The State's View of Amazonia: Forest Planning in Brazil, Colombia, Ecuador, and Peru Between 1968-1978❧

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Summary. Objective/Context: This research analyzes the circumstances and argumentative apparatus that affected the officials who planned the jungle zones of Brazil, Colombia, Ecuador, and Peru between 1968 and 1978. **Methodology:** Intellectual history tools are applied to unravel the construction of Amazonia as an object of knowledge among planners. Their interpretative mechanisms are observed in the dispute over the relevance of building urban or agricultural societies in the jungle. Considering their personal trajectories introduces a contextual analysis of the configuration of their argumentative bodies when giving meanings to the rainforest. Monitoring the insertion of Amazonia in the network of knowledges and technologies deployed with the implementation of development plans allows us to point out the most notorious environmental effects after their application. **Originality:** A comparative analysis of planning activities in Amazonia leads to an innovative description of the circumstances that defined the work of their planners in the context of "great acceleration," with which environmental history describes the turning point at which state action gained momentum of significant magnitude in the jungle space. **Conclusions:** In Brazil, Ecuador, and Peru, the intention to advance development centers prevailed among planners, promoting industrialized urban societies, whereas planners in Colombia opted for a model that affirmed the modernization of agriculture and livestock production. The former aimed to industrialize natural resources in the cities to strengthen their countries' political and economic independence; the latter encouraged the use of hybrid seeds and machinery among peasants to increase their productivity and income, hoping thus to open the national economy to the global market.

Keywords: Amazonian history, developmentalism, environmental history, planning history, urban history.

La mirada estatal de la Amazonia: la planificación de la selva en Brasil, Colombia, Ecuador y Perú entre 1968-1978

Resumen. Objetivo/Contexto: Esta investigación analiza el aparato argumentativo y las circunstancias que afectaron a los funcionarios que planificaron las zonas selváticas de Brasil, Colombia, Ecuador y Perú entre 1968 y 1978. **Metodología:** Se aplican herramientas de la Historia Intelectual para desentrañar la construcción de

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la Amazonia como objeto de conocimiento entre planificadores. Sus mecanismos interpretativos se observan en la disputa sobre la pertinencia de construir sociedades urbanas o agrícolas en la selva. La consideración de sus trayectorias personales introduce un análisis contextual de la configuración de sus cuerpos argumentales a la hora de dar significados a la selva. El seguimiento de la inserción de la Amazonia en el entramado de saberes y tecnologías desplegado con la puesta en marcha de los planes de desarrollo permite señalar los efectos ambientales más notorios tras su implementación. **Originalidad:** A través del análisis comparativo de la acción planificadora en la Amazonia surge una innovadora descripción de las circunstancias que definieron el quehacer de sus planificadores en el contexto de la "gran aceleración" con que la Historia Ambiental describe el punto de inflexión en que la acción estatal cobró un ímpetu de sensible magnitud en el espacio selvático. **Conclusiones:** Entre los planificadores de Brasil, Ecuador y Perú prevaleció la intención de adelantar polos de desarrollo, fomentando sociedades urbanas industrializadas, mientras que los de Colombia optaron por un modelo que afirmó la modernización de la agricultura y la ganadería. Los primeros buscaron industrializar los recursos naturales en las ciudades para fortalecer la independencia política y económica de sus países; los segundos, que el uso de semillas híbridas y maquinaria permitiera a los campesinos aumentar su productividad e ingresos, con lo que esperaban abrir la economía nacional al mercado global.

Palabras clave: historia ambiental, historia urbana, historia amazónica, historia de la planificación, desarrollismo.

A visão estatal da Amazônia: o planejamento da floresta no Brasil, na Colômbia, no Equador e no Peru entre 1968 e 1978

Resumo. Objetivo/Contexto: nesta pesquisa, são analisados o aparato argumentativo e as circunstâncias que afetaram os funcionários que planejaram as áreas florestais do Brasil, da Colômbia, do Equador e do Peru entre 1968 e 1978. **Metodologia**: são aplicadas ferramentas da história intelectual para detalhar a construção da Amazônia como objeto de conhecimento entre planejadores. Seus mecanismos interpretativos são observados na disputa sobre a pertinência de construir sociedades urbanas ou agrícolas na floresta. A consideração de suas trajetórias pessoais introduz uma análise contextual da configuração de seus corpos argumentativos no momento de dar significados à floresta. O seguimento da inserção da Amazônia na trama de saberes e tecnologias desenvolvidos com a realização dos planos de desenvolvimento permite identificar os efeitos ambientais mais notáveis após sua implementação. **Originalidade**: a partir da análise comparativa da ação planificadora na Amazônia, surge uma inovadora descrição das circunstâncias que definiram o trabalho de seus planejadores no contexto da "grande aceleração" com a qual a história ambiental descreve o ponto de inflexão em que a ação estatal ganhou ímpeto de sensível magnitude no espaço da floresta. **Conclusões**: entre os planejadores do Brasil, do Equador e do Peru, prevaleceu a intenção de realizar polos de desenvolvimento, fomentando sociedades urbanas industrializadas, enquanto os da Colômbia optaram por um modelo que afirmou a modernização da agricultura e da pecuária. Os primeiros buscaram industrializar os recursos naturais nas cidades para fortalecer a independência política e econômica de seus países; os segundos, que o uso de sementes híbridas e maquinaria permitisse aos camponeses aumentar sua produtividade e renda, com o que esperavam abrir a economia nacional ao mercado global.

Palavras-chave: história ambiental, história urbana, história amazônica, história do planejamento, desenvolvimento.

Introduction

On December 8, 1969, Ecuadorian Jorge Añazco took a group of peasants by canoe to the first oil well opened in the middle of the Ecuadorian jungle. They searched for the trail of a half-built road, cleared it, and began to delimit the farms that would belong to the newcomers. In the first two years, they opened an urban area divided into blocks and another of large rural properties. With days of joint work, they built a school and canals to dry the swamps, gradually pushing back the

jungle. On April 30, 1971, the town was recognized as the parish of Lago Agrio, while migration increased. In 1972, when a new military regime took power in Ecuador, an official from the Ecuadorian Institute of Agrarian Reform and Colonization (IERAC, for its acronym in Spanish) arrived and asked to talk with Añazco. From then on, the official stated, the farms would be communal, the construction of additional houses would be prohibited, and the settlers would be relocated to a new city. Jorge Añazco was bewildered; he did not know why they wanted to destroy what had cost so much, intrigued by the logic of the official.[1]

This article takes as its starting point the intrigue felt by Jorge Añazco regarding what the officials planning the Amazon Basin had in mind. The study investigates the meaning of the Amazon rainforest for officials in four South American Amazonian states between 1968 and 1979.

Historical and anthropological studies have contributed to understanding the role played by rainforest areas in Latin America. Although it has generally been said that these areas were outside any state authority, different studies have shown that the borders or margins were not isolated, as in a parallel dimension. The marginal zones were subject to special legal regimes to be exploited in a differentiated manner, thus incorporating them into the "body" of different states.[2] Since the independence of the nineteenth century, the display of jungle territories on patriotic symbols or maps allowed the states to unify a community within a space, promising future wealth and making public their claim to disputed territories. In the case of Amazonia, international demand for rubber made Brazil, Peru, and, to a lesser extent, Colombia encourage the arrival of companies, the organization of labor, and the presence of state authorities. However, it was in the second half of the twentieth century, in the period known to environmental history as "great acceleration," when state colonization occurred with a new impetus: roads were opened, hundreds of thousands of people migrated, hydrocarbon activities began, hydroelectric plants were created, and cities emerged. This colonization was designed by Brazilian, Colombian, Ecuadorian, and Peruvian state officials under a specific technical reflection on how to populate the Amazonian frontier. Since the second half of the 1960s, technocrats prescribed state action in national development plans and radically changed the jungle in these four countries. This article aims to understand the debates around the occupation of Amazonia in such a crucial period.

To study these debates, an intellectual history approach is used, which looks beyond the ideas—or the semantic content—about Amazonia to examine the conditions, procedures, and power relations that allowed its production.[3] Some previous studies used to state in a limited way that developmentalist policies saw the Amazon region as a sparsely inhabited area with a large reserve of resources to be exploited.[4] However, since the 1990s, research has focused on points of intersection between technical-political contexts and how the understanding of Amazonia was transformed during the period covered in this article. These inquiries have shown the

1 Jorge Añazco Castillo, *Sucumbíos: 5ta. provincia amazónica* (Quito: Producción Gráfica, 2000),142-179.

2 Veena Das and Deborah Poole, "State and Its Margins: Comparative Ethnographies," in *Anthropology in the Margins of the State*, edited by Veena Das and Deborah Poole (Santa Fe: School of American Research, 2004), 19.

3 Elias Palti, "The 'Theoretical Revolution' in Intellectual History: From the History of Political Ideas to the History of Political Languages," History *and Theory* 53, n.º 3 (2014): 401, https://doi.org/10.1111/hith.10719.

4 Jean Paul Deler, "Estructuras espaciales del Ecuador contemporáneo (1960-1980)," in *Nueva historia del Ecuador. Ensayos generales: Espacio, población y región*, edited by Ayala Mora Enrique (Quito: Corporación Editora Nacional, 1992), 73-134.

tension between different Amazonian planning agencies, detailed how developmental policies integrated environmental protection measures, compared how urban policies led, for example, the cities of Iquitos and Manaus to regulate their relationship with the river and the jungle, and studied the circulation of certain urban theories among those who designed settlements along the Trans-Amazonian highway.[5]

This article argues that, during the study period, Brazil, Colombia, Ecuador, and Peru had different conceptions about how their Amazonia should be planned. Thus, the planning was intertwined with a theoretical-political dispute that produced two proposals for markedly different futures. While the intention to advance development poles or industrialized urban societies prevailed in Brazil, Ecuador, and Peru, Colombia promoted a model focused on the modernization of agriculture and livestock production. Although, in practice, these two models have several points of contact, these conceptions proposed that Amazonian societies, infrastructure, and the rainforest should have different functions.

Despite the existence of these two currents, the planners shared a mode of production of plans with methodologies and concerns in common about the development of Amazonia, which determined the time frame of this research. Indeed, during these ten years, a regime of common knowledge emerged regarding Amazonian planning in these four countries. By 1968, they had already begun conducting public planning exercises with a regional approach. By 1978, all of them questioned the planning role of the state, and the ecological criticism of the indiscriminate use of the jungle came into force, which modified the way of understanding the future. To delve into the argumentative apparatus of the moment, the research is divided into three sections.

The first section identifies previous conceptions and procedures used by planners in Brazil, Colombia, Ecuador, and Peru to understand Amazonia as an object of knowledge. It examines how the development of the Amazon Basin was intertwined with a network of technical approaches on how to govern rainforest frontiers, subordinated to broader schemes on population administration in these countries.[6]

The second section addresses the discussion between different planners about the steps that would lead to the economic growth of the rainforest. The available sources reveal two competing approaches to the Amazonian development strategy, discussed in this section: the first conception seeks to build industrialized urban societies, whereas the second proposes the technification of agriculture.

The third section examines who were the actors in charge of development policies in the Amazon rainforest and what kind of organizations trained them. Subsequently, the fourth section discusses the most visible environmental impacts produced by implementing development plans and argues that it was in this period when Amazonia became definitively intertwined with the global demand for natural resources.

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5 John D. Browder and Brian J. Godfrey, *Rainforest Cities: Urbanization, Development, and Globalization of the Brazilian Amazon* (New York: Columbia University Press, 1997); Renato Leão, "Shaping an urban Amazonia: 'a planner's nightmare,'" *Planning Perspectives* 32, n.º 2 (2017): 1-22, http://dx.doi.org/10.1080/02665433.2016.1277952; Acker, "The Nature of the Brazilian Flag: An Environment Turn Under Military Rule (1964-1985)," *Forum for Inter-American Research* 13.1 (2020), 72; Adrián Lerner, "Jungle Cities: The Urbanization of Amazonia" (PhD diss., Yale University, 2020), 226-227.

6 Palti, "The 'Theoretical Revolution,'" 390.

The corpus of materials supporting this structure consists of national development plans, regional plans, administrative reports, political speeches, and publications of national planning bodies in academic journals.

From an intellectual history perspective, this research contributes to broadening the understanding of the environmental history of Amazonia by studying the emergence of the urbanization of the tropical forest in the four countries mentioned. In this way, it also sheds light on how the analyzed South American states governed their rainforest frontiers in the second half of the twentieth century when the great acceleration of the impact of human beings on the planet occurred.

1. The mode of production of Amazonian planning

In 1956, Brazilian urban planner José Geraldo da Camargo, in his capacity as a public official of the Institute of Immigration and Colonization, talked to peasants who had participated in the formation of failed colonization centers in the Northeast of Brazil. He wanted to understand why they sold the state lands they received to farm. During those conversations, he noted that "the settlers who withdrew from the nuclei were not those who had failed, but, on the contrary, those who progressed economically."[7] That contradiction shook him: he understood then that these peasants sold their lots because, beyond the money they had made, "they also wanted to progress socially," so they moved to the city to have better education for their children and urban amenities. When, in the late 1960s, Camargo designed an emblematic colonization project in Amazonia, he coined the term "rural urbanism," which implied creating urban conditions of work, education, commerce, sports, and recreation in the Amazon rainforest.[8] His design had in mind the conversation he had held years earlier because he brought to the jungle the infrastructure peasants could miss from the city. Along with the construction of the Trans-Amazonian highway, he created fifty settlements of these characteristics.[9] Although the colonization project stopped in 1974, Camargo was capturing a broader sensibility: on the planet, the rural world was to take on more urban forms.

In 1968, at the VII Inter-American Planning Congress in Lima, the influential Austrian thinker John Friedmann had already anticipated that the "urbanization of the countryside" would be felt throughout Latin America. According to his predictions, roads, means of communication, the expansion of educational opportunities, and the modernization of agriculture would make rural communities gain weight in national politics, and their inhabitants would acquire "urban values, attitudes, and ways of life."[10] This transformation of life in the countryside was seen as convenient so that peasants would stop migrating to capital cities.

Implicit in Friedmann's statement was an idea that had special force for Amazonian planners: that states are capable of rapidly orienting migratory flows and redesigning the meaning of space. In the 1960s, peasant migration to large Latin American cities led to the construction of makeshift dwellings on the outskirts of cities, with no drinking water service to cover all sectors, the growth

7 José Geraldo da Cunha Camargo, *Urbanismo Rural ma INCRA* (Brasilia: Gráfica Gutenberg, 1973), 2.

8 Camargo, *Urbanismo Rural*, 2.

9 Jociane Karise Benedett, "José Geraldo da Cunha Camargo – O Urbanismo na Ditadura" (MA thesis, Universidad Estatal de Londrina y Maringa, 2018), 29.

10 John Friedmann, *El futuro de la urbanización en América Latina: Algunas observaciones sobre el papel de la periferia* (Santiago de Chile: Fundación Ford, 1968), 25.

of traffic, and an apparent increase in crime.[11] Thus, Lima, Bogotá, and, a few years later, Quito began to experience intense social unrest of an urban nature, which forced these cities to look for strategies to prevent population growth. At the same time, in Brazil, the 1970 drought in the Northeast left thousands of people without the possibility of growing crops to survive. Faced with these circumstances, planners proposed to direct migration to Amazonia either to weaken the migratory flow to large cities or to generate economic possibilities to remedy the areas that had suffered natural disasters. The Brazilian Ministry of Planning, the Colombian National Planning Department, the Ecuadorian National Planning Board, and the Peruvian National Planning Institute saw the orientation of migration as a necessary tool for the population to inhabit spaces where resources could be efficiently used.[12] The search for balanced population distribution, or "geographical balance," was a major factor in the colonization of Amazonia. Thus, the 1967 National Development Plan in Peru alluded to the "macrocephaly" suffered by Lima, indicating that the migratory pace exceeded the capacities of the capital while the rest of the country was stuck in feudalism[13]; thus, planners advocated for an "aggressive regional policy" focused on "removing the conditioning factors" that prevented certain rural areas from developing.[14]

The search for "conditioning factors" that constrained the growth of remote regions guided various planners. If such obstacles—for example, lack of access roads, no connection to electricity systems, or absence of agricultural assistance—were identified, the government could plan how to overcome them. With this logic, national plans began to devote a section to regional development.[15]

In these national plans, regional development chapters used to be aligned with the security section. There were disputed border areas between countries, such as Ecuador and Peru, so the occupation of Amazonia by their nationals was necessary for an effective control of the claimed territory.[16] Nevertheless, in the context of the Cold War, strategists such as Brazilian General Golbery do Couto e Silva, Ernesto Geisel's chief of staff, insisted that the army should be ready to crush any subversive focus in Amazonia,[17] as it did in effect crush a guerrilla group of the Communist Party in Pará and Goiás in 1970.[18]

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11 Arturo Almandoz, "Industrialización, urbanización y modernización sin desarrollo en la Latinoamérica del siglo XX," in *Historiografía y planificación urbana en América Latina,* edited by Isabel Duque Franco (Bogotá: Universidad Nacional de Colombia, 2013), 57.

12 Departamento Nacional de Planeación [Colombia], *Las cuatro estrategias* (Bogotá: Editorial Andes, 1972), 193; Junta Nacional de Planificación y Coordinación Económica [Ecuador], *Plan integral de transformación y desarrollo 1973-77* (Quito: JUNAPLA, 1972), 23.

13 Instituto Nacional de Planificación [Peru], *Plan Nacional de Desarrollo 1967-1970* (Lima: INP, 1967), 13.

14 Instituto Nacional de Planificación [Peru], *Plan Nacional de Desarrollo 1967-1970* (Lima: INP, 1967), 168-169.

15 Carlos de Mattos, "Estrategias de desarrollo regional polarizado en la planificación nacional en América Latina," in *Ensayos sobre planificación regional del desarrollo*: *compilación* (México: Siglo XXI Editores, 1976), 217.

16 Instituto Nacional de Planificación [Peru], *Plan Nacional de Desarrollo 1971-1975*, *Vol. 11: Políticas de desarrollo regional* (Lima: Presidencia de la República, 1971), 66. Fernando Santos Granero and Federica Barclay, *La frontera domesticada: Historia económica y social de Loreto, 1850-2000* (Lima: Pontificia Universidad Católica del Perú, 2002), 313.

17 Susanna Hecht and Alexander Cockburn, *The Fate of the Forest: Developers, Destroyers, and Defenders of the Amazon* (United States: University of Chicago Press, 2010), 114-115.

18 Hecht and Cockburn, *The Fate of the Forest*, 121-122.

These innovations in state technology were generating a dislocation in the way of understanding the Amazon rainforest.[19] Indigenous peoples in isolation, the absence of accurate maps of the most distant areas, and the manifestation of strange diseases meant that, by the end of 1960, the cloak of mystery that had covered Amazonia for centuries remained. Faced with the impenetrable forest, planners defended a realistic and scientific spirit that would make the jungle measurable.

That premise was well described by Brazilian Arthur Cezar Ferreira Reis, governor of the State of Amazonas during the Castelo Branco government, in a 1967 text addressed to officials of the World Bank and the International Monetary Fund. In it, he warned that "when we talk about Amazonia, we think of a strange, different world in a dense, impassable, aggressive forest, improper for human life," blaming such exaggeration on the "sensationalist news of travelers or chroniclers who described the region for an audience that is only satisfied with an exalted description." Thus, he advocated for scientifically recording "one of the largest desert areas on earth."[20] It was a statement echoed in the Peruvian National Development Plan in 1971, which stated that "we must overcome the false image that exists inside and outside the region" that "distorts the search for solutions." Thus, he defended the need for a "deep and realistic knowledge" of the jungle.[21]

Paradoxically, the anxiety of scientific knowledge of the jungle was linked to two long-standing government goals: to make people and non-human beings more docile. To that end, the government of Ecuador had an agreement with the Summer Linguistic Institute to create a "protectorate" to evangelize Huaorani Indians, which existed between 1968 and 1975. The Institute (which was also present in Colombia and Peru) started from a careful study of the Huaorani language and culture to Christianize them, making them settled and susceptible to labor discipline with a series of daily rules that undermined the authority of their leaders and their traditional spiritual and sexual practices.[22] In Brazil, in 1974, the Volkswagen company set up a cattle ranch in Pará in partnership with the Superintendence of Amazonian Development. In addition to raising cattle, the company reported, one of its goals was to generate a change of mentality among its workers. To incorporate values the company considered modern, it gave them houses carefully aligned and limited with a fence separating the domestic space from the jungle.[23] Additionally, it tried to change their pattern of constant migration, organizing marriages so the workers put down roots, converting the ranch into a "civilizational laboratory."[24]

The other side of the same coin was the conviction that the jungle should become accessible. The design of river, air, and land transportation networks sought to make passable what was previously impregnable. The planning of national parks and zoos sought to make visible previously

19 Palti, "The 'Theoretical Revolution,'" 404.

20 Arthur Cezar Ferreira Reis, *Amazônia e o mundo atual* (Rio de Janeiro: Banco Comércio e Indústria da America do Sul, 1967), 7.

21 Instituto Nacional de Planificación [Peru], *Plan Nacional de Desarrollo 1971-1975*, *Vol. 11: Políticas de desarrollo regional*, 63.

22 Pablo Campaña, "Cultural Genocide Against Huaorani People (1968-1975)" (MA thesis, University of Amsterdam, 2016); Ana María Rizo, "La supremacía gráfica como elemento de alfabetización y constructora de realidades sociales en comunidades étnicas en Colombia: el caso del Instituto Lingüístico de Verano" (MA thesis, Universidad Jorge Tadeo Lozano, 2018).

23 Antoine Acker, *Volkswagen in the Amazon: The Tragedy of Global Development in Modern Brazil* (Cambridge: Cambridge University Press, 2017), 104.

24 Acker, *Volkswagen in the Amazon*, 100-104.

hidden animals.[25] The soil, animals, plants, and rivers had to be studied, predictable, and useful for planned economic ventures.

This vast transformation might suggest that Amazonia became entirely subject to state control, but in all four countries, the territory was too immense to think that investments could be made simultaneously in the entire jungle. Thus, there was a general agreement that only certain zones should be chosen for development, and other Amazonian areas would only grow in the distant future, as illustrated by the Brazilian case. In this way, the 1972-1974 Amazonian Development Plan was only going to affect 26.9% of the entire territory of Amazonia in that country.[26] The same thing happened at the state level: in the State of Amazonas, projects were going to be concentrated in the east of the state, while the west would stay isolated, have a small population, and receive limited attention.[27]

State planning in Amazonia was based on this web of arguments about techniques for managing national borders. However, there were several specific elements in each country. In Peru, Amazonia had a brief mention in the national plan of 1967-1970 but took on a relevant role in the 1971 plan of the government of Velasco Alvarado. For this country, the Amazon rainforest, specifically the Ceja de Selva—composed of the high-altitude rainforests of the eastern edge of the Andes Mountains—was a promise of fertile lands free of essential deficiencies for agriculture, which was highlighted in the National Development Plan for the years 1971-1975: "Unlike the soils of the Coast and the Sierra, which necessarily require irrigation to be able to develop agriculture, in the Ceja de Selva, there are very few areas that demand complementary irrigation."[28] In the case of Ecuador, Amazonian planning focused on the northeast of the country and had different motivations: the discovery of large oil reserves in 1967 resulted in the construction of a set of roads that facilitated colonization and urbanization in the 1970s. Brazil is unique because the institutionalization of this planning dates back to 1953 when the Superintendence of the Amazon Economic Valorization Plan was created to develop the region. However, since the institution was accused of corruption, it was replaced in 1966 by the Superintendence of Amazonian Development (SUDAM, for its acronym in Portuguese), which was directly controlled by the military government, interested in closely monitoring the incorporation of the rainforest frontier into the national economy. In turn, the Colombian state is the one that makes the least mention of Amazonia. In 1972, the plan called the Four Strategies put the problem of massive urban growth on the table, stating that "foresight obliges us to plan our urbanization process immediately." This concern led to strengthening the construction industry and oriented populations toward already established cities, while colonization policies were only tersely mentioned.[29] A Colombian official of the time stated that the lack of regional policies was because there were several intermediate cities at the center of the

25 Instituto Nacional de Planificación [Peru], *Plan Nacional de Desarrollo 1971-1975*, 69.

26 Ministêrio do Interior-Superintendência do Desenvolvimento da Amazônia [Brazil], *Plano de Desenvolvimeto da Amazônia (1972-1974)* (Belén: SUDAM, 1971), 17.

27 João Walter de Andrade, *Plano de Govêrno 1971-1974* (Manaus: Estado do Amazonas, 1971), 44.

28 Instituto Nacional de Planificación [Peru], *Plan Nacional de Desarrollo 1971-1975, Vol. 1: Plan global* (Lima: Presidencia de la República, 1971), 10.

29 Departamento Nacional de Planeación [Colombia], *Las cuatro estrategias*, 26-193.

decentralization processes, but they were not in Amazonia. He even presented in his lecture on industrial regionalization a map of his country where the Colombian Amazonia did not appear.[30]

The starting points for the planning of Amazonia were a series of technical approaches to population management on the rainforest frontier, which, as an innovative connotation, guided the urbanization strategies of the countryside, rapidly orienting migratory flows, identifying and overcoming obstacles that prevented the growth of the regions, militarizing the borders, and undertaking scientific studies that would put an end to the enigmas of the jungle. However, these approaches were intertwined with aspirations that date back to the colonial period and derive from urban forms typical of the Spanish imperial settlement, such as disciplining Amazonian inhabitants and domesticating non-human beings. When the impetus of the planners was confronted with the vastness of Amazonia, they realized that any project could only achieve a partial transformation.

2. Urban societies and technified rural settlements

2.1. Development poles: the construction of Amazonian urban societies

In the late 1960s, a reading of the past emerged that weighed on the planning of Amazonia. In Brazil, Peru, and Ecuador, officials of the planning institutions shared a historical interpretation of the role that Latin America's natural resources had played in the world economy. For these officials, the economies of the United States and Europe had exploited the nature of Latin American countries; nevertheless, the industrialization processes and the bulk of the profit remained in the "developed" countries. In the words of Peruvian planners: "Since the beginning of the modern era, some societies of the Old World expanded their action towards areas that were peripheral to them, dominated them economically, and incorporated them in conditions of subordination to the nascent European capitalist system."[31] Following the postulates of the economists of the Economic Commission for Latin America (ECLAC), these officials believed that such terms of trade had to be modified by promoting national industrialization processes. For this reason, when the roads gave access to wood, soil, and minerals from Amazonia, it was necessary for such industrialization to take place to allow the retention of capital in the national economy.

Thus, in 1972, when the oil boom began in the Ecuadorian jungle, the country's planners claimed that "oil alone" would not help "solve the structural, economic, and social problems of the country": its exploitation and colonization should be focused on the creation of industries.[32] However, in order to create them, a requirement was the "spatial concentration" of all the activities and services that would integrate them into the production chain, as explained by regional planner Carlos De Mattos.[33] To achieve this industrialization in Amazonia, the Ecuadorian military gov-

30 Gabriel Poveda Ramos, "Algunos aspectos sobre descentralización industrial en Colombia," in *Fomento industrial en América Latina*, edited by Marcelo Avila (Bogotá: Ediciones Internacionales, 1977), 188-189.

31 Instituto Nacional de Planificación [Peru], *Plan Nacional de Desarrollo 1971-1975*, *Vol. 1: Plan global*, 2.

32 Junta Nacional de Planificación y Coordinación Económica [Ecuador], *Plan integral*, 2 and 110 (quoted on p. 2).

33 De Mattos, "Estrategias de desarrollo regional," 222.

ernment signed a contract with the Texaco Company, forcing them to build two cities "to create development poles" in the middle of the jungle.[34]

From the perspective of Brazilian, Ecuadorian, and Peruvian planners, creating development poles challenged the international economic order because it modified the division of labor and distribution of wealth. To build them, it was necessary to identify a population center around which to organize the exploitation of natural resources, modify the living conditions of the surrounding area, and attract migratory currents to obtain a geographical balance.[35] The goal was that the pole—a word that implies attraction—would absorb the population of other centers of a lower hierarchy and the natural resources of the most distant places of Amazonia.

By applying the theory of poles, the states intended to go beyond offering rainforest lands to peasants. They wanted the urban centers to be spaces where the population would be subjected to labor regime regulation, molded into the national education system, comply with sanitary habits, urbanize their customs, and feel linked to the national authority. But it was also, as mentioned, a system of domestication of non-human beings. In development poles, plants and livestock would be adapted to the tropics. Urban centers would become the logistical preparation points for exploring subsoil minerals and timber trees, making production processes reach remote spaces.

The theory of development poles gained enormous circulation then because it was conceived for the planification of different rural regions in Latin America, not only Amazonia. The ECLAC Latin American Institute for Economic and Social Planning and the United Nations Division for Social Development promoted training processes and dissemination publications,[36] and this conception of space was appropriated by the officials who planned Amazonia.

In 1972, the National Institute of Colonization and Agrarian Reform of Brazil (INCRA, for its acronym in Portuguese) brought together one hundred and ten people for a five-day Seminar on Amazonian Colonization Systems, attended by agents of international organizations, academics, journalists, and officials of regional development programs and colonization institutes from Bolivia, Brazil, Colombia, Ecuador, Peru, and Venezuela. After attending lectures in the city of Belén and participating in a flyover of colonization projects in Altamira, in the State of Pará, the working groups agreed on recommendations in which they repeated the premises for creating colonization poles, taking into account the particularities of Amazonia.[37] Thus, a network of officials was forged who promoted this form of occupying the rainforest.

In that and other international conferences, the officials showed the poles with the greatest transformation.[38] In the case of Ecuador, the Amazon region had to incorporate 15,000 families

34 Ramiro Gordillo, *¿El oro del diablo? Ecuador: historia del petróleo.* (Quito: Corporación Editora Nacional, 2003), 137.

35 De Mattos, "Estrategias de desarrollo regional," 225.

36 Ricardo Cibotti, "Introducción," in *Ensayos sobre planificación regional del desarrollo: compilación* (México: Siglo XXI Editores, 1976), 17.

37 Instituto Nacional de Colonização e Reforma Agraria (INCRA)-Instituto Interamericano de Ciências Agrícolas da OAS, *Seminário sobre sistemas de colonização na Amazônia (Trópico Úmido) (*Belem é Altamira: INCRA, 1972).

38 Instituto Interamericano de Ciencias Agrícolas (IICA)-Instituto Ecuatoriano de Reforma Agraria y Colonización (IERAC), *Reunión técnica regional sobre colonización* (Santo Domingo de los Colorados: IICA- IERAC, 1975).

between 1972 and 1977, especially in the northeastern area, considered a priority for oil discoveries. There, in the town of Lago Agrio, a road and an airport were opened, and it was planned to start receiving electricity from the technical plant of the Texaco-Gulf oil company.[39] The Ecuadorian Institute of Agrarian Reform and Colonization conceived a plan to turn the town into the "Ecuadorian Brasilia" by regulating land use and building houses for its residents but met with resistance from the inhabitants to relocate.[40] That failure did not prevent the government from elevating Lago Agrio to a higher status, linking it by land and air to the transportation system, installing telephone and radio services, building educational centers, and opening state offices to expand agriculture, livestock production, oil exploitation, and logging.[41]

In the Peruvian Amazon, the poles chosen in the 1971 National Development Plan were Iquitos and Pucallpa. An office of the National Planning Institute was located in the former to establish a regional plan. For the Institute, the configuration of the city as a pole involved making Iquitos a more connected city with a port with a bigger berth, equipped with adequate electrical service and an extension of its airstrip.[42] Likewise, the Iquitos pole had to respond to growing migration with the construction of houses in the city, an urbanization plan, and the remodeling of the hospital.[43] In the city, there were plans to build cold storage facilities in the port, a cement factory, a shipbuilding factory, and a refinery.[44] Iquitos was seen as a training ground for people who would create new settlements, who would appear with the expansion of the oil frontier. These new population centers, the planners thought, should not be "enclaves dominated by exploration companies" but rather colonization projects with multiple economic activities.[45] Thus, the pole would become a place where future settlers would prepare to serve as forestry experts, mechanics, carpenters, boat pilots, and agricultural technicians so that the economic activity of the new settlements would be diverse.[46] This multiplicity of economic activities in Iquitos sought to give the region an economic autonomy that would free it from entirely depending on oil as it did on rubber.

In the case of Brazil, its size required a minimum differentiation of scales. Since 1966, SUDAM had selected thirty-six municipalities and developed urban plans to install water, sewerage, and energy systems in the states of Acre, Amazonas, Roraima, Amapá, and Pará. First, diagnostic studies were carried out in each of these municipalities and then "hypotheses for development" were formulated for each location.[47] The 1972-1974 Amazon Development Plan was in line with the theory of poles insofar as it sought that the municipalities radiate their influence in the regions where they were located. In the 1975-1978 Plan, SUDAM confirmed the importance of the poles, creating the Poloamazonía program, which involved the identification of fifteen regions with their

39 Junta Nacional de Planificación y Coordinación Económica [Ecuador], *Plan integral*, 348.

40 Castillo, *Sucumbíos*, 179.

41 Junta Nacional de Planificación y Coordinación Económica [Ecuador], *Plan integral*, 2.

42 Instituto Nacional de Planificación [Peru], *Plan Nacional de Desarrollo 1971-1975*, *Vol. 1: Plan global,* 162-164.

43 Instituto Nacional de Planificación [Peru], Plan Nacional *de Desarrollo 1971-1975, Vol. 7: Plan de vivienda*, 293.

44 Instituto Nacional de Planificación [Peru], *Plan Nacional de Desarrollo 1971-1975*, *Vol. 5: Políticas de desarrollo regional*, 74-76.

45 Instituto Nacional de Planificación [Peru], *Plan Nacional de Desarrollo 1971-1975*, *Vol. 5*, 66.

46 Instituto Nacional de Planificación [Peru], *Plan Nacional de Desarrollo 1971-1975*, *Vol. 5*, 70.

47 Ministêrio do Interior y Superintendência do Desenvolvimento da Amazônia [Brazil], *Plano de Desenvolvimento*, 103-104.

development nuclei.[48] The latter institution, however, tensely shared the role of Amazonian planning with INCRA, which also designed its own conception of urban settlements.

José Geraldo Cunha Camargo, an urban planner at INCRA, proposed that an effective occupation of Amazonia required the construction of "small growth poles," called *rurópolis*, along the new Trans-Amazonian highway. In these *rurópolis*, of around 20,000 inhabitants, urban, rural, agricultural, industrial, and commercial spaces should coexist. These areas were to be complemented by political institutions, hospitals, and educational, mail, telephone, and telegraph services.[49] This pole should radiate its influence to small villages and towns, designed so that city life could be enjoyed in the countryside, as Renato Leão observes in a rich analysis of the proposals of the urban planner.[50] The design also sought to create a "new civilization" among people from different areas of Brazil, living on equal terms.[51] Between 1969 and 1973, thirty villages, eleven towns, and one *rurópolis* were built; nevertheless, the plan ceased to be implemented afterward because the budget was overstretched and the design presented difficulties in access to water or fertile land.[52]

This pole-based design was implemented by both federal institutions and Brazilian states. Thus, the State of Amazonas indicated in its 1971-1974 Development Plan that Manaus represented "the center of economic convergence of the state and potentially a nucleus of irradiation of actions capable of provoking the expansion and modernization of the main nuclei of the interior of the state."[53] The function of Manaus, which by then had 277,000 inhabitants, would be to demand raw materials and offer transportation, communication, banking, and public services to other municipalities of the State of Amazonas, which had an intermediate hierarchy and, in comparison to more remote places, were called "points of support and irradiation."[54] To fulfill the role of Manaus, the plan consisted of expanding the water supply system, constructing roads and houses, extending the telephone and electricity network, installing educational radio and television programs, consolidating the public school network, and creating an Amazonian cultural foundation. This government plan shows how the role given to a pole was simultaneously disputed by political authorities of different hierarchies.

The organization of space based on poles was hegemonic between 1968 and 1978 in the South American Amazonia. But, more than a mere division of competencies, the theory of development poles was a mechanism of knowledge on how to make a population and natural resources spread over a vast territory interact with the national economy and political system. This knowledge proposed concentrating commerce, industry, social services, and political institutions in an Amazonian urban space to stimulate the desire of the inhabitants of rural areas to move towards these development nuclei. Such decisive transfer from more remote areas would occur thanks to the hypothetical magnetism attributed to technology, markets, educational and health institutions,

48 Ministério do Interior y Superintendência do Desenvolvimento da Amazônia [Brazil], II. *Plano nacional de desenvolvimento programa de ação do governo para a Amazônia 1975-79* (Belén: SUDAM, 1976), 66.

49 Camargo, *Urbanismo rural*, 17.

50 Leão, "Shaping an urban Amazonia," 4.

51 Leão, "Shaping an urban Amazonia," 16.

52 Leão, "Shaping an urban Amazonia," 12-15.

53 De Andrade, *Plano de Govêrno*, 44-45.

54 De Andrade, *Plano de Govêrno*, 46.

and other urban experiences. The history of Amazonian regions passed through varying levels of attraction exerted by the cities and variable ways in which people responded to urbanization.

2.2 Integrated rural development: technified peasant settlements

Colombia faced the unique political and economic weight the cities of Cali, Medellín, and Barranquilla represented for the government. Given their prominence in the national context, these three cities demanded the distribution of the economic growth of Bogotá among them. Thus, in 1970, the National Planning Department regarded cities with 30,000 to 200,000 inhabitants as development poles.[55] Meanwhile, in locations of the Colombian Amazonia, the creation of modernized agricultural societies linked to the market was proposed, following the approaches of organizations such as the World Bank and the Inter-American Development Bank (IDB).

For these organizations, the lack of growth in Latin American economies was not the consequence of an alleged unfair trade with the so-called "developed" countries. According to their perception of economic history, the lag was due to the absence of measures necessary to export their natural resources, that is, to what they considered weak links with the world economy. In the 1970s, both institutions viewed with disdain the excessive economic regulation of the state and, therefore, also the proposal to build societies in the middle of the jungle with long-term public investment.[56]

At the mentioned seminar held in Belén in 1972, the IDB delegate, Adolfo Beeck, summarized the requirements that had to be met by a colonization project seeking to obtain financing from his institution. By then, the IDB had financed eighteen colonization projects in different countries, an experience he invoked by stating that "those with less state control are those that, in general, work best." The official claimed that when peasant colonization was directed by the state, "a paternalistic attitude was observed." Consequently, IDB financing was then "directed to projects that stimulate and settle spontaneous migratory flows," in which settlers received "indispensable support services."[57]

This austere view of colonization policies harmonized with the vision of the World Bank. When Robert McNamara took over as president in 1968, he proposed that the institution should not only seek the growth of countries but also translate it into eliminating poverty.[58] Thus, after internal debates, in 1971, the institution devised a strategy that involved bringing technological advances in agriculture to small peasants so they could increase their production. The plan was to give them credit to purchase hybrid seeds, machinery, and fertilizers to increase their income, a tactic that would become known as integrated rural development.[59]

This approach left out several components of the development poles. If peasants increased their income, it was unnecessary to build cities, industries, government entities, and recreational

55 Ministerio de Desarrollo Económico-Departamento Nacional de Planeación [Colombia], *Plan de desarrollo económico social: políticas de desarrollo regional y urbano* (Bogotá: Departamento Nacional de Planeación, 1970), 5.

56 Patrick Allan Sharma, *Robert McNamara's Other War: The World Bank and International Development* (Philadelphia: University of Pennsylvania Press, 2017), 94-95.

57 14. Instituto Nacional de Colonização e Reforma Agraria (INCRA)-Instituto Interamericano de Ciências Agrícolas da OEA, *Seminário*, 5, 25.

58 Sharma, *Robert McNamara's Other War*, 54.

59 Sharma, *Robert McNamara's Other War*, 64.

spaces and encourage their participation in national politics. For this proposal, the public services to be built were basic health centers and primary schools, but it did not consider the erection of hospitals, secondary schools, or universities. Integrated rural development increased the productivity of small plots of land, thus dismissing the need to redistribute land from large estates. For this reason, the reception of agrarian rural development approaches coincided with freezing land distribution policies in Colombia.[60]

Agricultural modernization approaches circulated throughout Latin America through the mentioned Inter-American Institute of Agricultural Sciences (IICA), which formed part of the Organization of American States. Under Project 206, the Institute offered courses to train technicians from national agencies and peasants throughout the region. It had offices in the countries studied in this article and, in 1969, created a program focused on Amazonian agriculture in Belém, Brazil.[61] All four countries promoted the use of fertilizers and agricultural machinery, and in cities such as El Coca, Ecuador, or Tarapoto, Peru, institutions were created to adapt plants to the Amazonian climate.[62] However, it was in Colombia where the 1975-1978 plan took the concept of integrated rural development as the axis of government.[63]

Already in 1971, the World Bank had signed with Colombia the implementation of a colonization project in the Amazonian intendancy of Caquetá for US$ 8,100,000. In line with this, the plan—which would be extended with a new contract in 1975—focused on building roads and facilitating access to seeds and machinery in nine locations. As part of the social component, eighty-seven rural primary schools and three medical centers were built. As Sandra Patricia Martínez Basallo states, "Investment in the social development component was minimal, while administrative expenses took a good part of the budget."[64]

While this austere policy was applied in colonization areas, there was no urban planning in the capital of the intendancy, Florencia. It was the local protests of 1972 and 1977 that led to the construction of a milk processing plant and a technical education center for young people and the installation of electric power. The city's inhabitants claimed to be a regional urban center, but their attention was not a stable state policy.[65]

In Colombia, it was not only international organizations but also the Colombian Institute of Agrarian Reform (INCORA, for its acronym in Spanish), created in 1961, that favored minimalist state intervention in the colonization process. At an international seminar on colonization, the

60 Daniel Pécaut, *Crónica de dos décadas de política colombiana 1968-1988* (México: Siglo XXI, 1988), 253-253.

61 Instituto Interamericano de Ciencias Agrícolas (IICA). *Desarrollo rural y reforma agraria en América Latina. Informe de evaluación del Proyecto 206 del Programa de Cooperación Técnica de la OEA* (Costa Rica, IICA: 1975), 24-26.

62 Ackner, *Volkswagen in the Amazon*, 176 and 185; Instituto Nacional de Investigaciones Agropecuarias (INIAP). *Breve diagnóstico de la región amazónica y proyecciones de investigación para la Estación Experimental Napo-Payamino del INIAP* (Quito: INIAP, 1988); Centro Regional de Investigación Agropecuaria, *Producción e investigación agraria en la Amazonía peruana* (Lima: Ministerio de Alimentación y el Instituto Interamericano de Ciencias Agrícolas, 1977).

63 Departamento Nacional de Planeación [Colombia], *Para cerrar la brecha: Plan de desarrollo social, económico y regional 1975-1978* (Bogotá: Banco de la República, 1975), 32.

64 Sandra Patricia Martínez Basallo, *Encuentros con el Estado: Burocracia y colonos en la frontera amazónica (1960-1980)* (Cali: Universidad del Valle, 2017), 98-106 (quote on p. 106).

65 Claudia Duque Fonseca, "La selva de concreto: proceso de urbanización y planificación urbana en Florencia (Caquetá, Colombia)" (PhD diss., Université Laval, 2020), 169-170.

delegate of this country indicated that "determining settlement costs is somewhat challenging in the Colombian case" since the State was limited to the "orientation of spontaneous colonization."[66]

In the special precinct of Putumayo, INCORA had developed one of its colonization fronts since 1964.[67] In the following years, different waves of peasants, motivated by the discovery of oil, obtained land adjudications, especially in Puerto Asís and Mocoa. Most of them were granted plots of land smaller than one hundred hectares.[68] In Puerto Asís, the population doubled between the 1964 and 1973 censuses, reaching 26,340 inhabitants; in contrast, Mocoa mostly grew in the late 1970s and early 1980s.[69] Lina Sánchez Steiner indicates that, in those years, Mocoa "finally surpassed the limits of the city to the north, east, and west and extended no longer in a compact way complying with the Spanish urban pattern, but in a spontaneous and disorderly manner."[70] While urbanization was a state development strategy in other Amazonian regions, in Putumayo, it emerged despite the state.

As neither the World Bank nor INCORA programs sought to stimulate the local political community, they did not modify the condition of Amazonia during the study period. The civic strikes in Florencia in 1972 and 1977 and Puerto Asís in 1974 strengthened local political communities outside the control of the state.[71]

In Colombia, the proposal to modernize agriculture in a broader sense did not intend to modify the relationship of the rest of the country with Amazonia. Nevertheless, the limited margin for state action proposed by integrated rural development did not stop migratory flows, population growth, and the birth of local political communities that acted beyond any external planning.

3. The training of Amazonian planners

In the period under study, the actors in charge of development policies in the Amazon rainforest acted under specific conditions that allowed their work and gave it practical effects. These circumstances, which partly emerge from plans, books, and planning articles, indicate what kind of training they received as officials, the international debates in which their work was framed, and the power relations they activated in the jungle.

Among them, it is possible to distinguish specialized officials and politicians. The former began university careers which, in principle, were not aimed at training regional planners. Their fields of study were varied, such as agronomists, economists, geographers, and sociologists. By the end of the 1960s, their university degrees allowed them to be part of national policies that renewed their public official status, giving them job stability and, in some cases, the possibility of studying abroad. In the case of Amazonian planners, many of these officials attended courses

66 Instituto Interamericano de Ciencias Agrícolas (IICA)-Instituto Ecuatoriano de Reforma Agraria y Colonización (IERAC). *Reunión técnica regional sobre colonización*, Document III-A-2-25.

67 Centro Nacional de Memoria Histórica (CNMH). *Petróleo, coca, despojo territorial y organización social en Putumayo* (Bogotá: CNMH, 2015), 76.

68 Centro Nacional de Memoria Histórica, *Petróleo*, 80.

69 Centro Nacional de Memoria Histórica, *Petróleo*, 90.

70 Lina Sánchez Steiner, *La ciudad-refugio. Migración forzada y reconfiguración territorial urbana en Colombia* (Barranquilla: Universidad del Norte, 2012), 79.

71 Centro Nacional de Memoria Histórica, *Petróleo*, 89.

at ECLAC in Santiago or at IICA, where urban planner Camargo da Cunha (1925-2011) was a lecturer. Among these technocrats was Ecuadorian sociologist Nelson Romero Simancas, who, between 1974 and 1975, completed two postgraduate programs in regional planning at the Institute of Economic and Social Planning in Santiago de Chile and a master's degree at the Federal University of Pará in the Brazilian Amazonia.[72] Upon returning to his country, Romero was appointed urban planner in the division of regional studies of the National Planning Board of Ecuador, becoming a technocrat—an official with specialized knowledge that allowed him to advise a leading institution as an expert.[73]

We also found other planners who did not make a career in a public institution but had a political profile and experience in Amazonia. This is the case of two Brazilians, Hélio Palma de Arruda (1926-1985) and Francisco Moura Cavalcanti (1924-1994). Agronomist Palma de Arruda began his political life in 1959 as prefect of the city of Cuiaba, the capital of the State of Mato-grosso, and was later appointed president of the Bank of Amazonia. Between 1970 and 1978, he held the position of project director of the INCRA, where he presided over the construction of settlements along the Trans-Amazonian highway and was a speaker at events organized by IICA.[74] Moura Cavalcanti, born in Pernambuco, studied law and started a political career thanks to which he served as governor of the Federal Territory of Amapá in Amazonia in 1961. Although his time as governor was one year due to the resignation of President Jânio Quadros, who had appointed him, this knowledge was the basis for his appointment as director of INCRA between 1970 and 1973.[75] Although they lacked specific training, the planners who were not career officials were illustrious people, recognized for their political capital and knowledge of Amazonian societies, based on which they obtained their positions.

Regardless of their profiles, their stories show that they were frequently invited to attend IICA and ECLAC courses. In 1970, the latter opened a regional and urban planning studies program, through which it proposed the thesis of creating development poles in rural areas.[76] The IICA courses emphasized the modernization of agriculture in line with the terms promoted by the IDB and the World Bank. By attending these courses, Amazonian planners felt the dispute between ECLAC and international financial organizations. This dispute was part of a broader debate between the two currents on the development of Latin America.

72 Nelson Romero Simancas, *Guía técnica para estudios de planificación urbano regional* (Quito: Junta Nacional de Planificación 1977).

73 Eduardo Dargent, *Technocracy and Democracy in Latin America: The Experts Running Government* (New York: Cambridge University Press, 2015), 13.

74 Instituto Interamericano de Ciencias Agrícolas (IICA)-Instituto Colombiano de la Reforma Agraria (INCORA), *Seminario nacional sobre criterios para programas de colonización* (Bogotá: INCORA, 1974), IV, B,1.

75 José Francisco Moura Cavalcanti, *Brasis que vivi* (Recife: Fundacao Joaquim Nabucco, 1992), 12-16.

76 Instituto Latinoamericano de Investigaciones Sociales (ILDIS)-Instituto Latinoamericano de Planificación Económica y Social (ILPES), *Planificación regional y urbana en América Latina* (México: Siglo XXI Editores, 1974), 1.

4. The most visible environmental effects of the implementation of development plans

While ECLAC officials proposed structural changes that would modify the peripheral condition of Latin American economies through the nationalization of the industrialization process and their strategic insertion in the world economy, organizations such as the World Bank promoted, instead, the modernization of traditional societies by opening them up to the international market.[77] In Amazonia, this dispute translated into a commitment by ECLAC to build industrialized urban societies, as opposed to organizations such as the IDB or the World Bank that sought to modernize agriculture through seeds, machinery, and roads according to the demands of the international market.

The efforts of these international training spaces focused on providing courses for state planners since their designs could produce significant effects. National development plans directed public investment and channeled projects to receive international loans.[78] This meant that the viability of an infrastructure project in Amazonia depended on being recorded in official documents that programmed state intervention. A national or colonization plan also created a collective predisposition for action. Indeed, agrarian reform and colonization institutes had become important institutions, with proposals that activated the agency of thousands of people. For example, in 1971, Colombia's INCORA—which had increased its initial number of officials sixfold—put 3,796 officials into action.[79]

But the most lasting effect of the work of planners was that their plans projected—and thereby instrumentalized—Amazonian resources in different directions with varied consequences. As previously seen, the projects that bet on the creation of development poles intended to retain agricultural, livestock, and mining resources in their national economies through their industrialization. In turn, plans that emphasized the modernization of agriculture sought to ensure that resources would eliminate poverty and circulate on the international market with the support of private agents of any nationality.

In the environmental sphere, the development policies of the 1970s left a severe footprint. Roads through the rainforest promoted the arrival of hundreds of thousands of people who deforested the jungle to build their ranches and homes. As documented, colonization policies encouraged deforestation by requiring newcomers to prove their right to the land by cutting down trees on their claimed property.[80]

However, different environmental effects can be identified in rural and urban settlements. In the former, as in the case of the integrated rural development project in Caquetá, Colombia, a World Bank report indicates that 500,000 hectares had been deforested in 1975. In response to

77 Margarita Fajardo, *The World that Latin America Created: The United Nations Economic Commission for Latin America in the Development Era* (Cambridge: Harvard University Press, 2022), 12.

78 Luis Bernardo Mejía, *Central Planning Offices in Latin America: A Comparative Historical Analysis Perspective (1950-2013)* (Maastricht: Boekenplan, 2014), 195-197.

79 Instituto Colombiano de la Reforma Agraria (INCORA), *25 años de reforma agraria en Colombia* (Bogotá: INCORA, 1988), 24.

80 John R. McNeill and Peter Engelke, *The Great Acceleration: An Environmental History of the Anthropocene since 1945* (Cambridge: Balknap of Harvard University Press, 2014), 56-58.

concerns raised, the Bank's officials claimed in the same document that restricting forest clearing would be economically unviable.[81] Likewise, the impact of large cattle ranches was significant, as in the case of Companhia Vale do Rio Cristalino in Pará, where tractors destroyed the trees and spread herbicide to eliminate weeds, workers cut the remaining trunks, and the land was burnt in the dry season, eliminating almost all its nutrients.[82] Similarly, the projects that created urban development poles also generated considerable pollution. In Iquitos, the river was constantly polluted by waste dumped in it by the inhabitants, and the expansion of the city caused many of the Peruvian Amazonian neighborhoods, such as Belén, to grow in areas susceptible to flooding that became very destructive.[83] It should be noted, however, that urban development centers also led to deforestation. For example, an agricultural district was created in Manaus on the outskirts to produce food, which deforested 35,000 hectares of jungle[84]; in the Ecuadorian city of Lago Agrio, satellite images show that, in 1973, when it was just beginning to grow, the forest mass had no opening due to deforestation and, by 1985, the urban center had extended by 56%, deforesting the surrounding jungle, which, added to oil exploitation, contaminated the waters of the Aguarico River.[85]

But beyond the environmental damage specific to each trend, it is arguable that the planning policies of the 1970s inserted Amazonia into the "technosphere" to the extent that they made it possible for the region to articulate itself definitively to the global demand for resources. In environmental history, the term is used to describe the entire network of large-scale technology that enables the extraction and transportation of energy and the existence of government offices, industrial processes, instantaneous means of communication, and the circulation of food and other goods on a global scale.[86] Since the late 1960s, the oil exploration of the Texaco Company in Putumayo, the Occidental Petroleum Company in Iquitos, the exploitation of Ecuadorian gas reserves in Shushufindi or the construction of the Tucurí hydroelectric plant in Brazil show that the Amazonian territory began to get entangled with the global demand for energy with unprecedented intensity. The opening of regional planning offices, the creation of new cities such as Lago Agrio, and the role of colonization offices show that the planning institutions connected international economic interaction with the local one, where, in addition, the road transportation of food, wood, and other forest products began, which would be exported on a global scale. Thus, these development programs created the "technosphere" necessary for the Amazon rainforest to respond to the demands of the twentieth century.

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81 International Bank for Reconstruction and Development, *Appraisal of the Caqueta Rura Settlement Project (Phase II)* (Colombia, Report of May 2, 1975, No. 501a-CO, Annex 4, Appendix 1), 2.

82 Acker, *Volkswagen in the Amazon*, 115-6.

83 Lerner, "Jungle Cities," 237.

84 Lerner, "Jungle Cities," 248.

85 Belén García Martínez *et al.*, "Retos socio-ambientales de la conservación en la Amazonía de Sucumbíos (Ecuador)," in *América Latina en las últimas décadas: procesos y retos,* coordinated by Francisco Cebrián Abellán, Francisco Javier Jover Martí, and Rubén Camilo Lois González (La Mancha, Ediciones de la Universidad de Castilla, 2018), 108-107.

86 Chris Otter, "Technosphere," in *Concepts of Urban-Environmental History*, edited by Sebastian Haumann, Martin Knoll, and Detlev Mares (Bielefeld: Universität Salzburg, 2022), 22.

Conclusions

Delving into the argumentative apparatus of Amazonian planners between 1968 and 1978 reveals a network of preliminary concepts that influenced their vision and their way of designing the Amazon rainforest. Although the planners shared some of these starting points, there were two different tendencies in the design of Amazonian development. In Brazil, Ecuador, and Peru, the creation of urban development poles in the jungle predominated, and the recommendations proposed by ECLAC were accepted. On the contrary, the planning of the Colombian Amazonia was marked by the proposal to modernize agriculture based on the model recommended by the IDB and the World Bank, which guided the colonization project in the Caquetá intendancy and the actions of INCORA in the Putumayo precinct.

In both currents, ECLAC and IICA were the organizations responsible for creating courses to disseminate the theory of development poles and agricultural modernization techniques. Thus, the debate on Amazonian development models is revealed to us as part of a broader discussion among international organizations on the role of the South American economy in the international economy.

This last idea helps understand the historical circumstances in which planning knowledge emerged and took effect. The technicians who produced national and regional plans for Amazonian development were generally officials trained in planning courses of the institutions mentioned above or scholars with political careers in Amazonia. The plans they presented served to direct state budgets and the collective action of public officials and instrumentalized Amazonian resources in the creation of urban poles or rural settlements.

In addition to the fact that the implementation of colonization projects caused a severe environmental impact, it also created a "technosphere" capable of channeling international demands for energy and forest products through large-scale infrastructure, political institutions, and media created by the states. However, future research could deepen the characterization of how the conditions of this international assembly were created.

During the study period, planners understood the region on a global scale and were enthusiasts to imagine its future. However, their working procedures and plans did not seek to understand the people and non-human beings who inhabited Amazonia. This absence limited their proposals and resulted in environmental impacts that only later became evident.

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