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ARTÍCULO

Spatial Transformations of Nearshoring in Mexico and the Impacts of a «New» Development Paradigm

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Abstract. Given the vulnerability of supply chains and current trade and geopolitical tensions, nearshoring is on the rise. This paper describes the policies and actions aimed at promoting it in Mexico, paying particular attention to the role of the current administration's megaprojects in the production of space, assessing their relationship with the real estate market, the overall expansion of built-up areas, and the related socioecological implications, including those derived from lock-in effects and land teleconnections. The paper distinguishes between aspects that constitute a reformist agenda aligned with the traditional notion of development—and thus of growth—and those that seek to create, amid challenges and contradictions, the conditions for transforming current social relations of production, including the human-nature relationship. In our reflection, we do acknowledge that the current and the previous administrations differ markedly from their predecessors and that there are limits to their immediate action. With this in mind, we aim to foster a constructive yet critical and useful analysis, concluding with practical short-term recommendations and calling for a collective process to guide and sustain a shared normative notion of long-term transformational change that actively addresses the most challenging and contested aspects.
Keywords. nearshoring; production of space; lock-in effects; land teleconnections; sustainability; Mexico.

ES Transformaciones espaciales del *nearshoring* en México y los impactos de un «nuevo» paradigma de desarrollo

Resumen. Dada la vulnerabilidad de las cadenas de suministro y las tensiones comerciales y geopolíticas actuales, la deslocalización (*nearshoring*) está en auge. Este artículo describe las políticas y acciones encaminadas a impulsarla en México, prestando especial atención al papel de los megaproyectos de la actual administración en la producción de espacio, evaluando su relación con el mercado inmobiliario, la expansión general de las áreas edificadas y las implicaciones socioecológicas relacionadas, incluyendo las derivadas de los «efecto candado» (lock-in) y las teleconexiones terrestres. El artículo distingue entre los aspectos que constituyen una agenda reformista alineada con la noción tradicional de desarrollo y, por ende, de crecimiento, y aquellos que buscan crear, en medio de desafíos y contradicciones, las condiciones para transformar las relaciones sociales de producción actuales, incluyendo la relación entre el ser humano y la naturaleza. En nuestra reflexión, reconocemos que la administración actual y la anterior difieren

notablemente de sus predecesoras y que existen límites a su acción inmediata. Con esto en mente, pretendemos fomentar un análisis constructivo pero crítico y útil, concluyendo con recomendaciones prácticas a corto plazo y llamando a desarrollar aún más un proceso colectivo para guiar y sostener una noción normativa compartida de cambio transformacional a largo plazo que aborde activamente los aspectos más desafiantes y controvertidos.
Palabras clave. deslocalización; producción de espacio; efectos de candado; teleconexiones terrestres; sostenibilidad; México.

PT Transformações espaciais do *nearshoring* no México e os impactos de um «novo» paradigma de desenvolvimento

Resumo. Dada a vulnerabilidade das cadeias de abastecimento e as atuais tensões comerciais e geopolíticas, a deslocalização (*nearshoring*) está em alta. Este artigo descreve as políticas e ações voltadas para seu avanço no México, com especial atenção ao papel dos megaprojetos do atual governo na produção de espaço, avaliando sua relação com o mercado imobiliário, a expansão geral das áreas construídas e as implicações socioecológicas relacionadas, incluindo aquelas derivadas dos efeitos de *lock-in* e das teleconexões terrestres. O artigo distingue entre aspectos que constituem uma agenda reformista alinhada à noção tradicional de desenvolvimento e, portanto, de crescimento, e aqueles que buscam criar – em meio a desafios e contradições – as condições para transformar as atuais relações sociais de produção, incluindo a relação homem-natureza. Em nossa reflexão, reconhecemos que o atual governo e o anterior diferem marcadamente de seus antecessores e que há limites para sua ação imediata. Com isso em mente, pretendemos promover uma análise construtiva, mas crítica e útil, concluindo com recomendações práticas de curto prazo e apelando para que se cultive um processo coletivo para orientar e sustentar uma noção normativa compartilhada de mudança transformacional de longo prazo que aborde ativamente os aspectos mais desafiadores e controversos.
Palavras-chave. nearshoring; produção de espaço; efeitos de bloqueio; teleconexões terrestres; sustentabilidade; México.

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Introduction

Recent trade and geopolitical tensions, along with the United States of America (USA) shift of imports away from China, have positioned Mexico as a central actor in North American nearshoring, that is, the relocation of production closer to consumption markets.

Despite ongoing socioeconomic and diplomatic tensions, Mexico's advantages include geographic proximity to the USA market, low labor costs, inexpensive land, abundant natural resources, a macroeconomic environment favorable to foreign direct investment (FDI), and robust trade agreements such as the United States-Mexico-Canada Agreement (USMCA), which safeguards investments, establish dispute-settlement mechanisms, and defines rules of origin.

Largely aligned with USA interests, nearshoring in Mexico strengthens supply chain and energy security – given its ties to national energy policy and export markets –, an especially critical factor amid escalating international conflicts and impacts derived from global climate-environmental change. For the USA, nearshoring thus carries strategic implications for national and re-

gional security, particularly in relation to supply (energy and food in particular), while also serving as a tool to preserve its hegemony against China's growing dynamism (Green, 2023).

Nearshoring emerges as a response to the restructuring of global value chains, which are highly interconnected due to limited diversification of key suppliers, rising demand for international transport and logistics, imbalances of interoceanic trade, and the global expansion of e-commerce.

As said, the main drivers of relocation include: (a) trade wars and broader geopolitical and geoeconomic factors including trade tensions between China and USA and the armed conflict between Russia and Ukraine which raised prices of agricultural commodities, fuels, minerals and fertilizers; (b) the economic impacts of the COVID-19 pandemic; (c) increasing international transport and logistics costs; and d) mixed behaviour of global inflation rates, which peaked in mid-2022 before beginning to decline, yet still remain above pre-pandemic levels (González, 2024).

Our premise is that nearshoring, which entails legal, economic, social and environmental dimensions, have diverse implications, particularly those influencing territorial (re)organization, namely the (re)definition of land use and the placement of strategic infrastructure to connect relocated production with resource supply and consumption hubs. This involves the development of housing, industrial warehouses, storage facilities, transport infrastructure, and related investments in security and connectivity. According to our preposition, steady supply of production inputs, particularly critical natural resources, is also a decisive factor in determining the suitability of specific regions for nearshoring.

Our hypothesis is that the Mexican State plays a central role in creating the enabling conditions for accelerating nearshoring, framed by the current government as a pathway to national development. While business elite support – national and international – is not new, what seems to be unprecedented in Mexico's contemporary history is that such support is now being granted to a government of progressive orientation.

This paper therefore seeks to identify who benefits most and assess the territorial impacts of nearshoring, contending that it reinforces an uneven production of space (Smith, 1984) where benefits and burdens are unequally distributed.

Our analysis focuses on investments – whether planned or already underway – in production, logistics, strategic infrastructure, and real estate, arguing that these have uneven spatial and socioecological implications, amplified by the speculative nature of urbanization (Logan and Molotch, 1987; Brenner, 2015). In the case of nearshoring-driven urbanization, promoted by the real estate sector as a business opportunity, its spatial and, above all, its socioecological impacts remain overlooked despite their significance. These impacts can nonetheless be observed, as we will show, in the rising demand from real estate and construction for land, resources, and water.

Attending to the current political and economic context of the agents driving this development in Mexico, we review their main narratives, actions and expectations drawing on press reports, government and banking statistics, and specialized literature. This analysis is situated within broader geopolitical struggles, regional to subnational geoeconomic dynamics, and land teleconnections – which link land-use change to underlying urbanization dynamics and lock-ins (Seto, Reenberg, Boone and Simon, 2012).

Through a critical geopolitical lens – concern with «the politics of the geographical specification of politics» (Kuus, 2017) – and drawing on economic, historical, and sociocultural factors shaping «spatial relationships and entities» (Sharp, 2020), we analyse how Capital, particularly through nearshoring, assigns hierarchies to different territories within global productive forces. From a Latin American perspective of political ecology and urban political ecology (Delgado, 2013; Alimonda, Toro and Martín, coords., 2017; Delgado, 2019a; Alimonda, 2025), we further trace prospects for market expansion into strategic *places* marked by ecological degradation and social injustice, while outlining short-term actions and potential pathways for long-term transformational change.

1. Nearshoring's space production

The production of space refers to the intricate process by which absolute, or physical, space and relative, or social, space interact and manifest within distinct territorial realms. The crystallization

of this process reflects the logic of the prevailing social system and consequently of the spatial integration required for its production and reproduction (Harvey, 2001 and 2006). It involves various elements, including natural resources, labour force, markets, and advancements in scientific and technological innovation, with territorial space functionally organized through practices and organizational processes related to production, circulation, and consumption, which serve to both integrate and fragment territories (i.e., globalization and regionalization of markets and chains of value, production and supply). Under capitalism, this transformation of territorial dynamics, along with the myriad relationships existing across different spatial and temporal scales, aims to facilitate the transformation of the very use value of territories into a commodity, a context in which not all territories provide equivalent profitability conditions; thus territories with superior advantages become highly contested (Smith, 1984; Santos, 1990; Harvey, 2001; 2006). The same applies to territories with strategic positions within global geopolitics, usually intertwined with regional and global geoeconomic dynamics, thereby influencing the «geometry» of trade (Seong *et al*., 2025).

The strategic nature of territories is therefore complex, shaped by evolving, multifactorial dynamics centred on three key aspects: reserves of, and access to, natural resources; the presence of population centres (as they provide labour and constitute consumption markets); and infrastructure and public services that enable and facilitate the circulation of goods, services, and labour (Delgado, 2015a). Moreover, under the current mode of production, regulatory frameworks that safeguard private property and promote investment and trade have been central to Capital's spatial prioritization, with free trade agreements playing a particularly influential role since the establishment of the General Agreement on Tariffs and Trade (GATT), now the World Trade Organization.

Considering the just said, the production of space entails multiple transformations shaping changes in the built-environment and urbanization patterns (Brenner, 2015), favouring investment, trade, and ultimately capital accumulation. This process of production of «spaces of Capital» (Harvey, 2001) within the T-MEC region, as we show below, encompasses the development of industrial parks, storage facilities and logistics infrastructure – including «last-mile» facilities – , all of which must comply with current urban development plans. The latter highlights the enduring interconnection between industrial and infrastructure development and urban growth, showing that urbanization is intrinsically associated to nearshoring and vice versa.

Nearshoring-driven urbanization incentivizes the development of housing as well as commercial and agricultural real estate linked to various forms of speculation but also to state programs such as Mexico's National Housing Program for Well-Being, which aims to provide up to 7.4 million affordable homes for 24.9 million disadvantaged people in «prioritized areas» (ideally located near to employment sources, including those generated by nearshoring). Infrastructure supporting nearshoring – particularly for the transportation of goods and production inputs – adds complexity by connecting urbanized and non-urbanized areas through land teleconnections (at multiple scales). Resources appropriation in this context, is often socio-politically contested, often resulting in dispossession and significant socio-environmental impacts (Martínez Alier, 2023).

The above said suggests that the subordination of territories and their inhabitants to the facilitation of new investments and capital endeavours not only drives urban expansion and strategic infrastructure development but also, in the case of Mexico, potentially reinforces socio-spatial disparities and labour precarity by exploiting differential labour costs within the T-MEC region[1]. Simultaneously it may accelerate ecosystem fragmentation and degradation (Cruz, 2024) and create lock-in effects tied to unsustainable land patterns and resource use (Helmrich, Chester, Miller and Allenby, 2023).This dynamics highlight the significance of analysing nearshoring-related socio-territorial transformations in Mexico given the scope and enduring nature of their potential impacts

1. Mexico is one of the top ten most attractive labour markets globally (SE, 2022), with a significant wage differential within North America. The average hourly wage for the manufacturing sector in Mexico at the end of the third quarter of 2023 was around US$4 dollars, compared to US$27 in the USA and US$22 in Canada.

2. Promoting nearshoring in Mexico

Nearshoring is not new in Mexico. It dates to the National Border Program (1960-1965) and the subsequent Border Industrialization Program of 1965. It can be contended that the «new» nearshoring pertains to more recent relocations, particularly under the T-MEC and as part of an international trend of economic and commercial regionalization.

The increased appeal of the Mexican economy for Foreign Direct Investment (FDI) has been underscored in recent years by the Ministry of Economy of Mexico (SE, 2023a; 2025).[2] More than half of the FDI has been funneled into the manufacturing sector, with nearshoring investments concentrated in the automotive, electronics, semiconductors, home appliances, chemical and pharmaceutical industries, along with logistics, a context in which four regions are fundamentally driving this momentum: (i) the Northern region, encompassing the Ensenada-Tijuana-Mexicali and Saltillo-Monterrey corridors, along with Ciudad Juarez; (ii) El Bajío comprised by the Guanajuato-Querétaro corridor, extending to Aguascalientes, San Luis Potosí, and portions of Jalisco; (iii) the Puebla-Tlaxcala-Hidalgo corridor; and (iv) the Metropolitan Area of the City of Mexico and surrounding areas serving as a crucial logistical hub for the domestic market.

Despite recent trade barriers and tariffs, financial analysts expect USA protectionism toward Mexico to be lower than that applied to other countries, favouring the integration of nearshoring value chains (Lopez, Serrano and Vázquez, 2025). Projections for nearshoring remain promising, though not without caution and acknowledgment of the existing challenges (see below). Estimates suggest nearshoring could boost Mexico's economy by up to 8% this decade (Santander, 2023). In that sense, the draft of the National Strategy for Industrialization and Shared Prosperity, or Plan Mexico, identifies nearshoring and increased FDI as key priorities (Gobierno de México, 2025). Data from the Mexican Association of Private Industrial Parks (AMPIP) show that industrial property availability in the regions mentioned above has been limited due to nearshoring demand, particularly in 2023 whit only 2.2% available across 430 industrial parks that are part of the Association (mainly in Nuevo León, State of Mexico, Guanajuato, Coahuila, Chihuahua, and Jalisco). These regions house over 3,700 companies within 44 million square meters of built space. Despite some constraints on land availability, 4.2 million square meters were added to the inventory of industrial properties in 2023, largely due to e-commerce expansion and anticipated nearshoring demand (Escobar, 2023a; AMPIP, 2025) Between 2024 and the first quarter of 2025, an additional 11.1 million square meters were added, bringing industrial property availability to 4.9% (AMPIP, 2025).

According to Plan Mexico a package of initiatives (Gobierno de México, 2025) are underway to advance economic development. These include consolidating and creating additional «Development Poles of Well-being» (formerly PODEBIs, now PODECOBIs) and «Development Circular Economy Poles for the Well-being» (PODECIBis); deploying energy, water and transportation infrastructure through public investment and private-public partnerships[3]; constructing one million social housing units; expanding or establishing new industrial parks across twelve designated polygons; promoting national industry and products («*Hecho en Mexico*» campaign)[4]; among other. These initiatives aim to strengthen and complement existing dynamic regions and consolidate new ones *vis a vis* the advancement of infrastructure and megaprojects. Plan Mexico is therefore consolidating the Sonora Plan; enhancing the Tula area through the development of a PODECIBI – supported by granting tax benefits – and linking the logistics and economic activities associated with the Felipe Ángeles International Airport (AIFA); and integrating the Isthmus and Mérida-Progreso regions recently connected by the Mayan Train. Further details are offered below.

Even before Plan Mexico, a prevailing discourse across the country's regions emphasized the urgency of seizing nearshoring opportunities, championed by both the business sector and some local political actors. In addition to implementing measures to generate favourable conditions for

2. FDI in Mexico reached US$34.1 billion in 2018 and US$34.5 billion in 2019. With the pandemic, FDI fell to just under US$28.2 billion before increasing to US$31.5 billion in 2021 and nearly $35.3 billion USD in 2022. As of the end of the third quarter of 2023, the Ministry of Economy (SE, 2023b) reported almost US$33 billion in FDI, an amount that reached a new high of $36.8 billion USD in 2024. Recent data indicate that Mexico registered a new record in DFI in the first quarter of 2025, 5.4% higher than in the same period of 2024 (SE, 2025).
3. Infrastructure investments required by 2032 have been estimated in about US$400 billion (Gobierno de México, 2025)
4. See: https://hechoenmexico.economia.gob.mx

FDI by various federal entities aiming to position nearshoring as a driver of economic growth and job creation, a competitive environment has been also observed in which the advantages of each federal entity over the others have been argued. These advantages may include their location, the availability of skilled labour, infrastructure, and even cultural affinity with certain types of investments.

This environment has revealed the active role of interest groups, both business and political interest groups, who have prioritized short-term economic gains over long-term implications for the built environment and land teleconnections. As President López Obrador noted, during his government, «... businessmen and bankers have done well» (Jiménez and Sánchez, 2023).

In this context, it is not surprising that at least 174 companies had announced relocation-related investments for about US$74 billion (SHCP, 2023), a trend that continued in 2024 with additional large FDI projects such as Foxconn's GB200 superchips manufacturing facility. According to a BBVA Research-AMPIP survey, new investments representing incoming tenants in industrial parks are expected to reach 399 between 2024 and 2025, most of them from the USA (Escalera, López, Serrano and Vázquez, 2024).

Governmental optimism about nearshoring-led growth is evident in fiscal incentives such as immediately deductions for investments in fixed assets and training expenses (SEGOB, 2023a). These measures run in parallel to the promotion of PODECOBIs, including those initiated in the Isthmus of Tehuantepec under the previous administration (SEGOB, 2023b) as well as under Plan Mexico which expands further fiscal and other types of incentives for nearshoring (SEGOB, 2025). Official discourse presents these packages of measures as catalysts for innovation, quality employment opportunities, and equitable regional development; claim that still await validation as this process is not only fraught with contradictions but also remains anchored in maquila-type manufacturing. More broadly, how «development» is understood – in terms of its objectives, primary beneficiaries, and those most affected is critical – since history has shown that any capitalist-based development scheme, inevitably produces uneven development, various forms of structural dispossession and socioecological degradation.

Expectations of nearshoring are already driving socio-territorial transformations, particularly in Mexico's Northern region which concentrates 54.3% of industrial real estate demand (Monterrey, Juárez, Saltillo, Tijuana, and Reynosa), compared to 23.7% in the Bajío-West (Guanajuato, Querétaro, San Luis Potosí, and Jalisco); and 22.1% in Central Mexico (Mexico City, Toluca, and Puebla) (AMPIP, 2025). This concentration, however, contrast with the stated goal of fostering «equitable regional development». Industrialized areas in the North are anticipated to benefit the most, at least in the short term, already demanding expanded customs operations and greater capacity in terrestrial cargo ports.

A similar dynamic is observed in the Bajío region, where rapid investment growth has been observed in the automotive, aerospace, IT, digital and computational services sectors, particularly in Guanajuato and Querétaro. A notable example is Amazon's US$5 billion investment to establish a «digital region» of data centres in Queretaro. In Mexico' Central region, new investments linked to Plan Mexico target two key fronts: the Tula industrial corridor – primarily a strategic energy hub that received significant investments for the modernization of the Tula refinery; and the AIFA area of influence, encompassing logistics, manufacturing, commercial and real estate projects associated with the largest domestic consumption market in the country – the megalopolitan area of central Mexico, particularly the Metropolitan Area of Mexico City.

Moreover, the expansion of the national railway network seeks, among other issues, to further incentivize, nearshoring along the Interoceanic Corridor of the Isthmus of Tehuantepec and the Mayan Train, complemented by modernization efforts at key maritime ports such as Veracruz, the New Port of Veracruz, Puerto Lázaro Cárdenas, Puerto Progreso, and Ensenada. In the near future, new railway connections, first between Mexico City and Queretaro, and later extending to Irapuato, are expected to strengthen interconnections between the Central and Bajio regions, linking major industrial zones along the route. These include northern municipalities of Mexico City and the conurbation area in the State of Mexico (Cuatitlán, Cuatitlán Izcalli, Tlalneplantla, etcetera), the Tula region in Hidalgo, and industrial hubs in Queretaro such as San Juan del Río, La Corregidora, and the International Airport of Queretaro.[5] Given its multiscale implications, this project requires

5. It is also a hub for the aerospace industry. See: www.proyectosmexico.gob.mx/ppp07-tren-mexico-queretaro.

close attention as it unfolds, particularly regarding its effects on the regional and thus national nearshoring dynamics and their socioecological (and other) impacts.

The following sections review the Interoceanic Corridor and the Mayan Train; projects framed in the official narrative as means to counter southern Mexico's uneven spatial development and promote shared prosperity.

2.1. Interoceanic Corridor for the Isthmus of Tehuantepec

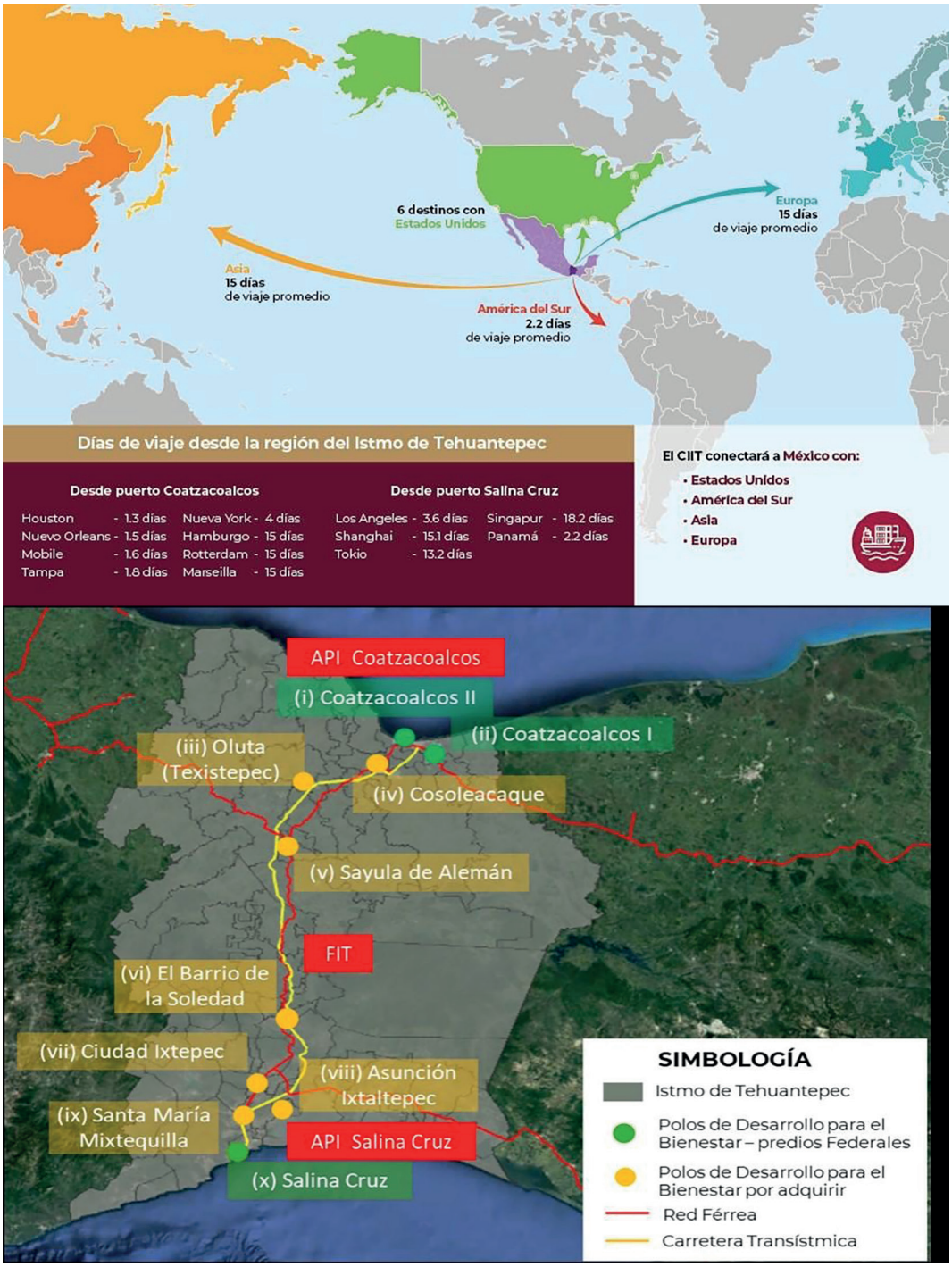
The integration of Pacific and Gulf ports with major South-North road arteries has been a longstanding objective, dating back to the La Mesilla Treaty of 1854 and the McLane-Ocampo Agreement of 1859 (the latter never ratified). Article VIII of the La Mesilla Treaty granted free transit of people and goods across the Isthmus of Tehuantepec (the McLane-Ocampo agreement intended to additionally grant to the USA the perpetual free transit of goods and people in the region, including belligerent troops). Article VIII of the Mesilla Treaty was derogated during the presidency of Lazaro Cárdenas in 1937, all in a context in which the USA already controlled the Panama Channel one year before it started its construction in 1904. Since the first section of the trans-isthmus railway was built in 1907 under Porfirio Díaz, efforts to connect the ports of Coatzacoalcos (Veracruz) and Salina Cruz (Oaxaca) have faced diverse biophysical, economic, political and technological challenges. Renewed proposals to escalate the project emerged under the North America Free Trade Agreement (NAFTA) era multimodal development corridors in the late 20th century, and later, in 2005, under the Security and Prosperity Partnership of North America (SPP). Moreover, efforts have been also made to consolidate interconnected «industrial hubs» within the North American market through the promotion of «Special Economic Zones» in 2016 as well as in the context for advancing «strategic infrastructure» as a part of a national program extending until 2030, as proposed by the Mexican Chamber of Construction Industry in 2017. The last and current administrations have articulated its own narrative focused on reinforcing strategic infrastructure and promoting PODEBIs (now PODECOBIs).

Today the corridor encompasses 79 municipalities – 46 in Oaxaca and 33 in Veracruz – and involves two key components: (i) a logistical hub for interoceanic cargo transportation, including the modernization of the ports of Coatzacoalcos and Salina Cruz, the Interoceanic Railway, and supporting infrastructure such as optical fiber networks, antennas, gas pipelines, and National Guard facilities; and (ii) the consolidation of PODEBIs/PODECOBIs aimed at attracting international and national industries to stimulate regional supply and productive chains. Priority sectors include food and beverages, tobacco, raw materials, textiles, wood and paper, chemicals, automotive components, metals, machinery, and equipment. See Figure 1.

The territorial transformation associated with the PODEBIs/PODECOBIs officially covers 2,622 hectares (see Table 1). To this must eventually be added the additional surface generated by urbanization processes and land-use changes – formal and informal – triggered by their establishment.

The modernization and rehabilitation of this corridor, including new infrastructure and the development of PODEBIs/PODECOBIs, has raised concerns and already generated tangible socioecological impacts (Ceceña *et al*., 2021; García, 2024). Opposition has emerged from local populations, particularly Indigenous communities in the norther Isthmus, as well as from organizations such as Red de Defensoras y Defensores Comunitarios de los Pueblos de Oaxaca, Educa Oaxaca, Comité de Defensa de los Derechos Indígenas, among others. Limited public information on the project's environmental evaluations, coupled with preexisting environmental problems expected to worsen – e.g., deforestation, water demand, and pollution – has fuelled contestation. Activists have reported harassment, arbitrary judicialization, and direct attacks by security forces and organized crime, within a broader context of regional violence and insecurity that, for example, culminated in the assassination of Arnoldo Nicolás Romero, an environmental activist with the Unión de Comunidades Indígenas de la Zona Norte del Istmo (EDUCA, 2025; Ortuño, 2025).

Figure 1. Interoceanic Corridor of the Isthmus of Tehuantepec Route



Source: National Infrastructure Fund, Government of Mexico
Recovered from https://www.fonadin.gob.mx/fni2/fe59/ and https://gob.mx/ciit

Table 1. Surface area designated for the development of PODEBIs

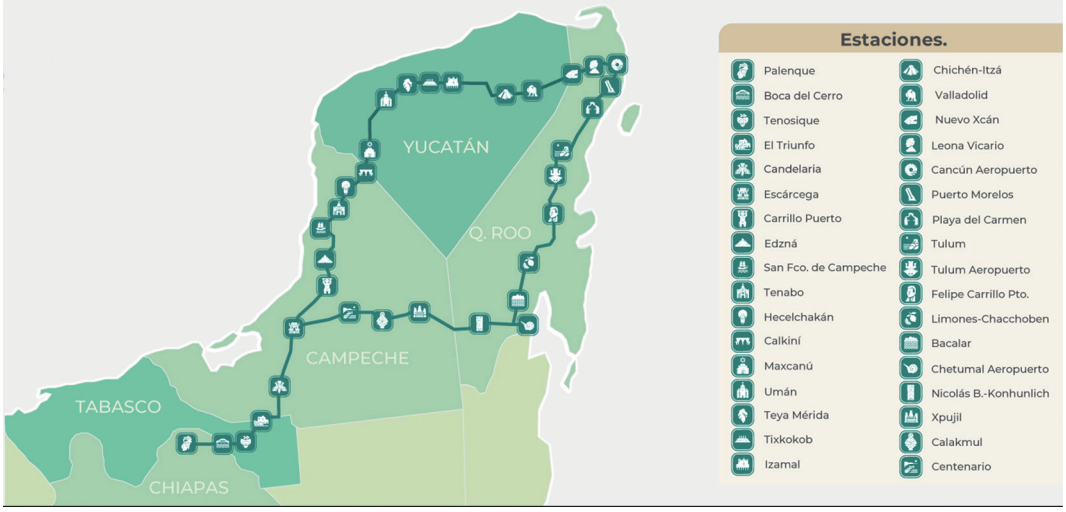
PODEBI's name	*Surface area (ha)*	*Company*	*PODEBI's name*	*Surface area (ha)*	*Company*
Coatzacoalcos I	257.7	Mota Engil México	Ciudad Ixtepec, Oaxaca	412.5	Canceled tender
Coatzacoalcos II	131.8	Ursus Energy	Santa María Mixtequilla, Oaxaca	502.4	Profharmax – ABCD Arquitectura
Salina Cruz	82.1	Mota Engil México	Matías Romero Avendaño, Oaxaca	179.2	Sergio Mañón Pineda – ABCD Arquitectura
San Juan Evangelista	360.2	Profharmax - ABCD Arquitectura	Asunción Ixtaltepec	234.1	Arzyz
Texistepec	462.4	Profharmax – Transportadora Comexsa			

Source: authors' own elaboration based on the declaration of each PODECOBI in the Official Gazette of the Federation (Diario Oficial de la Federación – www.dof.gob.mx).

2.2. Mayan Train

Although primary designed to promote tourism, historically a driver of speculative activity in coastal real estate markets – this 1,440 km railway project, connecting key cities and tourist destinations across Chiapas, Tabasco, Campeche, Yucatan, and Quintana Roo (Figure 2), also has the potential to integrate nearshoring activities and even consolidate regional nearshoring hubs, as highlighted in Plan Mexico.

Figure 2. Mayan Train Route



Source: Gobierno de México, Secretaría de la Defensa Nacional obtenido de www.trenmaya.gob.mx

Comparable to the Transisthmian Corridor, this project comprises a range of initiatives along its route, including infrastructure, housing, equipment, and support for productive activities. meaning that the potential territorial transformation may far exceed the land required for the construction of the railway itself. The construction has also demanded substantial natural resources with considerable associated environmental footprints. Between 2021 and 2023 alone, over 222,000

tons of ballast were extracted from multiple sources, from Cuba to open-pit mines on the edges of Los Tuxtlas Biosphere Reserve in Veracruz (Morales, 2025). Similarly, the project has required large volume of cement – over one million cubic meters in 2023 (Escobar, 2023b) – and steel, with more than 12,300 tons consumed that same year alone (Juárez, 2023). In 2024, sales of these materials slowed slightly due to the completion of megaprojects and the change of the federal administration. Nonetheless, renewed demand for these and other resources is expected under Plan Mexico, which, as said, encompasses, not only infrastructure and industrial hubs and corridors, but also housing development.

This large material footprint of the Mayan Train project and its related environmental impacts –including deforestation, biodiversity loss, air pollution, and even disruptions to underground water systems– have even been acknowledged by the national environmental authority (Rosete, 2025). Thus, it should serve as a caution for the implementation of Plan Mexico's projects.

The anticipated demand for construction materials to enable large-scale infrastructure and variated real estate projects has become evident as entrepreneurs and the government of Yucatán support the advancement of nearshoring, primarily through integrating the ports of Salina Cruz and Puerto Progreso via the Mayan Train. As former Governor Maricio Vila Dosal (2018-2024) stated, the aim is to «compete with the regions of the North and El Bajío» (Ayala, 2023). In this context, transportation infrastructure development has intensified real estate speculation in the Yucatán Peninsula. Mérida alone had over 100,000 investment plots developed by 2023, reflecting a broader phenomenon of speculation and land acquisition practices (Chan, 2023). Equally important is the enduring pattern of speculation and land acquisition in the Riviera Maya, expected to expand further with the Mayan Train operation and its connection to the Interoceanic Train and to the rest of the railway system serving nearshoring investments and, in general, FDI.

The impacts of FDI on the built environment, along with national public and private investments, whether in the Isthmus, the Yucatán Peninsula, or other urban areas across the nation where nearshoring initiatives are underway, requires careful consideration. Such investments strongly influence local socioeconomic dynamics, generating both benefits and adverse effects on working, living, and environmental conditions.

Once changes in land use and the expansion of the built environment take place, their impacts often outlast the lifespan of FDI projects and may intensify overtime due to land teleconnections. Thus, while FDI may be considered successful in terms of short-term economic gains and employment, its lasting socioecological impacts may not align with such measures of success. Land grabbing, directly and indirectly associated with nearshoring, has the potential to induce significant effects, including the consolidation of extensive single land-use areas, impacting mobility and escalating the demand for infrastructure, public services, and resources such as energy and water. Additionally, these processes may foster segregation and urban gentrification, translating into the advancement of «sacrifice zones» (Navarro and Barreda, 2022) where undesirable land uses concentrate in areas inhabited by the most vulnerable populations – a phenomenon widely documented by urban political ecology (Heynen, Kaika and Swyngedouw, 2006; Ernston and Swyngedouw, 2019; Delgado, 2019a; Delgado, Jiménez Caballero and Vidal Origel, 2023).

3. Nearshoring challenges in Mexico

The advancement of nearshoring, as analysed by Intercam Banco (2023), requires substantial public and private efforts, particularly in energy infrastructure and the security of both production inputs and goods transportation. Adequate electrical infrastructure is essential to support the expansion of nearshoring operations and incoming companies, a need repeatedly made by the private sector, most recently by actors involved in semiconductor and chip production –which also require reliable water supply (USAID, 2024).

Unlocking nearshoring's potential, therefore relies on improvements to both water and energy systems, including increased generation capacity, expanded distribution networks, and efficiency enhancements, aligned with the development of industrial parks and corridors. These demands place significant pressure on the state-owned *Comisión Federal de Electricidad* (Federal Electri-

city Commission), while creating opportunities for private cogeneration projects which in Plan Mexico are framed as a way to advance energy transition and national energy sovereignty. Under Plan Mexico an additional 3,585 Mw of electricity generation is targeted for 2025, with 25% from renewable; by 2030 total generation is projected to rise by 22,674 Mw, including 6,400 Mw to be generated by the private sector, primarily from renewables (Gobierno de México, 2025).

Regarding security – particularly the transportation of production inputs and final goods – public investment is crucial to address persistently high theft rates. Criminal incidents against carriers reached 13,199 in 2022 and 15,937 in 2024, generating an annual cost of 2.3 billion pesos according to the National Transport Association, which represents 55% of the nation's carriers (Cota, 2023). Projections for 2025 suggest over 12,000 incidents (Logistics World, 2025), though efforts of the National Guard for increasing inspections and patrols and additional measures adopted by the private sector may mitigate this. Improvements in transportation security and logistics could transform the freight sector, currently dominated by 56% «owner-operators» and 44% managed by over three hundred companies, potentially leading to grater corporate consolidation and partial shifts to modernized railway networks. These potential changes are driven by the combined impetus of emerging regulatory frameworks and fiscal measures targeting motorized freight transportation, coupled with the escalating shortage of drivers willing to work under conditions of pronounced insecurity. While some companies employ escort services to protect merchandise, such scarcity can erode profits and affect national confidence, as asserted by Intercam Banco (2023). It is important to highlight that the security crisis in Mexico is largely driven by criminal networks exploiting communication infrastructure to expand illegal and illicit markets –drug, fuel and human trafficking, merchandise theft, illegal mining, and even land appropriation– escalating violence in general but particularly around industrial, logistics and infrastructure areas. The case of the Isthmus of Tehuantepec exemplifies this dynamic due to its geostrategic location and status as a border zone (El Universal, 2025).

In addition to the trajectories shaping the supply conditions of energy, water, and other resources, as well as security concerns, nearshoring faces potential challenges related to trade tariffs, labour rights, environmental regulations, and social contestation. Labor issues include shortage of skilled workforce, adjustments in labour regulations, working conditions, and workers' rights, including the right to unionize, which could deter investment. Environmental regulations, if strengthened, could increase operating costs, as exemplified by mandatory environmental risk insurance for high-risk activities (Branded Content, 2023) or compliance with new regulations, such as those pertaining to the construction of sustainable and resilient buildings and infrastructure, highlighted by the damage to Acapulco's tourist infrastructure from Hurricane Otis (Tulio, 2023).

For the business sector, the solution lies in the efficient management of resources (capital, human, and natural) and the «responsible» management of «externalities,» while simultaneously promoting «green» businesses that enable new accumulation niches, fiscal incentives – or of other type – and socio-environmental positive corporate images.

The following section examines further the socioecological dimension of nearshoring, including impacts linked to nearshoring-related real estate speculation.

4. Socioecological impacts of nearshoring

Nearshoring inevitably increases demand for energy, materials, and water, unfolding within a context of unsustainable and unequal resource consumption, which, under a business-as-usual scenario, is projected to drive a significant rise in absolute global consumption in the coming decades (UNEP, 2021; 2024).

Resource demand associated with both relocated production processes and the development of new infrastructure and buildings compounds existing challenges, especially in regions already grappling with issues such as water scarcity. This is evident in Mexico's Northern region where nearshoring is advancing despite water shortages and foreseeable impacts on local biodiversity and ecosystems. Two large projects have warned the scale of the problem. On one hand, the Tesla gigafactory in Monterrey, Nuevo León, initially approved by the government (SEMARNAT,

2023) but later frozen by Elon Musk in July 2024. On the other, the Constellation Brands brewery plant proposed in Mexicali, Baja California, in 2020, cancelled by the federal government due to social contestation and local water scarcity, and relocated to Veracruz, where it will start operations in 2026.

The most water-intensive industrial activities, such as the projects mentioned before, particularly intensify competition for water resources, including allocations needed to sustain ecosystems.[6] This applies not only to the potential reactivation of Tesla's factory – or to any other automotive manufacturer –, but also to the Constellation Brands plant, which places pressure to water availability in Veracruz, a state with far greater water resources than Baja California, yet still finite. To address this type of situations, water concessions should be conditioned to water availability in the long term – to guarantee the human right to water and ecosystems sustainability. However, this principle has historically been neglected, with some regions under water bans nonetheless granting large industrial water concessions (Delgado, 2015b).

The expansion of nearshoring also drives increased waste generation, the management of which its often inadequate across much of Mexico, particularly for toxic and special handling waste, including in the latter construction and demolition residues (Muñoz, Delgado, and Díaz, 2021). Changes in land use associated with the relocation of production and infrastructure development, coupled with natural resource extraction and the waste generation, have the potential to escalate socio-environmental conflicts over land, resources, and livelihoods. This is particularly notable in the already mentioned sacrifice zones, where undesirable land uses and their associated impacts concentrate.

Nearshoring thus entails the relocation of socioecological impacts, often towards regions with the weakest regulatory frameworks and limited environmental oversight capacities. The «exportation» of impacts can be an advantage companies pursuing nearshoring, in contrast to reshoring strategies, which may be less attractive due to stricter environmental and labour regulations and oversight at home. In this context, as McCulligh (2024) notes, the Mexican state plays a central yet contradictory role in environment-making; while it promotes private investments and private-public-partnerships in infrastructure aimed at addressing pressing environmental challenges – such as remediation or waste water treatment –, it simultaneously fosters further degradation by encouraging manufacturing-oriented investments, including nearshoring projects that, as described before, may entail significant socioecological impacts.

Nonetheless, a narrative framing nearshoring as «sustainable» has gained traction, arguing that, compared to offshoring, it shortens supply chains distances, thereby reducing resource consumption and polluting emissions (Fernández *et al*., 2022). While this argument is valid, it should not imply the absence of socio-environmental impacts. Nor does it guarantee waste reduction or «acceptable» pollution levels, which depend on the types of pollutants and the sensitivity of exposed ecosystems.

Coupling nearshoring with circular economy practices along the supply chains has also been proposed, with projections suggesting a potential reduction of the material footprint of supply chains by approximately 28% by 2032 (PACE, 2021). However, despite the appeal of such circularity initiatives, their constraints cannot be overlooked. First, companies generally adopt waste minimization and industrial symbiosis measures only to the extent that they remain profitable, which does not necessarily align with optimal environmental practices . This constraint may limit the potential of PODECIBIs, unless the state enforces circularity standards among polluting industries and/or offers sufficiently attractive incentives. Second, coupling circular economy schemes with nearshoring could foster an environment-making process that transforms certain nearshoring regions into specialized spaces for circular economy activities, without necessarily generating local economic gains – particularly in the absence of high-value domestic circular economy

6. With a production capacity of one million automobiles, the Monterrey plant is projected to directly consume between 5 and 6 million m3/year, a quantity sufficient to meet the annual water needs of over 75 thousand inhabitants. However, the plant's indirect water consumption, associated with its supply chain, could amount to an additional 140 million m3, equivalent to the annual water supply for 40% of the population of the Metropolitan Area of Monterrey. These estimates are derived from the average direct consumption values calculated by Semmens, Bras and Guldberg (2013) and indirect consumption values provided by Automotive World (2014). The average per capita water consumption is estimated to be 180 liters per day.

productive chains. Moreover, these specialized spaces may become sacrifice zones, concentrating the socioecological costs inherent to circularity initiatives, which cannot be fully decoupled from undesirable impacts. For example, the energy required for repurposing, recycling, and reusing materials may not come from renewable sources, potentially generating greenhouse gas emissions. Circular economy strategies may also demand large volumes of water and contribute to air pollution, as in the case of microplastics release during mechanical recycling. Furthermore, nearshoring investments in circular economy activities may exacerbate spatial disparities in the distribution of circular economy phases and their associated implications. The recovery, reuse, and repair stages are likely to remain confined to local economic circuits, while the recycling and reinsertion phases are primarily designed to reduce the operating costs of nearshoring investing companies. In these latter phases, nearshoring regions in the Global South could become receptacles of waste – both domestically and imported – to be processed (as observed in Mexico's border region: Delgado, 2019b). This dynamic may enable the Global North to continue «specializing» in consuming goods, now delivered through nearshoring supply chains, while exporting the environmental and health burdens of waste management to the Global South, all under the guise of environmental responsibility .

It is worth noting that measures aimed at extending the lifespan of goods may face resistance, as they could slow down capital turnover and, thus, hinder wealth accumulation. Within capitalist production relations, such measures may only be feasible in certain niches and limited scales.

In summary, the socioecological tensions of nearshoring are manifest across multiple dimensions, from extractive resource activities and potential land dispossession, to impacts from expanding infrastructure and building stock, and waste generation and disposal. In this context, the creation or expansion of sacrifice zones will inevitably fragment territories, degrading ecosystems and consolidating an asymmetric distribution of nearshoring's socioecological «bads» as part of a specific environment-making process.

Advancing nearshoring as a pathway or platform for a «national transformation» may jeopardize the future of many territories, their inhabitants, biodiversity and ecosystems. While this model may offer certain short-term socio-economic benefits, it inherently fails to resolve the underlying tensions and contradictions between the current development paradigm and alternative approaches.

These unresolved tensions and contradictions are reflected in views of agrobusiness-women Alta Gracia Gómez Sierra[7] who has championed nearshoring in Mexico as a catalyst for «conscious capitalism.» According to its proponents, this ideology seeks to cultivate financial, economic, and social prosperity for all stakeholders (Mackey and Sisotia, 2019), the later having an affinity to the so-called «shared prosperity» slogan of the current administration.

Advocates argue that conscious capitalism can be achieved through ethical entrepreneurial principles, including a commitment to «serve others» (exemplified by Amazon); the pursuit of «furthering human knowledge» (as Google and Intel represent); the «creation of beauty» (Apple); and the «courage to promote change and improve the world» (The Gates Foundation or Whole Foods Market) (Mackey, 2011). Mackey[8], for instance, contends that business and capitalism, «while not perfect», are «fundamentally good and ethical» (The Guardian, 2013).

Despite critiques of conscious capitalism regarding its principles, scope, and the actual practices of its proponents (Monthly Review, 2013) it ultimately remains rooted in the more basic capitalist logic. Moreover, conscious capitalism parallels Blair's «third way», which sought more socially just governmental policies within capitalist globalization but failed to materialize meaningful mid- to long-term change. This political narrative, which shapes discourse around nearshoring in Mexico for the foreseeable future, is, in our view, questionable and lacks a solid grounding in modern political economy and the historical role of the Mexican economy.

7. See video: https://www.tiktok.com/@claudiasheinbaum/video/7340131706147474693

8. Mackey, the primary proponent of conscious capitalism, was co-founder and co-CEO of Whole Foods Market until 2022. Well-known for his anti-union views and full supporter of free market, as well as sceptical to the notion of anthropogenic climate change as he believes that climate change «is a perfectly natural and not necessarily bad» (The Guardian, 2013).

In the subsequent section, we draw some findings from our analysis to further explore some of the key inherent tensions and contradictions within both current and prospective transformational model proposals in Mexico.

5. Navigating the Challenges of National Transformation: tensions and contradictions.

In response to business-as-usual practices, the notion of transformation and reflections on potential transformation pathways for achieving it, has increasingly permeated both academic debates and political narratives. Although no consensus has been reached, a wide range of conceptual frameworks and implementation strategies are under discussion. Alongside positions that resist change, reformist proposals advocate for adjustments without fundamentally altering the underlying logic of the prevailing production system and power structures (Delgado, 2018; 2019b). Beyond these, a spectrum of transformational paradigms – ranging from the moderately progressive to the radical – has emerged, including post-growth (Jackson, 2021), degrowth (Demaria, Schneider, Sekulova and Martínez Alier, 2013), post-development (Escobar, 2005; 2017), post-capitalism (Mason, 2019), ecosocialism (Saito, 2017), and the pursuit of the «common good of humanity» (Houtart, Dierckxsens, Delgado and Jijón, 2017). However, to date, these proposals have not translated into tangible transformational pathways with the necessary momentum and political capacity to reshape spatial production and substantially challenge the hegemony of Capital, its market relationships and basic principle of wealth accumulation – at least beyond the local scale, where valuable but still relatively few collective processes have taken or are currently underway.

Given that exchange value and use value shape the nature of space, for some, space production involves the creation of conditions for generating and accumulating wealth through control over production, distribution, and consumption of goods and service, relegating other considerations as to mere externalities. Conversely, others emphasize socio-territorial features essential for safeguarding quality of life and the long-term viability of life itself, encompassing both humans and non-humans.

These contrasting interpretations, commonly observed between business elites and much of the political class on one side, and local inhabitants and grassroots movements on the other, give rise to tensions regarding desirable imaginaries and the acceptance of gains and losses. These tensions span both economic-material concerns and fundamental conditions for life. Therefore, it must be recognized that prioritizing exchange value, as exemplified by the promotion of nearshoring in Mexico, does not necessarily maximize use value for the majority. In fact, the pursuit of both objectives is «inherently contradictory and a continuous source of tension, conflict, and irrational configuration of space» (Logan and Molotch, 1987, p. 2). The resulting process, strongly influenced by prevailing power structures, fundamentally delineates how space is produced, for what purposes, who is most affected, and whose interests it ultimately serves.

Thus, if the proposed «national transformation» by the Mexican state adopts a reformist approach, characterized by an intention to ameliorate certain conditions without altering key structural aspects of the existing production system, then nearshoring can play a key role and will likely be perceived as such by actors prioritizing exchange value and the immediate advantages associated with it. Within this framework, perspectives vary, ranging from purely predatory to socially and environmentally optimistic positions that aim to reduce social debt and mitigate negative socio-environmental impacts to varying degrees.

Conversely, if the national transformation seeks to consolidate structural changes, the promotion of nearshoring, despite its potential economic benefits, will inevitably be recognized as an endeavour generating tensions and contradictions, not only due to socio-environmental impacts but, more fundamentally, because of conflicting worldviews and valuation languages (Martínez Alier, 2004). The likelihood of failing to achieve structural changes amid such tensions and contradictions is high, given the historical precedents observed in contemporary Latin-American history. Reformist measures have been often strengthened because they are perceived as transitional stages that address immediate needs while ostensibly laying the ground for structural transfor-

mations. Yet, deep structural change has proven difficult to achieve, particularly in the mid- to long term, because the progress achieved through reformist measures reinforces – or, at least, fail to successfully challenge – the logic of Capital and the core interests of certain bourgeois classes. These actors resist and actively contest regardless of whether they face potential losses since their ultimate goal is the continuous pursuit of further gains.

Such paradoxical circumstances are evident in the adoption of neo-extractivist policies (Gudynas, 2010; 2017) in countries such as Venezuela, Argentina, Ecuador, Bolivia and Brazil, where significant debates have emerged regarding the definition, scope and praxis of «alternative» positions. These debates have unfolded across multiple dimensions, notably highlighting the failure of the «commodities consensus» (Svampa, 2013) to deliver the favourable exchange conditions that its advocates anticipated.

For instance, initiatives like Ecuador's so-called «Buen Vivir mining», framed as a strategy to address social disparities, faced criticism for failing to dismantle the structural foundations of neoliberalism. Instead, this policy exacerbated the well-documented socio-environmental impacts of extractivism (Báez and Sacher, 2014). Persistent critiques from various socio-environmental grassroot movements prompted former president Correa to dismiss them as «environmentalism, fundamentalism, and childish nonsense,» contributing to the institutional harassment of these movements (GK, 2019). Extractivism persisted during and after Correa's administration, gaining momentum under Noboa's government.

In Mexico, amid the right-wing environmental critiques advanced in favor of their political, economic, and class interests, the former government (2018-2024) tagged environmental scientists as «fifis» (swanky and privileged) and environmental groups as «freeloaders serving vested interests» (Martínez and Garduño, 2022), branding them as pseudo-environmentalists opposing government-tal mega-projects, such as the Mayan Train. Analogous to the Ecuadorian scenario mentioned above, these narratives hinder honest and open dialogue about the socio-ecological impacts of prevailing policies and, if necessary, potential alternatives or solutions. In this context, political polarization has played a key role: aligning with leftist positions while also constructively critiquing their impacts becomes particularly challenging, as dissent from the institutional standpoint is often interpreted as siding with opposing factions. We strongly distance ourselves from such an interpretation.

Like neo-extractivism, certain endeavours aimed at regional integration in Latin America also present challenges, as exemplified by the Initiative for the Integration of South American Regional Infrastructure (IIRSA). Having invested nearly US$199 billion dollars as of the end of 2023, the IIRSA has received support from the Inter-American Development Bank (IDB), the Development Bank of Latin America and the Caribbean (formerly the Andean Development Corporation - CAF), various other international financial institutions, and the private sector. While prompted as essential for the advancing transportation, logistics, communications, and energy infrastructure crucial for «promoting sustained economic growth in the region» (UNASUR-CEPAL, 2011), the initiative has faced recurrent criticism for consolidating extractive corridors and favouring «neodevelopment» (Delgado, 2008; Mansilla, Panez and Ponce-Hille, 2019; Álvarez, 2021). Indeed, despite its progress, the socio-economic conditions of several participating countries have deviated from their initial progressive stances, moving instead toward neoliberal paradigms or, in some instances, radical neoliberalism, as observed in Argentina under Milei's presidency.

Today, social movements serve as a contested terrain between far right and leftist forces across several countries. Throughout much of Latin America, far-right movements have successfully responded to the timid attempts at popular reforms in the 2000s and 2010s, ascending to power by manipulating popular discontent. This trend serves as a cautionary signal for leftist or progressive governments still active on the continent (Canary, 2024).

In this context, the contradictions and tensions inherent to contemporary progressive initiatives represent a significant concern. If these contradictions are acknowledged and addressed, contingent on the prevailing correlation of forces (both domestic and international), opportunities may arise to create conditions conducive to socially and environmentally favourable outcomes in the production of space, guided by alternative logics and oriented toward different ultimate goals. However, this cannot be taken for granted. The path is fraught with obstacles, resistances, inertial practices, and challenges, including the rapid transgression of planetary boundaries.

The transformation envisaged here, characterized by long-term social and ecological viability, inclusivity, and justice, places central importance on social time, community relations, nature, and non-monetary values, thereby prioritizing life itself.

We contend that the attainment of such a transformation hinges on the collaborative construction of diverse possibilities, tailored to the specific features of each territory and the needs and priorities of both people and nature. This implies a process of co-production that fosters horizontal diagnoses and solution-building, in which places – as conceptualized by Escobar (2008) and the broader literature of political ecology anchored in critical political anthropology –, become central. In this perspective, community engagement and collaboration among all social actors are paramount, alongside governmental institutions willing to support these processes. To make this vision achievable, it is essential to consolidate foundational conditions, including the satisfaction of basic needs, access to (critical) education, health, security, and participatory democracy. The pathway toward attaining this objective is as important as the overarching goal itself.

In the context of advancing a «fourth transformation» and given that the infrastructure megaprojects delineating the spatial and material foundations of nearshoring in Mexico are either already established or nearing completion, it is imperative to highlight critical considerations for progressive political actors. This is particularly relevant for actions with enduring implications that materialize in specific forms of space production and environment-making, as evidenced in this paper and confirmed through the validation of our hypothesis. Maintaining a clear understanding of the destination and trajectory of this transformative course is thus imperative to ensure that ongoing adjustments facilitate genuinely structural changes to the greatest extent possible.

In this pursuit, those invested in transformative processes must continuously (re)examine our own subjectivities and contradictions. Neglecting this introspective work risks undermining even the most ambitious initiatives, including those driven by institutions, by allowing individualistic, predatory, and/or destructive behaviours to erode collective efforts. Profound transformations cannot emerge from, nor be sustained with, such subjectivities, regardless of rhetorical commitments.

In our view, comprehensive transformation resides in communal and participatory engagement, encompassing critical knowledge production and, above all, decision-making processes. Yet, it also involves individual effort, expressed through our attitudes, aspirations, behaviour, and hopes –all of which are central in delineating our everyday life, the concrete space where individual and collective hope can be transformed into tangible history (Freire, 2005). Confronting these human dimensions is among the greatest challenges ahead, for all of us, social movements, academia and certainly the political left.

Resistance to change, whether systemic or subjective, is likely to lead us towards discouraging scenarios. At best, these may deliver the short-term «improvements» typical of reformist endeavours, at a historical juncture when the window for mitigating the irreversible consequences of planetary degradation is rapidly closing. The urgency of the present moment demands resolute structural transformative action, from institutions to individuals, to avert such outcomes.

Final thoughts

In a context where nearshoring becomes central to the state's new development paradigm, some practical and immediate recommendations can be made to avoid its most undesirable outcomes.

Regarding extractive activities and water use, it is essential to strengthen current regulation by linking land-use change decisions to prior, informed, and culturally appropriated public consultation, as well as to community-based land-use planning. In the case of water, this thus implies aligning the granting extractive permits with water concession, thereby ensuring that local and regional water availability sets the limits for new extractive projects or any other water-intensive economic activities, including those envisioned in PODECOBIs, PODECIBIs and nearshoring corridors more broadly. Moreover, incentives for these activities should be legally eliminated in places where environmental thresholds, particularly water availability, have already been reached or exceeded.

At the same time, because infrastructure and productive zones' placement catalyses urbanization and fuels real estate speculation, it is imperative to establish regulatory frameworks – encompassing social and community dimensions – to oversee urban development and land valuation. This requires a reassessment of the criteria used to define urban land reserves, as well as the adoption of mechanisms to capture the value generated by public investments that otherwise accrue disproportionately to private landowners. Such mechanisms should aim to align market and land values – defined by the state – while transferring – at least partially – the costs of infrastructure and equipment deployment to industrial and high-end residential developers.

It is also imperative to revisit private property rights concerning land and real estate, starting with secondary properties, to pave the way for innovative forms of usufruct that guarantee the human right to housing while mitigating socio-environmental impacts to the greatest extent feasible. This requires enhancing local capacities for sustainable, inclusive, equitable, and participatory territorial planning and management (Delgado, 2019b), as well as for the governance of developed and undeveloped areas. Efforts should be directed towards curtailing Capital's exploitative practices while, as already said, bolstering community-based initiatives. Within this framework, leveraging literature such as political ecology and urban political ecology can illuminate the demands and solutions originating from socio-environmental movements, as well as on the mechanisms and strategies that empower them (Delgado *et al*., 2023). With respect to sacrifice zones associated with waste generation, closing existing gaps in waste management (urban, toxic, and of special handling, as classified in Mexico) is a pressing priority in parallel to policies that promote ecosystem restoration and the development of cooperative and solidarity-based circular economy schemes at all feasible scales.

Yet, most of the measures outlined above remain confined to a primarily reformist agenda. While such recommendations are important to curve the most predatory dynamics, they do not necessarily pave the way for an anti-capitalist or post-capitalist alternative that is socio-environmentally desirable and viable in the long term. Advocating proposals of that nature would require structural changes concerning the roles of the state, the private sector, academia, and society at large, enabling the transcendence of territorial reconfigurations that currently reinforce the subordination of entire regions to the national, regional, and global markets demands, and thereby to geopolitical and geoeconomic dynamics.

Instead, there priority should be a shift toward addressing the needs, priorities and aspiration of places and people through a transformation inspired by the care for life wherein all forms of life and the intrinsic value of nature are prioritized. This shift is critical if humanity seeks to avoid undesirable and potentially irreversible impacts, given that the window for maintaining business-as-usual practices – whether driven by capitalist interests or pursued through reformist agendas – is rapidly closing.

To overcome the limits and pitfalls of a reformist agenda, even when regarded as a transitional means, it is imperative to articulate a comprehensive participatory, inclusive, and diverse agenda aimed at identifying the desirable and feasible actions needed to generate changes in ways of feeling-thinking-acting conducive to the transformation we aspire to achieve. Here, we embrace Escobar's (2014, p. 16) proposal on «feeling-thinking with the Earth» which emphasizes the practice of «thinking from the heart and from the mind, or co-reasoning». Since feeling-thinking translates into specific modes of action that, through interaction at multiple scales, shape tangible territorial realities, it becomes essential to reconcile the time of nature and the time of sociopolitical and economic dynamics across different spatial scales. Only then can we avoid undermining the material and environmental basis that sustain social relations of production.

Transformational change, which materializes in concrete places, must be scaled up in ways that respect the diverse forms of feeling-thinking-acting, thereby counterbalancing more effectively the powerful and contradictory dynamics of capitalism. This endeavour requires careful attention not only to current space-production practices and the geopolitical and geoeconomic forces influencing them, but also to the capacities, contradictions and limitations of institutions, collectivities, and individuals. The challenge ahead, as said, is profoundly complex and extends beyond the scope of the «desirable» state action.

Each of us plays a role, whether actively or passively. Yet, feeling-thinking-acting demands that we become increasingly proactive, self-critical, collaborative, and indeed decisive, all of which are

central for enabling change. In this sense, we call for nurturing a collective process that can guide and sustain a shared normative notion of long-term transformational change, one that actively engages with the most challenging and contested aspects of present and future related policy and politics.

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References

Alimonda, H. (2025). *Descolonizar la naturaleza. Por una ecología política latinoamericana*. Buenos Aires: CLACSO.

Alimonda, H., Toro, C., and Martín, F. (Coords.) (2017). *Ecología política Latinoamericana.* Buenos Aires: CLACSO / Mexico City: UAM.

Álvarez, Á. (2021). *Infraestructuras de transporte y disputas territoriales. La IIRSA en Santa Fé.* Buenos Aires: CLACSO-UNC.

AMPIP (Asociación Mexicana de Parques Industriales Privados). (2025). El sector inmobiliario industrial en México. *AMPIP*. Retrieved from https://www.ampip.org.mx/sector-inmobiliario-industrial

Automotive World. (2014). Water, water, everywhere in vehicle manufacturing. *Automotive World*, October 6.

Ayala, C. (2023). Tren Maya, oportunidad para que Yucatán aproveche el nearshoring. *El Economista*, May 12.

Báez, M., and Sacher, W. (2014). Los discursos del Buen Vivir y el Sumak Kawsay y la minería metálica a gran escala en Ecuador: rupturas. In G. C. Delgado (Coord.), *Buena vida, buen vivir* (pp. 233-276). México: CEIICH-UNAM.

Branded Content. (2023). El nearshoring sostenible: los riesgos ambientales son transferibles. *El Economista*, November 27.

Brenner, N. (Ed.). (2015). *Implosions / Explosions: Towards a study of Planetary Urbanization.* Berlin: Jovis.

Canary, H. (2024). La crisis subjetiva de la clase trabajadora. *Jacobin*, August 11.

Ceceña, A. E., Barrios, D., Franco, A., Hidalgo, A., Moreno, P., Núñez, V.,... Tejada, F. (2021). *El Istmo de Tehuantepec en riesgo.* Observatorio Latinoamericano de Geopolítica, Mexico: IIEs-UNAM.

Chan, I. (2023). La especulación inmobiliaria es crítica en Yucatán: especialistas. *Haz Ruido*, June 15.

Cota, I. (2023). El robo de carga en México: un crimen al alza que se cobra vidas y miles de millones de pérdidas. *El País*, July 17.

Cruz, I. (2024). *Nearshoring's Environmental and Social Impacts and the Need for Trade Reform.* Baker Institute Report.

Delgado, G.C. (2008). Cuestión Ambiental. In E. Sader, I. Jinkings, R. Nobile and C. E. Martins (Eds.), *Latinoamericana: Enciclopedia Contemporánea de América Latina y el Caribe* (pp. 81-95). Madrid: Akal-CLACSO-Boitempo.

Delgado, G. C. (2013). ¿Por qué es importante la ecología política? *Nueva Sociedad*, (244), 47-60.

Delgado, G. C. (2015a). Configuraciones del territorio: desarrollo, desarrollismo, transiciones y alternativas. *Argumentum*, *7*(2): 32-58.

Delgado, G. C. (2015b). *Apropiación de agua, medio ambiente y obesidad. Los impactos del negocio de bebidas embotelladas en* México. Mexico City: CEIICH, UNAM.

Delgado, G. C. (2018). Transición urbana, sustentabilidad y cambio climático: una lectura de las resistencias, tensiones y contradicciones desde la actual política estadounidense. In J. C. Rueda Abad, V. Vázquez García and S. Lucatello (Eds.), *Del Oasis al Desierto: la política anti-climática de Donald Trump* (pp. 95-114). México: PINCC-UNAM.

Delgado, G. C. (2019a) Real Estate Industry as an Urban Growth Machine: A Review of the Political Economy and Politcal Ecology of Urban Space Production in Mexico City. *Sustainability*, *11*(7), 1980.

Delgado, G. C. (2019b). *Asentamientos urbanos sustentables y resilientes: retos y oportunidades para la transformación urbana en California y Baja California*. México: CEIICH, UNAM.

Delgado, G. C., Jiménez Caballero, A. K., and Vidal Origel, D. S. (2023). Urban political ecology in Mexico: metabolism, conflicts and the need for transformational pathways in the Valley of Mexico, Guadalajara and Monterrey. *Journal of Political Ecology*, *30*(1): 716-742.

Demaria, F., Schneider, F., Sekulova, F., and Martínez Alier, J. (2013). What is Degrowth? From an Activist Slogan to a Social Movement. *Environmental Value*s, (22), 191-215.

El Universal (2025). Operación Sable avanza en el Istmo; 37 detenidos por delitos de alto impacto. *El Universal*, 24 de abril.

EDUCA. (2025). *Monitoreo: Alas y Raíces de los Movimientos Sociales en Oaxaca (Diciembre 2022 - Mayo 2025)*. EDUCA.

Ernstson, H., and Swyngedouw, E. (2019). *Urban Political Ecology in the Anthropo-obscene.* New York: Routledge.

Escalera, M., López, D., Serrano, C., and Vázquez, S. (2024). *BBVA Research-AMPIO Survey, 2nd edition.* BBVA Research.

Escobar, A. (2005). El 'postdesarrollo' como concepto y práctica social. In D. Mato (Coord.), *Políticas de economía, ambiente y sociedad en tiempos de globalización* (pp. 17-31). Caracas: UCV.

Escobar, A. (2008). *Territories of Difference: Place, Movements, Life, Redes.* Durham, N.C., USA: Duke University Press.

Escobar, A. (2014). *Sentipensar con la tierra. Nuevas lecturas sobre desarrollo, territorio y diferencia.* Medellín: Ediciones UNAULA. Retrieved from https://biblioteca.clacso.edu.ar/Colombia/escpos-unaula/20170802050253/pdf_460.pdf

Escobar, S. (2023a). Por nearshoring, México volverá a romper récord en desarrollo de naves industriales en el 2023. *El Economista*. October 26.

Escobar, S. (2023b). Holcim, cerca de cumplir con la provisión de 1 millón de metros cúbicos de cemento para el Tren maya; apunta al nearshoring. *El Economista*, September 21.

Fernández, M., Riccardi, A., Veglio, M. P., García-Muiña, V., Fernández del Hoyo, F., and Settembre-Blundo, D. (2022). Disruption in resource-intensive supply chains: reshoring and nearshoring as strategies to enable them to become more resilient and sustainable. *Sustainability, 14*(17), 10909.

Freire, P. (2005). *Pedagogía de la esperanza. Un reencuentro con la pedagogía del oprimido.* Mexico City: Siglo XXI.

García, M. A. (2024). Corredor interoceánico en el Istmo de Tehuantepec. Pueblos originarios, naturaleza y soberanía nacional, bajo amenaza. *CECCAM*. Retrieved from https://www.ceccam.org/sites/default/files/Cuaderno%20MAG-WEB11%282%29interoceanico_0.pdf

GK. (2019). Mordaza o muerte: cuando la ley se usaba para callar la protesta en Ecuador. *Mongabay*, October 30. Retrieved from https://es.mongabay.com/2019/10/ecuador-defensores-ambientales/

Gobierno de México. (2025). *Plan México. Estrategia de Desarrollo Económico Equitativo y Sustentable para la Prosperidad Compartida.* Primer borrador, Retrieved from https://www.planmexico.gob.mx/assets/pdf/Plan_Mexico_PrimerBorrador.pdf

González, S. (2024) Marco contextual del nearshoring: retos y oportunidades para México. In A. Díaz-Bautista, E. Díaz y S. González (Coords.), *Nearshoring, comercio internacional y desarrollo económico en* México (pp. 21-42). México: Comunicación Científica.

Gudynas, E. (2010). Si eres tan progresista ¿Por qué destruyes la naturaleza? Neoextractivismo, izquierda y alternativas. *Ecuador Debate*, (79), 61-81.

Gudynas, E. (2017). Neoextractivismo y crisis civilizatoria. In G. Ortega (Coord.), *América Latina: avanzando hacia la construcción de alternativas* (29-54). Asunción: BASE. Retrieved from https://www.baseis.org.py/wp-content/uploads/2018/05/2017-Conferencias.pdf

Green, M. (2023) *A Bill to decrease dependency on People's Republic of China manufacturing and decrease migration due to lost regional economic opportunities*. Proposal of Bill. 118th Congress.

Harvey, D. (2001). *Spaces of Capital. Towards a Critical Geography.* New York: Routledge.

Harvey, D. (2006). *Spaces of Global Capitalism: Towards a theory of uneven geographical development.* London/ New York: Verso

Helmrich, A., Chester, M., Miller, T., and Allenby, B. (2023). Lock-in: origination and significance within infrastructure systems. *Environmental Research. Infrastructure and Sustainability*, *3*(3): 032001.

Heynen, N., Kaika, M., and Swyngedouw, E. (2006). *In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism.* New York: Routledge.

Houtart, F., Dierckxsens, W., Delgado, G. C., and Jijón, V. H. (2017). *Las relaciones Sur-Sur y el desafío de un nuevo proyecto de civilización.* Quito: IAEN-UPE.

Intercam Banco (2023). *Hablemos de Nearshoring 1.0 | #AnálisisIntercam*, August 18. Retrieved from https://intercamblog.com/hablemos-de-nearshoring-1-0-analisisintercam/

Jackson, T. (2021). *Post Growth. Life after Capitalism.* Cambridge: Polity.

Jiménez, N., and Sánchez, A. (2023). A empresarios y banqueros les ha ido bien en mi sexenio: AMLO. *La Jornada*, February 16.

Juárez, C. (2023). México importará más de 10 mil toneladas de rieles de acero de fabricante chino. *The Logistics World*, September 14. Retrieved from https://thelogisticsworld.com/actualidad-logistica/mexico-importara-mas-de-10-mil-toneladas-de-rieles-de-acero-de-fabricante-chino/

Kuus, M. (2017). Critical Geopolitics. En *Oxford Research Encyclopedia of International Studies.* Oxford: Oxford University Press.

Logan, J., and Molotch, H. (1987). *Urban Fortunes. The Political Economy of Place.* Berkeley: University of California Press.

Logistics World. (2025). Alerta en las carreteras: panorama 2025 de robos al transporte de carga en México. *The Logistics World*, June 16. https://thelogisticsworld.com/actualidad-logistica/alerta-en-las-carreteras-panorama-2025-de-robos-al-transporte-de-carga-en-mexico/

López, D., Serrano, C., and Vázquez, S. (2025). *Adjustments in U.S. Tariffs: Reduced Trade Protectionism Toward Mexico.* BBVA Research. Retrieved from https://www.bbvaresearch.com/wp-content/uploads/2025/05/250505_aranceles_ajuste_stacking_eng.pdf

Mackey, J. (2011). What Conscious Capitalism Really Is. *California Management Review*, 53(3), 83-90.

Mackey, J., and Sisodia, R. (2013). *Conscious Capitalism: liberating the heroic spirit of business.* Cambridge: Harvard Business Review Press.

Mansilla, P., Panez, A., and Ponce-Hille, M. I. (2019). Discursos geopolíticos de desarrollo y reestructuración territorial IIRSA en el eje Mercosur-Chile. *Diálogo Andino*, (59), 37-53.

Martínez Alier, J. (2004). Conflictos ecológico-distributivos y los indicadores de sustentabilidad. *Revista Iberoamericana de Economía Ecológica,* (1), 21-30.

Martínez Alier, J. (2023). *Land, water, air and freedom.* Cheltenham/Northampton: Edward Elgar.

Martínez, F., y Garduño, R. (2022). Ambientalistas son «vividores»; sirven a intereses creados: AMLO. *La Jornada*, April 5.

Mason, P. (2019). *Postcapitalismo. Hacia un nuevo futuro.* México: Paidos.

McCulligh, C. (2024). Racionalizar la acumulación en una zona de sacrificio urbano-industrial: Nearshoring y otras contradicciones de 'revivir' el río Santiago, México. *Bajo el Volcán. 6*(11), 238-279.

Monthly Review. (2013). Notes from the Editors. *Monthly Review*, *64*(10).

Morales, F. (2025), México: la Reserva de la Biósfera Los Tuxtlas está acorralada por proyectos mineros para el Tren Maya. *Mongabay.* Retrieved from https://es.mongabay.com/2025/06/mexico-reserva-biosfera-tuxtlas-acorralada-proyectos-mineros-tren-maya/

Muñoz, G., Delgado, G.C., and Díaz, R. (2021). Circular Economy in Mexico. In: S. Kumar Ghosh and S. Kumar Ghosh (Eds.), *Circular Economy: Recent trends in global perspective*. (pp. 497-523). Singapore: Springer.

Navarro, M., and Barreda V. (2022). Luchas por la reapropiación eco-política de los territorios-de-vida contra la producción de zonas de sacrificio. *Crítica y Resistencias. Revista de conflictos sociales latinoamericanos.*, (14), 82-103.

Ortuño, G. (2025). Detenciones, amenazas y un asesinato: el clima de violencia que enfrentan los defensores que se oponen al Tren Interoceánico en México. *Mongabay*, February 10. Retrieved from https://es.mongabay.com/2025/02/tren-interoceanico-mexico-defensores-violencia/

PACE (Platform for Accelerating the Circular Economy). (2023). *The Circularity Gap Report 2021.* Amsterdam. Retrieved from https://assets.website-files.com/5d26d80e8836af2d12ed1269/60210bc3227314e1d952c6da_20210122%20-%20CGR%20Global%202021%20-%20Report%20-%20210x297mm.pdf

Rosete, E. (2025). El Gobierno reconoce, cinco años después, los daños ecológicos por la construcción del Tren Maya. *El País*, April 2.

Saito, K. (2017). *Karl Marx's Ecosocialism. Capital, nature, and the unfinished critique of political economy.* Nueva York: Monthly Review Press.

Santander (2023). Nearshoring podría impulsar un crecimiento adicional de 8% en el PIB en seis años: oportunidad histórica. *Santander Sala de Prensa*, March 1. Retrieved from https://www.santander.com.mx/ceb/2023/sala_prensa_2023_0103.html

Santos, M. (1990). *Por una geografía nueva.* Madrid: Espasa Universidad.

SE (Secretaría de Economía). (2023a). *Invierte en* México. Tu *mejor opción hoy para el largo plazo.* Gobierno de México, México. Retrieved from https://www.economia.gob.mx/files/gobmx/ied/dossier_inversion_esp.pdf

SE (Secretaría de Economía). (2023b). De enero a septiembre de 2023, México recibió 32 mil 926 millones de dólares de inversión extranjera directa. November 8. Retrieved from https://www.gob.mx/se/prensa/de-enero-a-septiembre-de-2023-mexico-recibio-32-mil-926-millones-de-dolares-de-inversion-extranjera-directaaAAA

SE (Secretaría de Economía). (2025). *Nuevo récord de atracción de IED en México al 1T 2025.* Gobierno de México, México. Retrieved from https://www.gob.mx/se/prensa/nuevo-record-de-atraccion-de-ied-en-mexico-al-1t-2025

SEGOB (Secretaría de Gobernación). (2023a). Decreto por el que se otorgan estímulos a sectores clave de la industria exportadora consistentes en la deducción inmediata de la inversión en bienes nuevos de activo fijo y la deducción adicional de gastos de capacitación. *DOF*, October 11.

SEGOB (Secretaría de Gobernación). (2023b). Decreto por el que se fomenta la inversión de los contribuyentes que realicen actividades económicas productivas al interior de los Polos de Desarrollo para el Bienestar del Istmo de Tehuantepec. *DOF*, June 5.

SEGOB (Secretaría de Gobernación). (2025). Decreto por el que se otorgan estímulos fiscales para apoyar la estrategia nacional denominada «Plan México», para fomentar nuevas inversiones que incentiven programas de capacitación dual e impulsen la innovación». *DOF*, January 21.

SEMARNAT (Secretaría de Medio Ambiente y Recursos Naturales) (2023). *Gaceta Ecológica*, *XXI*. No. DGGIRA/005/23, September 14. Retrieved from https://sinat.semarnat.gob.mx:8443/Gacetas/archivos2023/gaceta_0055-23.pdf

Semmens, J., Bras, B., and Guldberg, T. (2013). Vehicle manufacturing water use and consumption: *The International Journal of Life Cycle Assessment*, *19*, 246-256.

Seong, J., White, O., Birshan, M., Smit, S., Lananna, C., and Devesa, T. (2025). *Geopolitics and the geometry of global trade: 2025 updat*e. McKinsey Global Institute.

Seto, K., Reenberg, A., Boone, C., and Simon, D. (2012). Urban land teleconnections and sustainability. *PNAS, 109*(20), 7687-7692.

SHCP (Secretaría de Hacienda y Crédito Público) (2023). *Gobierno de México fortalece inversiones por Nearshoring en todo el país*. No. 68. October 11. Retrieved from https://www.gob.mx/shcp/prensa/comunicado-no-68-gobierno-de-mexico-fortalece-inversiones-por-nearshoring-en-todo-el-pais

Sharp, J. (2020). Critical Geopolitics. In A. Kobayashi (Ed.), *International Encyclopedia of Human Geography (Second Edition)* (pp. 45-49). Amsterdam: Elsevier.

Smith, N. (1984). *Uneven Development. Nature, Capital, and the Production of Space.* Athens, GA: The University of Georgia Press.

Svampa, M. (2013). Consenso de los «commodities» y lenguajes de valoración en América Latina. *Nueva Sociedad*, (244), 30-46.

The Guardian. (2013). Whole Foods CEO: «climate change is not necessarily bad». *The Guardian*, January 18.

Tulio, M. (2023). Llama la LXIII Legislatura a expedir nuevo reglamento de construcción que prevea vientos de más de 300 km/h. *Boletín de la LXIII Legislatura*, Guerrero, November 14.

UNASUR-CEPAL. (2011). *Infraestructura para la integración regional*. Santiago de Chile. Retrieved from https://www.iirsa.org/admin_iirsa_web/Uploads/Documents/CEPAL%20UNASUR-Infraestructura%20para%20la%20Integración%20Regional.pdf

UNEP (UN Environment Programme). (2021). *El peso de las ciudades en Am*érica Latina y *el Caribe. Requerimientos futuros de recursos y potenciales rutas de actuación*. Panamá

UNEP (UN Environment Programme). (2024). *Global Resources Outlook 2024. Bend the trend. Pathways to a livable planet as resource use spikes.* Nairobi.

USAID. (2024). *Mapa de ruta: Oportunidades para el Nearshoring de Semiconductores en M*éxico. Retrieved from https://codeso.mx/wp-content/uploads/2024/07/Documento_Principal_Esp-1.pdf