenomena manifest naturally, without any external instigation.

The methodology to follow consists of the following steps.

1. Description of the institutions on both sides of the border in charge of urban planning.
2. Analyze the efficiency of the efforts of the urban planning institutions of the border area through their productivity and binational activity from 2015 (year in which the SDGs are established) to 2022, using a selection of plans in which and instruments that are implemented in the border region.

A total of 28 urban development plans were selected, which are divided into 5 implementation instruments in Tijuana with a sustainable approach, 6 implementation instruments in San Diego with a sustainable approach and 14 instruments that are implemented in the border region in the that determines the institution of elaboration, the city of implementation, if it has a cross-border approach, and if it focuses on sustainable development objectives. This allows dimensioning the degree of interaction and effort combining with a sustainable approach in terms of urban planning in the Tijuana - San Diego cross-border region.

4.-RESULTS

Urban development institutions in the Tijuana - San Diego region

Both cities have institutions responsible for urban planning. They carry out the necessary actions to develop and implement projects that are of great importance to improve the cities. The following table is a description of the institutions in charge of urban planning and development on both sides of the border.

Table. 1
Institutions in charge of Urban Planning

Government	Institution	Description
Mexico	IMPLAN	Tijuana metropolitan planning institute.
Mexico	SIDUE	Secretary of Infrastructure and Urban Development of the State. It is in charge of coordinating, planning and executing infrastructure and equipment works in the State of Baja California.
Mexico	DAU	Secretary of Territorial, Urban and Environmental Development. It is responsible for improving the standard of living of Tijuana, through quality public services with better infrastructure.
United States	NADBANK	Development Bank of North America. Its function is to preserve, protect and improve human health and the environment in the US-Mexico border region.
United States	CALTRANS	California Development Transportation. It focuses on transportation and mobility systems, with a component for cross-border planning.
United States	SANDAG	San Diego Regional Planning Agency. This organization acts as a forum for regional decision-making, and binational planning aspects.

Source: Self-elaboration with information from BCGOB and SANDAG (2022).

Institutions must be related and strengthened simultaneously on both sides of the border since the way of conceiving the border space shapes the institutional design, mainly through functions and limitations (Brenner, 1999). The institutions have a territorial political component whose scale can be global, national, local and regional. Therefore, it is necessary to give relevance to the institutions in charge of urban planning.

The organization in charge of urban planning in Tijuana is the Municipal Planning Institute (IMPLAN for its acronym). IMPLAN is a decentralized public body of the municipal public administration of Tijuana, Baja California. Its objective is to act as an integrating entity of the municipal planning functions, to link the different bodies and authorities of the three levels of government, responsible for the formulation, instrumentation, control and evaluation of the plans and programs derived from the State System of Developing. Its functions and attributions include the following:

1. Prepare the Municipal Strategic Plan and the Municipal Development Plan.
2. Carry out an inventory and prepare a record of the public works carried out in the Municipality.
3. Formulate and propose to the City Council policies on urban development.

4. Formulate and propose to the City Council the plans, programs and technical standards necessary for the creation of territorial reserves for the growth, development and promotion of housing, as well as areas subject to conservation and ecological preservation areas.
5. Formulate urban zoning proposals.
6. Prepare, evaluate and approve urban infrastructure projects, road structure, transportation, equipment and public services.

IMPLAN plays a critical role in Tijuana due to the city's rapid growth and intense binational constituted dynamics. As with any organization, it has an organizational structure that comprises individuals with varying social positions that influence their relationships and roles (Blau, 1974). The structure is a tool for control that is continually created and reconstructed through interaction, as both and constituent, according to Stewart and Greenwood in 1980. It is worth noting that an organization's structure is flexible because its constituents are constantly transitioning, and it is subject to ongoing societal and consumer changes. Therefore, it influences and is influenced by the organization. However, organizations are inherently conservative in nature.

The interactions within a structure are determined by its composition. While it does not require full adherence, it does prevent arbitrary behavior. Structures can encompass technological, political, and social aspects within organizations. The IMPLAN typically undergoes significant changes during state and municipal political administrations, which can impact the organization's efforts.

Considering the formalization of the IMPLAN, it can be categorized as a formal organization, but formalization is not a neutral concept. The level of formalization within an organization indicates the decision-makers' perspectives regarding the members. If the members are perceived to possess sound judgment and self-control, then formalization is lower. Conversely, if they are viewed as incapable of making decisions and needing numerous rules to regulate their behavior, then formalization is higher. Formalization is a structural component that involves the organization's control over individuals, and therefore has ethical and political implications. (Galbraith, 1973).

In the case of IMPLAN, it has a high degree of formalization since the procedures correspond to the area of the town hall and must go through a bureaucratic process established in its regulations. The level of formalization refers to the degree of decision-making capacity that the organization grants to the behavior of individuals with respect to their work. This can even be observed in the norms, procedures and other defined and explicit means that ensure the fulfillment of the purposes of the organization, and that ensure the continuity of the workers (Cuenú, 2011). Formalization can be a set of organizational control parameters that guide the behavior of the individual (Robbins & Coulter, 2012) for the understanding of formalization (Rubio, 2009).

In the other side of the Border SANDAG is the primary organization responsible for urban planning in San Diego. Its objectives include facilitating consensus-building, strategic planning, resource allocation, and the planning, design, and construction of public transportation. Additionally, SANDAG provides information and addresses various issues related to improving the region's quality of life. Its Board of Directors comprises mayors, councilors, and supervisors from the 19 local governments in the region. The organization is supported by a knowledgeable staff with expertise in diverse areas, such as professional, technical, commercial, and operational fields.

As a result on the efforts of SANDAG's goals for urban planning, it prepares an annual report that outlines its accomplishments, tailored to each jurisdiction. Board members are required to present

this report at a public meeting for their respective member agencies. The report summarizes the consolidated agency's activities, which may encompass program developments, project updates, changes to plans regarding voter-approved spending, and potential voting measures. The Board of Directors approves the Legislative Program on an annual basis, which incorporates the agency's legislative policies and prioritizes potential federal, state, and local legislation for the upcoming calendar year.

Also, SANDAG has developed a Public Participation Plan with the aim of informing and involving regional residents in decision-making processes related to growth, transportation, environmental management, housing, open spaces, air quality, energy, fiscal management, economic development, and public safety. Participation occurs through meetings of the Board of Directors, including the Transportation Committee, Regional Planning Committee, Borders Committee, and SANDAG Public Safety Committee, as well as participation in other technical working groups and committees that align with the board's objectives.

SANDAG approaches Border planning from three distinct perspectives: binational perspective concerning the international border with Mexico; interregional perspective addressing issues with neighboring counties, such as Orange, Riverside, and Imperial County; and a government-to-government relationship with tribal governments within San Diego County. This type of actions could be considered as one of the first steps in impulse of a cross border urban planification. With these initiatives both institutions could work on a framework, of objectives and actions intended to promote important border related initiatives, to enhance the cross-border region. The purpose is always to create fair and equitable planning instruments that fits the region needs. Institutions need to start working in binational, and cross border maintaining active and honest communication with the neighboring counties, and the government of Baja California. In the own words of SANDAG “The Tijuana-San Diego transborder Region is recognized as a unique and dynamic place to live, embracing cultural diversity, promoting interregional understanding, and benefiting from its diverse history and experience.” (SANDAG, 2020).

SANDAG and IMPLAN possess the authority to lead the urban planning processes, addressing the needs of both cities and changes required in the border region. As organizations comprise individuals with distinct personalities and roles, a group's organizational personality is generated when they work together, which influences the instruments produced. Therefore, the instruments created should reflect the main characteristics of the border cities, considering Tijuana and San Diego's elements that differentiate them. To strengthen transborder cooperation mechanisms, SANDAG and IMPLAN should consider establishing cross-border offices within their organizations to address binational issues and maintain communication between the governments. The development of sustainable cities is a critical concern, supported by UN Habitat, with effective projects already in place. However, the current relationship and cooperation between the two organizations are limited to border crossing issues, without adequate consideration of the floating population's needs.

The institutional “form” on the border has the potential to be more porous, more flexible, more receptive to innovation than in the central territories (Bandelac, Ramirez, 2019). The border dialectic is a vector that has the potential to influence accountability, in the trust of citizens in institutions (porous, receptive, that respond to particular needs of the border area), in the establishment of alternative mechanisms of conflict resolution, in the construction of a new citizenship-state social contract. This would have the effect of a new potential governance pact of the border dialectic that only through cooperation can be triggered and optimized based on cross-border cooperation, which is key to democratic governance for territorial and social cohesion.

Local governments on the border have been able to adapt in many cases, to respond to a series of challenges. In this part of the United States-Mexico border, according to Alegria et al. (2009) those that stand out are the internationalization of the economy, the increasing modification of its powers through decentralization processes, greater involvement of the private sector in local decisions and policies, the contents of public policies that require local authorities with a greater degree of innovation in political engineering to promote social cohesion, and new forms of political and citizen participation, to mention a few. Efforts to increase cooperation in cross-border urban planning can be reflected in a series of specific plans and programs with objectives focused on the sustainable development of cities and a dynamic of binational cooperation in all those areas that require immediate attention. In the following table can review the programs and their specific objective, as well as the cooperative approach they intend to achieve.

Table. 2
Urban planning instruments in Tijuana with a sustainable approach

Program	Content
1. Monitoring program for the metropolitanization and integration process of the intelligent region of Tijuana	Establishes the general guidelines and bases of strategic planning to promote sustainable development within the entity. Said program must also promote the integration of the population centers of the Metropolitan Area itself, seeking environmental, cultural, social and economic relations with the city of San Diego. In this regional integration process, the use of smart technology tools of the Smart City type should be encouraged.
2. Preparation of the Planning Program for the Metropolitan Area	The objective of this instrument is to define the territorial ordering model and the portfolio of projects with a metropolitan impact, for the area that makes up the municipalities of Tijuana, Tecate and Playas de Rosarito. Land use planning is the distribution of economic activities in a sustainable way in the territory.
3. Metropolis Development Program and Metropolitan Agenda	In this program, institutional and civil society links are worked in order to create a Metropolitan Agenda. Among the coordination issues are urban public safety, water supply, sanitation, comprehensive urban solid waste management, wastewater treatment, metropolitan governance, territorial planning, among others.
4. Binational Planning Strengthening Program	The objective is to formalize and direct planning efforts to a binational area of institutional cooperation. Among the goals of this Program, there should be: in the short term, to link the pertinent institutions to strengthen the areas of cooperation
5. Update of the Otay Binational Strategic Plan	The objective of this plan is to articulate in a comprehensive Binational vision the development strategy and the bank of strategic projects of the Binational Otay Mesa - Mesa de Otay corridor.
6. Binational Strategic Projects Agenda	It is proposed to review and evaluate the lists of binational strategic projects projecting to a 2040 vision horizon, integrating the new Binational Strategic Projects Agenda.

Source: Self-elaboration with information from BCGOB and SANDAG (2022).

The areas that stand out the most are those related to mobility, transportation, economic development, cooperation, the environment, land use planning, reduction of urban marginalization, land use, use of smart technology tools and, of course, sustainability. All these issues are highly related to the focus on the Goal 11 of the Development Agenda. The following table shows in broad strokes the main plans or programs that have a binational orientation or with a sustainable development approach created by the government of the city of San Diego.

Table 3
Urban planning instruments in San Diego

Program	Content
1.State Route 11 and Otay Mesa East East Port of Entry	Create a 21st century border crossing for the San Diego-Baja California mega region that will enhance regional mobility and stimulate economic growth and binational commerce.
2.The Emissions Scope Plan	Provides an overview of tasks related to air quality / climate impacts Information was received on the proposed methods and data involved in the emissions analysis for the study
3.The Economic Outreach Plan	Aims to understand how companies involved in cross-border industries are affected by waiting times at the border, interviews were also conducted with individual companies
4.The Economic Model Methodology document	It presents the methodological framework used to estimate the economic impacts of border delays.
5.Border Health Equity Transportation Study	It documents the links between the built environment and health outcomes in the San Ysidro community, near the US-Mexico border. It used Comprehensive approaches to integrate transportation and land use planning to improve the quality of life and sustainability of local communities.
6.Binational Conference	It includes a wide range of topics, from water and energy supply, and transboundary climate change to border wait times and national security issues. The purpose of this event is to bring together stakeholders from both sides of the border, to address these problems, seek solutions, and identify opportunities.

Source: Self-elaboration with information from BCGOB and SANDAG (2022).

As the US-Mexico border region expands, it is crucial to enhance the effectiveness of urban planning and increase collaboration among the responsible institutions. This involves enhancing initiatives that promote sustainable city development and facilitating the movement of goods, services, and passengers through an integrated and efficient system to stimulate local, state, federal, and international economies. The table above shows the plans generated by the San Diego government with special attention to the border area. It can be seen that the priorities are mobility, transportation and the crossing of people, this derived from economic activities. But the issue of sustainability remains a priority and should have more weight in the next updates.

The following table shows plans, programs, reports, and studies that allow us to analyze the level of transborder cooperation in sustainable urban planning. The type of instrument, the responsible institution, the area of implementation, whether or not it has a cross-border approach and whether or not it has an SDG approach.

Table 4.
Planning instruments by institution and cross-border approach and the SDGs

Planing Program	Institution	City	Crossborder	SDG'S
Update of the Otay Binational Strategic Plan - Otay Table	Implan	Tijuana - San Diego	Yes	Yes
Binational Strategic Projects Agenda	Implan-Sandag	Tijuana - San Diego	Yes	Yes
Atlas of the San Diego-Baja California Border Region	Implan-Sandag	Tijuana - San Diego	Yes	Yes

Transportation study for border cities	Implan-Sandag	Tijuana - San Diego	No	Yes
Metropolitan Strategic Plan	Implan	Tijuana	No	Yes
Metropolitan Master Plan	Implan	Tijuana	No	Yes
Metropolis Development Program	Implan	Tijuana	No	No
Binational Planning Strengthening Program	Implan	Tijuana - San Diego	Yes	Yes
Planning Program for the Metropolitan Area	Implan	Tijuana	No	No
Monitoring Program for the Metropolization Process	Implan	Tijuana	No	No
Comprehensive Program for Urban Development in Suburban Zones	Implan	Tijuana	No	No
Regional Monitoring Report	Sandag	Sandiego	Yes	Yes
State Route 11 and East Otay Mesa Est Port of Entry.	Sandag	San Diego- Tijuana	Yes	Yes
Border Master Plan	Implan, Sidue,Sandag, Caltrans	San Diego, Tijuana, Tecate, Rosarito	Yes	Yes

Source: Own elaboration with information from BCGOB and SANDAG (2022).

There are instruments with a cross-border approach and as a result of cooperation between governments and institutions, as well as a focus on the Development Goals of the 2030 Agenda. Because this approach is more recent and has been added to the most recent instruments, there are some plans or programs that need an update. According to the information available in both IMPLAN and SANDAG, these updates are in process and have sustainable development for cities as a priority. From Tijuana, the Tijuana Economic Development Corporation (EDC) has played a significant role in promoting sustainable economic growth and cross-border collaboration (Bollard, 2017). The EDC has initiated several programs and projects to attract foreign investment, create jobs, and promote innovation.

Additionally, the city of Tijuana has partnered with other neighboring municipalities to create the CaliBaja Bi-National Mega-Region, which aims to promote cross-border trade and collaboration in a sustainable manner (SANDAG, 2021; Tijuana Economic Development Corporation, 2022). In San Diego, the San Diego Association of Governments (SANDAG) has been working on several initiatives to promote sustainability and integration in the Calibaja region. SANDAG has been involved in several cross-border transportation projects, such as the expansion of the San Ysidro Port of Entry, the busiest land border crossing in the world. SANDAG has also worked with Mexican counterparts to develop a bi-national airport terminal project (SANDAG, 2021; Tijuana Economic Development Corporation, 2022).

5.-CONCLUSION

The binational dynamics in the transborder region of Tijuana and San Diego is broad and active, therefore, it is necessary to strengthen transborder cooperation for sustainable urbanization, taking into account mainly Goal 11 of the 2030 Agenda for development.

According to the revision made to the institutions and their productivity (urban development plans and instruments), it can be concluded that:

- Institutions such as IMPLAN and SANDAG focus on the creation of instruments for urban planning considering the city in which they are implemented and limit themselves to reinforcing the creation of instruments binationally based on the cooperation of both governments and both institutions.
- -To achieve effective urban planning in the region, it is imperative to prioritize transborder cooperation in the development and implementation of planning instruments. This approach will not only improve the city of Tijuana but also have a positive impact on San Diego, leading to improvements in various crucial aspects of the binational dynamic. It is essential for nations to use cooperation as a primary tool for development, and borders should not act as geographical hindrances to progress.
- -The accomplishment of objective 11 by the year 2030 in the region seems challenging without the promotion of cross-border cooperation for the creation of instruments that address the region's needs and recognize it as a cross-border metropolis.
- -Out of the 28 instruments considered in this study, only 10 have a cross-border approach, and not all of them were created jointly by the institutions. This indicates that the institutions need to increase their commitment to creating cross-border instruments that benefit the sustainable development of the region.

While there have been significant institutional efforts in both Tijuana and San Diego to promote sustainability and integration, there are still several challenges that need to be addressed. For instance, the lack of adequate transportation infrastructure across the border can hamper cross-border trade and collaboration. Additionally, the differing regulatory and legal frameworks in both countries can create hurdles in terms of standardization and cooperation. However, the institutional efforts to promote integration and sustainability in the Calibaja region offer a promising vision of a future where the two cities work together in a more collaborative, sustainable, and mutually beneficial way.

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