Contested Peripheries: Nation Building, Regional Development, and the Failure of the TVA Model in Latin America in the 1940s and 1950s

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ABSTRACTS

Since the US New Deal, regional development has been seen globally as a promising way to modernize nation states. The Tennessee Valley Authority (TVA) and its river basin development generated a particularly strong interest among many governments of the Global South that aimed to develop their peripheries, which were often perceived as "backward", to the benefit of the whole nation. In Latin America, this development model flourished in the 1940s and 1950s. While national centres sent their experts and engineers to peripheral regions, development hopes and plans to spatially reshaping the nation quickly encountered problems and resistance. Drawing on selected state river basin programmes in Peru, Mexico, and Brazil, this article explores the conflicts that erupted between politicians, engineers, and local populations. Furthermore, it shows that the TVA model served more as a symbol to legitimize political interests than as an accurate technical model to be implemented.

Im Zuge des New Deal wurde regionale regionale Entwicklung weltweit als vielversprechender Weg zur Modernisierung von Nationalstaaten angesehen. Die Tennessee Valley Authority (TVA) und die Entwicklung von Flussbecken weckten ein besonders starkes Interesse bei vielen Regierungen des globalen Südens, die ihre oft als „rückständig" empfundenen Peripherien zum Nutzen der gesamten Nation entwickeln wollten. In Lateinamerika florierte dieses Entwicklungsmodell in den 1940er und 1950er Jahren. Während die nationalen Zentren ihre Experten und Ingenieure in die peripheren Regionen schickten, stießen Entwicklung und Planung zur räumlichen Neugestaltung der Nation schnell auf Probleme und Widerstand. Anhand ausgewählter staatlicher Flussbeckenprogramme in Peru, Mexiko und Brasilien untersucht dieser Arti-

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kel die Konflikte, die zwischen Politikern, Ingenieuren und der lokalen Bevölkerung ausbrachen. Darüber hinaus zeigt er, dass das TVA-Modell eher als Symbol zur Legitimierung politischer Interessen diente, denn als genaues technisches Modell, das umgesetzt werden sollte.

1. Introduction

When the Great Depression hit hard in 1929, economists from around the world searched frantically for instruments that could improve the situation. In the US, the administration of Franklin D. Roosevelt opted for social reform and state-controlled development, including infrastructure projects and regional development schemes. Since these New Deal policies proved successful, they attracted global interest.[1] The ideas of the Tennessee Valley Authority (TVA), namely the concept of river basin development, were particularly significant big hits among the US exports and contributed to their hegemonic position in development aid in particular and world affairs in general. During World War II, the US deployed aid to form political alliances, and after 1945, New Deal concepts shaped international cooperation in the context of the emerging Cold War and the beginning US-American world order. Aid in the form of experts, technology and loans from the Global North remained influential until the mid-1960s when the development paradigm started to deteriorate.[2]

Before becoming internationally relevant, the TVA, founded in 1933 as a federal agency, set out to transform the Tennessee River basin in the US-American South.[3] The agency aimed to develop the peripheral and impoverished region, historically shaped by the former slave economy, in order to bring it up to the national standard, therefore boosting the national economy as a whole. In the upcoming war, the TVA also contributed to the US war economy. On the ground, it mechanized agriculture and built large dams, hydroelectric plants, roads, factories, and cities. In dam building, the TVA introduced the multi-purpose paradigm that attributed a variety of functions to dams, such as energy production, flood control, irrigation, and navigation. Thousands of interested foreign politicians and technicians visited the TVA, admired modern facilities and up-to-date planning, and sought inspiration for their domestic regional development projects.[4] David Lilienthal, director of the TVA from 1941–1946, advertised the agency in his 1944 book "TVA: Democracy on the March", promising that the valorisation of natural resources would ensure "freedom and prosperity and democracy".[5] The TVA, he claimed,

1 K. Patel, The New Deal: A Global History, Princeton 2016.
2 D. Ekbladh, American Mission: Modernization and the Construction of an American World Order, Princeton 2010; C. Unger, International Development: A Postwar History, London 2018.
3 W. Chandler, The Myth of TVA: Conservation and Development in the Tennessee Valley, 1933–1983, Cambridge, MA 1984; Ekbladh, American Mission, pp. 43–63.
4 Tennessee Valley Authority, TVA as a Symbol of Resource Development in Many Countries, Knoxville 1952.
5 D. Lilienthal, TVA: Democracy on the March, New York 1944, p. 4.

was "a symbol of what man can do to change his physical environment" and should be implemented globally.[6]

Latin America was an important recipient of US aid and TVA concepts.[7] This was due to hemispheric cooperation under Roosevelt's Good Neighbour Policy and the social and economic transformation which many countries of the region faced had since the turn of the century. In the nineteenth century, Creole landowner elites still held the political power and profited from the export of primary goods, but over time, urban middle and working classes stimulated by migration from Europe and Asia gained ground. By the time the Great Depression hit, the export dependency on primary goods had induced an economic transformation through industrialization that challenged the power of the traditional elites. The US were model and problem at the same time: on the one hand, the new urban elites in Latin America were oriented towards the US-American way of life and recognized the economic hegemony and technological advancement of the northern neighbour; on the other hand, they articulated anti-imperialist resentments. When Latin American countries looked to the TVA, they emulated the United States to a certain point, but also wished for economic and political emancipation. They adapted US models like the TVA, often more strategically than practically, and welcomed US aid to achieve independence from the hegemonic superpower.

Scholarship on the transfer of TVA's regional development to Latin America and beyond has discussed to what extent foreign actors did in fact copy TVA ideas, how the transfer was done, and how these concepts were locally adapted. Another scholarly interest was why the global spread of the TVA model was seldom a success.[8] Recently, Vincent Lagendijk has pointed to the fact that ideas which were associated with the TVA had a much more complex genesis and received substantial input from the Global South.[9] This article contributes to this new strand of research that highlights the complexity and plurality of knowledge appropriation and enquires about how national elites used the TVA idea, such as regional development planning and the symbolic representations

6 Ibid., p. 191. See also p. 2; D. Ekbladh, "Mr. TVA": Grass-Roots Development, David Lilienthal, and the Rise and Fall of the Tennessee Valley Authority as a Symbol for US Overseas Development, 1933–1973, in: Diplomatic History 26 (2002) 3, pp. 335–374.

7 M. Gilderhus, The Second Century: US-Latin American Relations since 1889, Wilmington 2000; Patel, The New Deal, pp. 145–160, 174–178; A. Viladrich, El desarrollo hidráulico: sus características y relaciones con el desarrollo regional, Santiago de Chile 1972, CPRD-D/23, pp. 16–21, in: CEPAL, Repositorio Digital, Santiago de Chile.

8 W. Cole, S. Neuse and R. Sanders, TVA: An International Administrative Example, in: Public Administration Quaterly 8 (1984) 2, pp. 166–183; Ekbladh, "Mr. TVA"; F. Molle and Ph. Wester, River Basin Trajectories: An Inquiry into Changing Waterscapes, in: F. Molle and Ph. Wester (eds.): River Basin Trajectories: Societies, Environments and Development, Oxfordshire 2009, pp. 1–19; J. C. Orihuela, One Blueprint, Three Translations: Development Corporations in Chile, Colombia, and Peru, in: A. Ferraro and M. Centeno (eds.), State and Nation Making in Latin America and Spain: The Rise and Fall of the Developmental State, Cambridge 2019, pp. 107–133; Patel, The New Deal, pp. 294–298; Ch. Sneddon, Concrete Revolution: Large Dams, Cold War Geopolitics, and the US Bureau of Reclamation, Chicago 2015, pp. 52–74.

9 V. Lagendijk, From American South to Global South: The TVA's Experts and Expertise, 1933–98, in: F. Trentmann, A. Sum, and M. Rivera (eds.), Work in Progress: Economy and Environment in the Hand of Experts, Munich 2018, pp.79–101; V. Lagendijk, Streams of Knowledge: River Development and the TVA on the River Mekong, in: History and Technology 35 (2019) 3, pp. 316–337.

of national peripheries, for their own political gain. It also sheds light on tensions and conflicts resulting from the interaction between national centres and peripheries in the context of river basin development in Latin America.

It unfolds two arguments: First, national elites could easily apply the TVA model to legitimize the development and exploitation of national peripheries and to strengthen the power of the national centre. This developmentalist nation building served the interests of the centre better than those of the regions, often leaving regional inequalities untouched. The appeal of the TVA can be explained by the economic hegemony of the US and the capabilities of Latin American engineers who were already trained in water engineering and could therefore quickly adapt the new concept to their specifc region. Second, river basin development resulted in internal conflicts and political confrontations about the relationship between national centres and peripheries which contributed to the failure and demise of TVA-like agencies in Latin America. It was often not the TVA and its methods that were at stake, but the hegemony in domestic political debates. The TVA as a US paradigm served as a powerful symbol of economic aspirations and a potential target for nationalistic positions alike.

In what follows, three case studies substantiate the aforementioned claims. The Corporación Peruana del Santa, founded in 1943 in Peru to develop the Santa River basin in the central Andes north of Lima, was one of the first Latin American attempts to implement a kind of TVA. However, the project soon became a target for partisan confrontations about the role of US experts. The Comisión del Papaloapan in Mexico (1947) had an agenda for the social engineering of indigenous people who, together with other actors from civil society, showed resistance against their forced resettlement and the Comisión's paternalistic behaviour. This challenged the power relations between the political elites in Mexico City and the actors in the peripheral river basin in the states of Veracruz and Oaxaca. The Comissão do Vale do São Francisco, which had been active in the Brazilian Northeast since 1948, turned into a source of conflict between the elites from the political centre and from the peripheral region about development approaches. It was eventually replaced by a new agency that would represent regional development concepts which themselves had been developed by Latin American scientists.

2. Corporación Peruana del Santa, Peru (1943)

Like many other Latin American countries, Peru was subject to profound change during the interwar period.[10] In 1919, strikes and social unrest put pressure on the landowner elites, and socialist and reformist politicians who criticized social inequality founded the party Alianza Popular Revolucionaria Americana (APRA). However, the elites were able to hold their ground and install oligarch Augusto Leguía as president (1919–1930). He promoted foreign trade, invited US investments, and allowed US corporations to control

10 C. Contreras and M. Cueto, Historia del Perú contemporáneo, Lima 1999, pp. 159–208.

mining and oil extraction. From 1931–1945, several oligarchic presidents went ahead with the liberal trade policy and banned the APRA.[11]

In the context of World War II, Manuel Prado, president from 1939–1945, reinforced the close cooperation with the United States, which purchased primary goods of military importance, such as rubber, and installed a military base in Peru.[12] As a businessman, Prado had personal interest in this cooperation and was particularly eager to attract US credit and investment to boost industrialization. In 1940, his government decided to build the country's first steelworks in the port city of Chimbote in the Áncash department north of Lima. To this end, Prado hired several US experts and firms. In 1941, the engineering bureau H. A. Brassert & Co. presented a plan for the steelworks, and engineer Barton Jones started planning a hydroelectric plant in the Cañón del Pato on the Santa River to provide the steel mill with energy. The following year, Frederick Snare & Co. began with the construction of the port of Chimbote.[13]

After travelling to the US in 1942, Prado assigned all these activities to the state-owned company Corporación Peruana del Santa (CPS) which was clearly inspired by the TVA. Founded in 1943 under the leadership of former finance minister David Dasso, the CPS was one of several new public institutions that became involved in the domestic economy.[14] Its main goal was "the development and exploitation of resources that come directly or indirectly from the regions of the Santa River and its tributaries."[15] The Santa River basin is situated between two mountain ranges of the Andes in Áncash. In addition to infrastructure and industrial projects, the CPS aimed to build irrigation systems and roads and expand and operate a railroad line between Chimbote and iron ore and coal deposits in the mountains.

Not only the approach of the CPS was inspired by TVA's river basin development: Jones and two other experts were former TVA engineers.[16] The preference for foreign expertise meant that Peruvian technicians were not likely to work on these projects. Already from 1913–1915, engineer Santiago Antúnez de Mayolo had planned to build a dam in the Cañón del Pato and updated his concept again in 1940.[17] However, Prado entrusted the implementation to US-Americans because he was convinced that the technology of the

11 R. Thorp and G. Bertram, Peru 1890–1977: Growth and Policy in an Open Economy, Basingstoke 1978, pp. 145–202.

12 L. Clayton, Peru and the United States: The Condor and the Eagle, Athens, GA 1999, pp. 142–168; Contreras and Cueto, Historia, pp. 217–219.

13 C. E. Pardo, [Introduction], in: Comisión Mixta Parlamentaria (ed.), Informe sobre las actividades de la Corporación Peruana del Santa, Lima 1945, pp. III–XXIX, at III; C. Ramírez Alzamora Cobos, Santiago Antúnez de Mayolo: vida y obra, Lima 1980, p. 104.

14 M. Carey, In the Shadow of Melting Glaciers: Climate Change and Andean Society, Oxford 2010, pp. 69–73; S. Kahatt, Utopías construidas: las unidades vecinales de Lima, Lima 2015, pp. 65–66; Orihuela, One Blueprint, pp. 122–128.

15 Corporación Peruana del Santa, Estatutos, Lima 1951, p. 5. This and subsequent translations by the author.

16 M. Prado, Mensaje presentado al Congreso, Lima 1943, p. 211; Tennessee Valley Authority, TVA as a Symbol of Resource Development in Many Countries, Knoxville 1952, p. 9.

17 Carey, In the Shadow, p. 71; Ramírez Alzamora Cobos, Mayolo, pp. 102–106.

dam was "the most modern known".[18] In several addresses before the parliament, the president underscored that the CPS was not simply a regional project, but a crucial step "toward the national industrialization" and "toward the complete modernization of the economic structure of the Nation".[19] He wanted to "ensure the economic independence of Peru".[20] The CPS was based in Lima because the infrastructure and factories in Áncash were supposed to benefit the whole country.[21] While the Peruvian departments were responsible for economic activities, in the case of the Santa basin, the national government assumed this task and marginalized the regional agency. The CPS did not aim to develop the region as a whole, but rather to exploit its natural resources. Although the department of Áncash is situated on the coast relatively close to Lima and it is not a classic peripheral region, it was clearly subordinate to national politics.

The modalities of the implementation and the appointment of foreign experts hindered the success of the project. Even though Prado claimed in 1944 that the Morfit Mission, another group of US experts preparing studies about the exploitation of ores and coal in the region, had praised CPS planning and "the organizational and technical capacity of the State",[22] it became clear that political and technical elites hardly shared Prado's view and that CPS activities were highly questionable when President José Luis Bustamante y Rivero took a closer look at the project after entering office in 1945. The new president set great store on staging himself as a democrat who would distance himself from former authoritarian governments.[23] Therefore, he reduced diplomatic relations with the United States, closed their military base,[24] and commissioned a critical evaluation of Prado's CPS. The parliament appointed an investigation committee of Peruvian senators, deputies, engineers, and accountants who dissected Prado's favoured project and requested its restructuration.[25] The rehabilitated APRA party joined the harsh criticism of the state-owned company.[26]

Critics raised two issues: First, the committee accused the CPS of poor planning, mismanagement, and corruption. Infrastructure projects were not coherent, expensive foreign equipment was purchased without any planning, and important tasks such as irrigation remained ignored.[27] The accountants further lamented the waste of public funds,

18 M. Prado, Mensaje presentado al Congreso, Lima 1944, p. 247.
19 Prado, Mensaje 1943, p. 197. For the discursive setting of the CPS, see F. Purcell, Dams and Hydroelectricity: Circulation of Knowledge and Technological Imaginaries in South America, 1945–1970, in: A. Chastain and Th. Lorek (eds.), Itineraries of Expertise: Science, Technology, and the Environment in Latin America's Long Cold War, Pittsburgh 2020, pp. 217–236.
20 Prado, Mensaje 1944, p. 251.
21 CPS, Estatutos, p. 6.
22 Prado, Mensaje 1944, p. 251.
23 J. L. Bustamante y Rivero, Mensaje presentado al Congreso, Lima 1946, p. 15. See also Contrera and Cueto, Historia, pp. 219, 226–228.
24 J. L. Bustamante i Rivero, Tres años de lucha por la democracia en el Perú, Buenos Aires 1949, pp. 399–400.
25 Pardo, [Introduction], pp. V–XXIX.
26 S. Deza, Informe relativo a las actividades de la Corporación Peruana del Santa, in: Comisión Mixta Parlamentaria (ed.), Informe sobre las actividades de la Corporación Peruana del Santa, Lima 1945, pp. 135–160.
27 Pardo, [Introduction], pp. VII–XI.

missing financial documentation and inventory lists, and overly high salaries and expense claims.[28] Furthermore, they determined the CPS budget to be inadequate for the assigned tasks.[29] Engineer Jorge Grieve Madge claimed that the problems were the result of "poor organization and shortage of apt personnel" and the lack of "a harmonious plan of industrial development".[30] Chairman of the committee César Pardo even referred to the CPS as a symbol of the "totalitarian regime" and "a milieu of cronies and friends who are perched in power".[31] In his eyes, CPS director Dasso's undisputed power was proof of his allegations as he was not required to answer to a control body.

The second critique concerned foreign experts. The committee complained about the CPS not having sufficiently integrated Peruvian engineers and national authorities like the Dirección de Aguas. Instead, the corporation had contracted mostly foreigners who, according to specific accounts the committee uncovered, did not always follow through on their task.[32] "Foreign personnel, in fact, have *always* been better paid and, in most cases, inept", criticized Grieve Madge, naming US-Americans, Argentineans, and Yugoslavs.[33] He denounced "blind and unwarranted trust in American technicians" as unpatriotic because "the Peruvian engineers have been deliberately and humiliatingly exploited and neglected" and also poorly paid and treated.[34] Technical mistakes and the disregard of local knowledge and ideas of the Peruvian engineers had delayed the project and had made it more expensive.[35] The fact that the committee invited engineer Antúnez de Mayolo, who was mentioned above, when visiting CPS premises was clearly a statement in favour of domestic technicians.

CPS director Dasso wrote an extensive reply to these allegations.[36] He denied there had been any missing documents, praised the skills of his team, and rejected the responsibility for mistakes that were made before CPS had even been founded. He added that accountant Jorge Malpartida was biased against the CPS because he was working for US Steel, a direct competitor of the corporation. The accusations were nothing more than "phantasies and presumptions".[37] Nevertheless, the political mood in Peru had changed

28 Ibid., pp. XX–XXIII; J. Malpartida and G. Pérez, Informe presentado a la Comisión Parlamentaria Investigadora de la Corporación Peruana del Santa, in: Comisión Mixta Parlamentaria (ed.), Informe sobre las actividades de la Corporación Peruana del Santa, Lima 1945, pp. 5–21.

29 Pardo, [Introduction], p. III; Pan American Union, The Peruvian Economy: A Study of Its Characteristics, Stage of Development and Main Problems, Washington, D.C. 1950, pp. 240–241.

30 J. Grieve Madge, Informe a Comisión Investigadora Legislativa, in: Comisión Mixta Parlamentaria (ed.), Informe sobre las actividades de la Corporación Peruana del Santa, Lima 1945, pp. 79–93, at 89 and 92.

31 Pardo, [Introduction], p. V.

32 Ibid., pp. XVI and XIX–XX.

33 Grieve Madge, Informe, p. 92. See also pp. 86–87.

34 Ibid., pp. 90, 93.

35 Pardo, [Introduction], pp. XVI–XVII; Grieve Madge, Informe, pp. 82, 85.

36 D. Dasso, Refutación, in: Comisión Mixta Parlamentaria (ed.), Informe sobre las actividades de la Corporación Peruana del Santa, Lima 1945, pp. 163–184.

37 Ibid., p. 171. See also p. 163.

so drastically that the accountants had no need to make an effort to refute Dasso's claims. In a short text, they discredited them as "pure fiction, and bad fiction at that".[38]

During his term, Bustamante y Rivero paid little attention to the CPS, although the agency slowly continued working.[39] It was only under his successor Manuel Odría that the activities of the CPS intensified again, not least because of a severe avalanche in 1950 that destroyed large portions of the river basin, including the half-finished hydroelectric plant in the Cañón del Pato. The plant was finally inaugurated in 1958 during Manuel Prado's second term in office.[40]

CPS's aim to develop a river basin for the benefit of the whole country failed precisely because of its entanglements with the TVA, which attracted criticism by anti-American politicians and parties like the APRA and made the river basin paradigm a target of political disputes. In the Peruvian case, it was not the periphery itself that challenged national politics, but different groups in the national centre which struggled with the global and national embedding of the region. The case study also underscores the agency of domestic technicians who would not voluntarily make room for US experts. Along with corruption, these struggles proved to be a recipe for failure to such a degree that later evaluations of regional development projects by the United Nations Economic Commission for Latin American and the Caribbean (ECLAC) did not even mention the CPS.[41]

3. Comisión del Papaloapan, Mexico (1947)

TVA ideas resonated particularly well in Mexico. After a long reformist transition triggered by the Mexican Revolution (1910–1920), President Miguel Alemán (1946–1952) shifted his agenda from rural reform to the needs of the emerging urban middle class by promoting industrialization and agrarian mechanization and by using the model of the United States and the TVA.[42] In February 1947 he founded Mexico's first river basin agency, the Comisión del Papaloapan (CP), and by 1952 he had added three more.[43] During an official visit to the US in May 1947, Alemán even toured the TVA.[44] At the

38 J. Malpartida and G. Pérez, Respuesta, in: Comisión Mixta Parlamentaria (ed.), Informe sobre las actividades de la Corporación Peruana del Santa, Lima 1945, pp. 187–190, at 187.

39 Bustamante y Rivero, Mensaje 1946, p. 28; Bustamante i Rivero, Tres años, pp. 380–386.

40 Carey, In the Shadow, pp. 67–80; Thor and Bertram, Peru, p. 261.

41 Orihuela, One Blueprint, pp. 108, 122, 128; CEPAL and SEGEPLAN, Regional Development Planning in Latin America, Santiago de Chile 1980, E/CEPAL/ILPES/R.17, p. 36, in: CEPAL, Repositorio Digital, Santiago de Chile.

42 R. Alexander, Sons of the Mexican Revolution: Miguel Alemán and His Generation, Albuquerque 2016; D. Barkin and T. King, Desarrollo económico regional: enfoque por cuencas hidrológicas de México, Mexico City 1970; Cole, Neuse and Sanders, TVA; L. Aboites Aguilar, The Transnational Dimensions of Mexican Irrigation, 1900–1950, in: Journal of Political Ecology 19 (2012), pp. 70–80; T. Olsson, Agrarian Crossings: Reformers and the Remaking of the US and Mexican Countryside, Princeton 2017, pp. 159–190.

43 Comisión del Papaloapan, Memoria de la Comisión del río Papaloapan, 2 vols., Mexico City 1990; F. Schulze, Wissen im Fluss: der lateinamerikanische Staudammbau im 20. Jahrhundert als globale Wissensgeschichte, Paderborn (forthcoming), chapter 2.1.2.

44 W. Sturdevant, Office Memorandum: Visit of President Aleman of Mexico, in: 1933–57 Administrative Files, Records of the General Manager's Office, RG 142, box 4, National Archives at Atlanta.

time, the Papaloapan basin in the lowlands of Veracruz and the highlands of Oaxaca suffered heavy flooding. Under its director Adolfo Orive Alba, who was an engineer and minister for hydraulic resources, the CP set out to prevent further floods by studying, regulating, and agriculturally modernizing the river system, to free the region from malaria, and to improve infrastructure. The commission's pivotal project was the Presidente Alemán Dam, built between 1949 and 1960 on the Tonto River.[45] It was the first of two dams implemented by the CP.

The CP also improved health care and education and introduced the idea of "integrating" the indigenous groups of the Mazatecos and Chinantecos into the nation; these groups spoke little Spanish. Due to the indigenous character of the highland region of the river basin, the political centre in Mexico City discursively constructed the basin as "a backward region" and the indigenous as 'uncivilized'.[46] The social engineering of the indigenous and mestizo population was therefore an important concern of the Comisión.[47] Orive Alba explained:

> *It is a social work directed to developing the human being, to developing the most valuable resource we have, our people, curing them, first of all, of their illnesses, giving them the economic means to progress and giving them the culture to which they are entitled so that then the inhabitants of the basin can be the exploiters of their great natural resources and can be not only economically valuable for the region, but also be elements of value for the economic development of the whole country.*[48]

Like in Peru, Mexico wanted to valorize a peripheral region for the benefit of the country and used TVA expertise to this end. Mexico had already been sending engineers to the US-American agency and purchasing publications and technical handbooks from the TVA since 1938. Many Mexican technicians who acquired "experience and knowledge" at the TVA later worked for public agencies such as the CP.[49] The commission used TVA's river basin paradigm and tried to implement a regional development plan on the basis of water regulation. Alemán and Orive Alba called for "the integrated and harmonic development of natural resources of the Papaloapan basin."[50] Many early documents of the CP that applauded the TVA had the purpose of legitimizing its own policy.[51] However, the Mexican technicians did not intend on copying the TVA exactly. The po-

45 Schulze, Wissen, chapter 2.2.

46 Comisión del Papaloapan, Memoria, vol. 1, p. I. See also D. L. Schwartz, Displacement, Development, and the Creation of a Modern Indígena in the Papaloapan, 1940s–1970s, in: P. López Caballero and A. Acevedo-Rodrigo (eds.), Beyond Alterity: Destabilizing the Indigenous Other in Mexico, Tucson 2018, pp. 222–243.

47 Th. Etzemüller (ed.), Die Ordnung der Moderne: Social Engineering im 20. Jahrhundert, Bielefeld 2009.

48 A. Orive Alba, [Speech at the Congress of the Asociación de Banqueros de México], Veracruz, 29 April 1949, p. 9, in: Fondo Consultivo Técnico, 1029/9931, Archivo Histórico del Agua, Mexico.

49 F. Castillo Nájera to Lilienthal, Washington, D.C., 29 January 1943, in: 1933–57 Administrative Files, Records of the General Manager's Office, RG 142, box 347, National Archives at Atlanta.

50 A. Orive Alba, El Tennessee y el Presidente Alemán frente al Papaloapan: conferencia sustentada por el Sr. Ing. Adolfo Orive Alba, Secretario de Recursos Hidráulicos, ante la Asociación de Ingenieros y Arquitectos el día 18 de junio de 1947, p. 13, in: Archivo Miguel Alemán, caja 0018, exp. 609/38, Archivo General de la Nación, México.

51 Ibid., El Tennessee, pp. 5–12; H. Rangel Couto, El sistema del Valle de Tennessee, Mexico City 1946, pp. 9–36, in:

litical officials rather indicated that the Papaloapan basin and its development were not comparable to that of the Tennessee and that domestic technicians carried out a truly national project.[52] The CP was designed to show the capacity of the domestic engineers who asked only a handful of US-American consultants for help.[53]

The commitment of the political and technical elites in Mexico City contrasted with the resistance by the local population and indigenous groups.[54] The future reservoir of the Presidente Alemán Dam flooded several villages and required the resettlement of nearly 22,000 Mazatecos and Chinantecos. In order to accommodate them, the government expropriated farmers in the lowlands and founded new agrarian colonies there. The CP planners designed the resettlement program idealistically on the drawing board, but quickly learned that they had underestimated the task.

The CP was confronted with four sources of resistance. First, indigenous groups affected by resettlement measures reacted uncooperatively when contacted by medics and resettlement agents, not least because relocation was poorly organized. The CP failed to register all areas and persons affected by the flooding.[55] Protests continued when indigenous communities discovered that the announced compensation was not or not fully paid. One of the new villages lamented "that none of the promises made to us have been fulfilled, and to consummate the demagogic action they have unloaded on us, the commission has to continue to exploit us."[56] Additionally, the conditions in the new villages were precarious: soils were unsuitable for agriculture, equipment and seeds were missing, the prefabricated houses did not correspond to the living habits of the indigenous people, and often the CP did not offer support for the acclimation to the new environment.[57] International NGOs went so far as to denounce the relocation efforts and the social engineering as a "program of ethnocide".[58]

The landowners who had to give their land away to the resettled communities or whose properties were illegally occupied posed a second problem. Again, the CP did not pay all promised compensations or expropriated land, going against court orders.[59] Even newly

Archivo Miguel Alemán, caja 0019, exp. 704/10, Archivo General de la Nación, México. See also Barkin and King, Desarrollo, p. 98; Cole, Neuse and Sanders, TVA, pp. 167, 170.

52 Orive Alba, El Tennessee, p. 12.

53 Schulze, Wissen, chapter 2.2.1.

54 Ibid., chapter 2.2.3.

55 A. Villa Rojas, El Papaloapan: Obra del Presidente Miguel Alemán. 1947–1952, Mexico City 1952, p. 46; R. Pozas Arciniega, La desocupación del "vaso" de la presa Presidente Alemán, Oaxaca, Nuevo Paso Nacional, 29 November 1954, in: Fondo Documental Comisión del Papaloapan, caja 370/6028/4, Archivo Histórico del Agua, Mexico.

56 Pueblo de Reacomodo Las Margaritas to Ruiz Cortines, s.l., 13 November 1954, in: Archivo Adolfo Ruiz Cortines, caja 0014, exp. 508.1/179, Archivo General de la Nación, Mexico. See also Comisario Ejidal de Paso Nazareno to Ruiz Cortines, Chichicazapa, 9 July 1956, in: Archivo Adolfo Ruiz Cortines, caja 0014, exp. 563.3/49, Archivo General de la Nación, Mexico.

57 L. Ballesteros, M. Edel and M. Nelson, La colonización en la cuenca del Papaloapan: una evaluación socioeconómica, Mexico City 1970, pp. 145–146.

58 A. Barabas and M. Bartolomé, Hydraulic Development and Ethnocide: The Mazatec and Chinantec People of Oaxaca, Mexico, Copenhagen 1973, p. 3.

59 J. Olaria Ll. to Ruiz Cortines, Mexico City, 15 October 1954, in: Archivo Adolfo Ruiz Cortines, caja 0014, exp. 563.3/49, Archivo General de la Nación, Mexico.

founded agrarian cooperatives lamented "the abuses and outrages of the said invading farmers" who occupied their land unlawfully.[60] Third, trade unions like the Sindicato de Trabajadores Terraceros y Conexos organized resistance and vehemently represented the interests of the workers at the dam construction site, including pay rises and the improvement of working conditions.[61] Fourth, indigenous people and farmers founded political interest groups which mobilized against the CP.[62] Miguel Henríquez Guzmán, an opposition candidate for the presidential elections in 1951, supported the protest and incited violent riots at the construction site.[63] The political mobilization in Oaxaca resulted in the resignation of the governor the following year. In 1954, unrest erupted again at the dam so that the military had to intervene.[64]

In 1952, as a consequence of the upheaval, the government transferred the resettlement programme and the support of indigenous people to the Instituto Nacional Indigenista (INI), the national agency for indigenous affairs.[65] The INI completed the relocation but failed to satisfactorily solve the problems in the new villages, the more so as it maintained a paternalistic approach towards the indigenous people.[66]

The Mexican case illustrates that plans originating from the national centre to develop a peripheral river basin could evoke resistance from the affected region that articulate grassroots-interests different from those of the national elites. The democratic promise of the TVA can ultimately be evaluated as simple lip service. Furthermore, the elites also saw that the TVA paradigm failed to legitimize their policy when interests of the population were neglected. The peripheral spaces they wished to exploit were not uninhabited, and what the elites claimed were national aspirations were not necessarily shared by everyone. On the contrary, indigenous people had their own agenda and did not fully identify with the state.

4. Comissão do Vale do São Francisco, Brazil (1948)

Brazil started a similar process of social reform and industrialization to Peru and Mexico, when Getúlio Vargas came to power in 1930. He responded to social dynamics shaped

60 Colonia Agrícola Ing. Raúl Sandoval to Ruiz Cortines, Soyaltepec, 15 May 1958, in: Archivo Adolfo Ruiz Cortines, caja 0014, exp. 508.1/179, Archivo General de la Nación, Mexico.

61 Resumen de la sesión inaugural de la Covención del Sindicato Nacional de Trabajadores de Recursos Hidráulicos, 10 February 1947, in: Archivo Miguel Alemán, caja 0015, exp. 433/44 and Sección Sindical No. 20, Sindicato de Trabajadores Terraceros y Conexos de la República Mexicana to Alemán, Tuxtepec, 26 July 1948, in: Archivo Miguel Alemán, caja 0017, exp. 601.1/232, Archivo General de la Nación, Mexico.

62 A. Caso to Ruiz Cortines, Mexico City, 13 December 1954, in: Archivo Adolfo Ruiz Cortines, caja 0014, exp. 563.3/49, Archivo General de la Nación, Mexico.

63 B. Smith, Pistoleros and Popular Movements: The Politics of State Formation in Postrevolutionary Oaxaca, Lincoln 2009, pp. 362–401.

64 Mexican Troops Guard Dam Area, in: New York Times, 2 May 1954, p. 10.

65 Comisión del Papaloapan, Presa Presidente Alemán: memoria, Mexico City 1963, pp. 437–441.

66 D. Schwartz, Displacement, Development, and the Creation of a Modern Indígena in the Papaloapan, 1940s–1970s, in: P. López Caballero and A. Acevedo-Rodrigo (eds.), Beyond Alterity: Destabilizing the Indigenous Other in Mexico, Tucson 2018, pp. 222–243.

by immigration and challenged the political system of the old landowner elites.[67] After the Vargas administration had established good relations with Germany, it changed sides as soon as the US entered the war, intensified trade with the new northern ally, and received US loans to build up heavy industry.[68] At the same time, Brazilian politicians began to reflect on the unequal development of the different regions of their country and to envisage the exploitation of sparsely-populated areas. Apart from the Amazon, the government identified the Northeast as a problem region since its coastal region was still characterized by the colonial sugar economy, while the semiarid hinterland, the *sertão*, was suffering from severe droughts. In 1946, the new constitution earmarked fixed percentages of the federal budget for the development of such underdeveloped regions.[69]

One of these regions was the basin of the São Francisco River, the longest of the rivers that only flow through Brazilian territory, and the lifeline of the northeast with a river basin which travellers and engineers had encountered as early as in the nineteenth century because it connects the rich southeastern states of Minas Gerais and São Paulo with the northeast and has a significant capacity for providing hydropower. Several contemporary monographs described the potential of the river and its basin.[70]

Due to Brazil's close ties to the United States, Brazilian politicians were drawn to the TVA. In 1944, agriculture minister Apolônio Sales visited the agency in the US-American south, and in May 1949, President Dutra was an honorary guest of the TVA.[71] US experts, in turn, picked up on the idea of developing the São Francisco River basin. In 1944, a US expert mission led by Morris Cooke travelled to Brazil, recommended the application of TVA ideas to the São Francisco River basin, and favoured the construction of a hydroelectric plant at Paulo Afonso Falls.[72] When President Vargas founded the state-owned Companhia Hidro Elétrica do São Francisco (Chesf) in 1945 in order to build dams and hydroelectric plants on the river, TVA engineer Oren Reed went to Brazil the following year as a consultant.[73] The close technical and economic cooperation culminated in the Comissão Mista Brasil-Estados Unidos, a bilateral committee of experts which prepared several development projects in the early 1950s. Influential Brazilian committee members were economist Roberto Campos and engineer Lucas Lopes.[74]

67 S. Rinke and F. Schulze, Kleine Geschichte Brasiliens, Munich 2013, pp. 114–167.

68 F. McCann Jr., The Brazilian-American Alliance, 1937–1945, Princeton 1973.

69 S. Robock, Desenvolvimento econômico regional: o Nordeste do Brasil, Rio de Janeiro 1964, p. 89.

70 See, for example, A. J. de Souza Carneiro, A bacia do São Francisco, Salvador 1913; G. Rocha, O rio São Francisco: fator precípuo da existência do Brasil, São Paulo 1946. See also L. M. Pereira, Geraldo Rocha e os projetos de desenvolvimento do vale do São Francisco, in: D. Andrade de Paula and M. L. Corrêa (eds.), Intelectuais e desenvolvimento: perspectivas da pesquisa em História, Rio de Janeiro 2015, pp. 123–148.

71 M. Henle, Memorandum, 12 June 1944 and H. Wasson to G. Gant, Chattanooga, 4 May 1949, in: 1933–57 General Correspondence, Admin Files, Records of the Board of Directors, Office of the General Manager, RG 142, box 344, National Archives at Atlanta. See also Robock, Desenvolvimento, pp. 95–140.

72 M. L. Cooke, Brazil on the March: A Study in International Cooperation, New York 1944, pp. 195–206.

73 Dept. of State to Lilienthal, Washington, D.C., 24 July 1946, in: 1933–57 Administrative Files, Records of the General Manager's Office, RG 142, box 175, National Archives at Atlanta.

74 M. A. Falcão Lopes, O fracasso da Comissão Mista Brasil-Estados Unidos (CMBEU) e os rumos da política econômica no segundo governo Vargas (1951–1954), M.A. PUC São Paulo 2009; Robock, Desenvolvimento, pp. 138–140.

Finally, Brazil founded a TVA-like agency in 1948. The Comissão do Vale do São Francisco (CVSF) combined TVA ideals with older Brazilian perceptions of the São Francisco River basin. President Dutra explained CVSF's master plan before the congress in 1950, stating that the central goal of the agency was "the domination of water" to enable flood control, drought prevention, irrigation, hydropower, and shipping.[75] He hoped for the "recuperation of the São Francisco" and, by connecting the southeast to the northeast, "national unity, be it spatially and socially".[76] In his eyes, the CVSF was "the first attempt of regional planning in our country".[77] Again, national elites placed their hopes for national development in a peripheral river basin. The Comissão mirrored this approach by highlighting the significance of the project for the nation. It advocated for the economic and social development of the region and conceived it as "a territory of truly retarded development where it is indispensable first of all to establish the essential conditions for the productive life of its inhabitants".[78] Since the large basin of 600,000 km² spans across several states, the CVSF considered the coordination and collection of knowledge about the region to be of utmost importance.[79] The agency built the Três Marias dam, expanded infrastructure for transport and communication, and combated malaria.[80]

The CVSF and its technicians referred to Lilienthal and "the example of other hydrographic basins of the world", praised the TVA-like development of river basins, and were well aware of the Mexican and Peruvian efforts in the field.[81] At the same time, like their Mexican colleagues had done before, Brazilian engineers stressed the relevance of domestic experts and hoped for "political autonomy" in developing the São Francisco River basin, because "it will transform Brazil into a great power".[82] Like its counterpart in Mexico, however, the CVSF made it clear that they were not striving to become a second TVA.[83]

The success of the CVSF was hampered by disputes among the elites about the best development approach. These discussions resulted in the establishment of several competing development agencies which were responsible for specific, yet overlapping regions and which relied on the support of different actors. In the late 1950s, however, a new

75 E. Dutra, Mensagem No. 548, in: CVSF, Plano geral para o aproveitamento econômico do vale do São Francisco, Rio de Janeiro 1950, pp. 1–6, at 4. See also D. Andrade de Paula, A Comissão do Vale do São Francisco: planejamento e política pública nas décadas de 1940–1950, Paper for the 6th Simpósio Nacional Estado e Poder: Cultura, Universidade Federal de Sergipe 2010; J. G. da Costa, Planejamento governamental: a experiência brasileira, Rio de Janeiro 1971, pp. 237–255; Robock, Desenvolvimento, pp. 93–100.

76 Dutra, Mensagem 548, p. 5.

77 E. Dutra, Mensagem de 1948, in: CVSF, Plano geral para o aproveitamento econômico do vale do São Francisco, Rio de Janeiro 1950, pp. 9–11, at 9.

78 CVSF, Plano geral para o aproveitamento econômico do vale do São Francisco, Rio de Janeiro 1950, p. 154.

79 Ibid., pp. 34–38.

80 E. Dutra, Mensagem de 1949, in: CVSF, Plano geral para o aproveitamento econômico do vale do São Francisco, Rio de Janeiro 1950, pp. 12–20.

81 CVSF, Plano, p. 39. See also pp. 34–35; L. Lopes, O vale do São Francisco, Rio de Janeiro 1955, pp. 21, 100–101.

82 Rocha, São Francisco, p. 11. See also P. Peltier de Queiroz, Exposição de motivos, in: CVSF, Plano geral para o aproveitamento econômico do vale do São Francisco, Rio de Janeiro 1950, pp. 26–29, at 26.

83 Lopes, São Francisco, p. 114.

paradigm for regional development gained momentum and replaced the idea of developing river basins with a different, macroeconomic vision of regional development.

When the CVSF was founded in 1948, two other public institutions were already working on the São Francisco River basin. First, the Departamento Nacional de Obras Contra as Secas (DNOCS), a national agency founded in 1909 for drought prevention, tried to expand infrastructure to combat drought in the dry northeast.[84] Its area of activity was neither the whole northeast nor the São Francisco River basin, but the "polygon of drought", as it was defined legally in 1936, which comprised the hinterlands of the northeast and parts of the river basin.[85] The DNOCS built small dams, water storage pools, wells, and roads, but suffered from scarcity of capital and did not aim to alter the region economically or socially.[86] However, drought remained a problem. Discursively, DNOCS publications mirrored those by the CVSF: Both agencies were eager to contribute to the "magnification of Brazil".[87] Contrary to their statements, cooperation between the two was minimal.[88]

Second, the above-mentioned Chesf was responsible for the construction of dams in the northeast and, thus, on the lower course of the São Francisco. It was not only because Apolônio Sales was its first director that the company embraced the tradition of the TVA:[89] From 1948–1955, the Chesf built the first hydroelectric plant on the São Francisco River at Paulo Afonso Falls, which was also Brazil's first state-owned facility of its kind.[90] Contrary to the DNOCS, the energy supplier claimed that the energy it produced would lead to the economic integration of the region into the nation and to "a radical transformation of the northeast", which the company perceived as underdeveloped.[91] Chesf's goals mirrored those of the CVSF, while the company almost despised the DNOCS due to its unsuccessful fight against drought.[92] Yet, with the construction of Paulo Afonso, the Chesf outshined even the CVSF, whose first dam Três Marias was built not in the northeast, but in Minas Gerais.

The CVSF had a truly hard time competing with the Chesf, and during the presidency of Juscelino Kubitschek (1956–1960), the commission finally lost all significance. Initially, Kubitschek had supported the CVSF and had prioritized Três Marias. He had cooperated with Brazilian economists Roberto Campos and Lucas Lopes who represented the idea of sectorial development (for instance water regulation) and foreign investment and

84 Robock, Desenvolvimento, pp. 83–93.
85 V. Berrêdo, Obras contra as sêcas, Rio de Janeiro 1950, pp. 1–2.
86 L. A. da Silva Vieira, Obras no Nordeste (1940), in: DNOCS, DNCOS: pensamento e diretrizes, Fortaleza 1984, pp. 31–40, at 40; Interview Leonides Alves da Silva Filho, in: C. Morais de Sousa, I. Theis, and J. Barbosa (eds.), Celso Furtado: a esperança militante (Depoimentos), vol. 2, Campina Grande 2020, pp. 201–223, at 206.
87 Berrêdo, Obras, p. 46.
88 Peltier de Queiroz, Exposição, p. 27; Robock, Desenvolvimento, p. 96.
89 Chesf, 50 anos Chesf: Companhia Hidro Elétrica do São Francisco: 1948–1998, Rio de Janeiro 1998, pp. 6–9.
90 Chesf, Inauguração do Usina de Paulo Afonso, s.l. 1955.
91 Ibid., [pp. 4–5]. See also C. Berenhauser Júnior, Energia elétrica: influência de Paulo Afonso no desenvolvimento econômico do Nordeste, Rio de Janeiro 1953, p. 12.
92 Ibid., p. 6.

greatly influenced the work of the CVSF and the Comissão Mista as well as Kubitschek's national development programme, the Programa de Metas.[93]

However, economist Celso Furtado and his colleagues soon became increasingly influential. They endorsed ECLAC concepts such as integrated planning, public investments, and import-substituting industrialization.[94] A development approach that was limited to water regulation and the idea of "the river basin as practically isolated socio-economic universe", as ECLAC economists contemptuously wrote, no longer had a place in the new paradigm.[95] While the DNOCS and the CVSF were founded at the wish of northeastern elites to leave the privileges of the landowners untouched, the ECLAC's approach aimed to fundamentally overcome underdevelopment by changing all sectors of the economy and the society.[96] Proponents of this idea were the elites of the already industrialized southeast who challenged the interests of the elites in the northeast who in turn had often determined CVSF projects.[97]

When Kubitschek broke with Lopes and Campos (and at the same time with the International Monetary Fund) in June 1959, US ideas such as the TVA model lost their appeal.[98] Instead, Furtado's influence increased. In a report from 1959, his working group on the development of the northeast demanded the overcoming of "regional inequalities" by developing agriculture and industry, wherefore it perceived drought prevention to be only one task among many others that needed to be fulfilled in this respect.[99] In order to prevent the waste of resources and overcome the struggle between CVSF, Chesf, and DNOCS, Furtado's group wanted to establish a central body that coordinated all tasks. In their eyes, the CVSF was not suitable for such a task.[100]

During a speech in June 1959, Furtado stressed that the activities of the DNOCS and the CVSF overlapped and were too restricted: "[They do not have] a global vision of the problem and are therefore unable to solve it."[101] He argued for centralized planning to tackle the underdevelopment of the northeast, which he interpreted as a historical problem rooted in the sugar cane plantation system. Social inequalities, he warned,

93 R. Bielschowsky, Pensamento econômico brasileiro: o ciclo ideológico do desenvolvimentismo, Rio de Janeiro 2004 [1988], pp. 242–243; R. Ioris, Transforming Brazil: A History of National Development in the Postwar Era, London 2014, pp. 83–88; Presidência da República, Programa de Metas do Presidente Juscelino Kubitschek, Rio de Janeiro 1958.

94 Bielschowsky, Pensamento, pp. 242–243.

95 Viladrich, El desarrollo, p. 17.

96 D. Andrade de Paula, A Comissão do Vale do São Francisco como experimento de desenvolvimento regional no Brasil, 1946–1950, Paper for the 26th Simpósio Nacional de História, São Paulo 2011, pp. 2–6. See also D. Andrade de Paula, O debate parlamentar na criação da Comissão do Plano de Aproveitamento da Bacia do São Francisco (1946–1948): significados da atuação de Manoel Novais, Paper for the 28th Simpósio Nacional de História, Florianópolis 2015; Robock, Desenvolvimento, p. 94.

97 Costa, Planejamento, p. 249; Robock, Desenvolvimento, p. 93.

98 Ioris, Transforming, p. 91; J. Kubitschek, 50 anos em 5: meu caminho para Brasília, vol. 3, Rio de Janeiro 1978, pp. 38, 73–74, 234.

99 Grupo de Trabalho para o Desenvolvimento do Nordeste, Uma política de desenvolvimento econômico para o Nordeste, Rio de Janeiro 1959, p. 8. See also p. 11–12.

100 Grupo de Trabalho, Uma política, pp. 81–94.

101 C. Furtado, A Operação Nordeste, Rio de Janeiro 1959, p. 19.

could threaten "national unity".[102] In December 1959, Kubitschek founded the Superintendência do Desenvolvimento do Nordeste (SUDENE), a new federal agency under the leadership of Furtado for the implementation of an integral development policy for the northeast.[103]

SUDENE's first development plan from 1960 proposed extensive federal investments, infrastructure projects, and the promotion of industries and agriculture. The agency was eager to produce knowledge about the region, including water resources, which was a task that the CVSF and the DNOCS had failed to complete. The SUDENE also abandoned former water management strategies, such as "multi-purpose projects" in line with TVA concepts and the prioritization of "river basin units".[104] As the agency explained in a publication from 1961, the previous approach had increased agrarian use and worsened the drought problem. Instead, the SUDENE restricted extensive agriculture to coastal areas and introduced semiarid plants to the hinterlands. In sum, the new planners wished to "release [the development policy] from strict horizons in which it had confined itself and transform it into a broad action aimed at the simultaneous mobilization of the main factors that promote development".[105] As a consequence, the DNOCS was stripped of its power and the CVSF became subordinated to the SUDENE.[106]

In Brazil, TVA concepts were only an intermediate stage and the CVSF a "laboratory" in a sequence of different ideas about regional development.[107] National economists and engineers evaluated TVA and CVSF bluntly, named their shortcomings, and recommended alternative policies. US ideas were anything but hegemonic, particularly as their realization by the CVSF was relatively unsuccessful. The fact that the US still provided aid to the CVSF in the early 1960s under the Kennedy administration shows the plurality and the parallelism of different development approaches among which the TVA no longer played a dominant role. While some countries like Argentina ignored these trends and founded agencies inspired by the TVA as late as the 1960s, the positive image of the TVA was tarnished even in domestic debates in the US. Eventually, the TVA shared the fate of other highly modernist concepts and had lost its global appeal by the 1970s.[108]

5. Conclusion

The diverse adaptations of ideas of the TVA in Peru, Mexico, and Brazil show that supposedly universalist development approaches underwent significant changes when im-

102 Ibid., p. 16. See also pp. 20–22.
103 Kubitschek, 50 anos, p. 309; Robock, Desenvolvimento, pp. 100–133.
104 SUDENE, Primeiro plano diretor de desenvolvimento do Nordeste, Recife 1960, p. 107. See also pp. 108, 116.
105 SUDENE, Bases da política de desenvolvimento do Nordeste do Brasil e esquema do plano quinquenal da SUDENE, Recife 1961, p. 4. See also p. 6.
106 Costa, Planejamento, p. 256; Interview José Otamar de Carvalho, in: Morais de Sousa, Theis, and Barbosa (eds.), Celso Furtado, p. 116.
107 Paula, A Comissão, p. 12.
108 Viladrich, El desarrollo, pp. 4, 20–21.

plemented in different contexts and moments in time.[109] The Corporación Peruana del Santa was one of the earliest attempts to adapt the TVA model in Latin America. While the Peruvian government only implemented very few aspects of the TVA, mainly water power and the extraction of natural resources, and neither constructed the Santa basin as backward nor aimed at developing the whole region, the dependency on the United States was particularly great since engineers and corporations from the North were responsible for most of the tasks. The economic activity managed by the national centre caused conflicts not primarily with the politically neglected region, but between different political groups in the centre. Main points of conflict were the dominance of actors from the United States, corruption, and the lack of success of the project.

The Mexican Comisión del Papaloapan, which was founded just two years after its Peruvian counterpart, had a much more integral approach that resembled the TVA concept more. The commission wanted to develop the entire region, use water power, and apply social engineering to the mostly indigenous population. While Mexico avoided the Peruvian mistakes by not contracting US-Americans and expanding domestic engineering instead, the Papaloapan project looked down on the region and the local populations and created conflicts with residents and indigenous groups who did not agree to adapt to ideas and the lifestyle as dictated from the national centre.

The Comissão do Vale do São Francisco in Brazil resembled the Mexican concept, showed the same pejorative discourses about the region, and shared project failure, although cooperation with the US was more comprehensive than in Mexico. Here, the conflict took place between national and regional elites and involved different conceptions of the northeast and regional planning. As soon as TVA ideas proved unsuccessful, Brazilian economists were quick to replace them with their own concepts.

In sum, domestic politics were crucial for the transfer, appropriation, acceptance, or dismissal of global concepts, and looking closely at the situation in the recipient countries of development aid helps to challenge the notion of unidirectional transfer and the importance of foreign experts and expertise. In the three case studies, it was not the Latin American countries that became political footballs or experimentation fields of Western development thought, but the TVA's ideas that were (mis)used for political interests, legitimizing domestic projects, and for discrediting political opponents. The correct implementation of TVA ideas was seldom at stake because they did not correspond to local needs. Instead, the TVA was a welcome buzzword to stabilize the ambitions of the national centres to symbolically dominate and economically exploit the national peripheries.[110] Elites used the label "TVA" to expand their access to and power over peripheral regions. As a global idea, the US-American agency served Latin American countries to strengthen their national self-assertation and spatial reconfiguration.

At the same time, the global scope of the reference "TVA" weakened these aspirations considerably since the political instrumentalization of river basins and the cooperation

109 Orihuela, One Blueprint, pp. 107, 128; Viladrich, El desarrollo, p. 1.

110 CEPAL and SEGEPLAN, Regional Development, pp. 7–9.

with the United States triggered opposition and conflicts. Engineers, economists, and politicians strived for the emancipation from US influence and used TVA expertise to overcome dependencies, or they fought against TVA experts who they regarded as annoying competitors. Therefore, the long-held view that the United States dominated hydro-engineering in the post-war period must be replaced with a pluralization of historical actors, as Vincent Lagendijk has argued for the Mekong region.[111] Furthermore, river basin projects often had unwanted effects which jeopardized their goals and/or threatened indigenous people and the environment.[112] However, even victims of TVA-like projects were able to articulate themselves politically so that river basin projects did not result in social or economic homogenization, and instead led to more pronounced social fragmentation and regional inequality. The domination and development of national peripheries was rarely a successful endeavour.

111 Lagendijk, Streams.
112 Molle and Wester, River Basin, pp. 6–10.