

**Charles University**

**Faculty of Arts**

Institute of World History

# **Dissertation Thesis**

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## **Cold War Technopolitics: Czechoslovak Hydroexpertise in Africa**

Studenoválečná technopolitika:  
Československá hydroexpertiza v Africe

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I hereby declare that I have written this dissertation independently, using only the mentioned and duly cited sources and literature, and that the work has not been used in another university study programme or to obtain the same or another academic title.

In Prague on 31.10.2023

Jakub Mazanec, v. r.

## Abstract

Ghana, Guinea, Egypt, Algeria, Zambia, Ethiopia, and many other African countries; that is exactly where you can find great water works, machines, hydrological maps, plans, or the imaginary "footprints" of hydro experts from Czechoslovakia dwelling here especially before 1989. How is such a thing possible in a landlocked, central European country without a colonial history?

The decolonisation of Africa, particularly in the 1950s and 1960s, gave rise to a number of new states. These countries, until recently completely dependent politically and economically on their colonial capitals, were now looking for the most appropriate political, economic, and social model for their future direction. As part of full independence, they were trying to modernise their economies, which, in addition to supplementing their lack of infrastructure, meant making better use of their natural resources. The notion of a path to modernization through large-scale industrialization and the necessary electrification that went hand in hand with it made African leaders seek to make better use of the water resources their countries possessed. Given the lack of their own funds, experts and technology, the new governments were mostly dependent on cooperation with states in the Global North for water resources development. Water resources development, or the export of the technology and expertise required for it, thus became a political tool that Global North states began to use extensively to achieve implicit or explicit policy goals in the particular region. This phenomenon refers to the so-called *technopolitics/hydrotechnopolitics/hydropolitics*, which has been defined in a similar vein by e.g., G. Hecht, Ch. Sneddon or T. Mitchell. Having completed its domestic hydro-construction in the early 1960s, Czechoslovakia began to actively market its hydro-expertise towards the countries of the Global South to further its foreign policy or economic goals or to support the positions of its socialist allies.

This dissertation thesis looks at the hydropolitics and developmentalist efforts of Global North states in the Global South, particularly in the field of water resources development, through the perspective of socialist Czechoslovakia. It sees water development itself, especially the building of dams and large water works, as a global phenomenon (in line with the works by V. Lagendijk and F. Schultze). It views the Cold War period primarily as an accelerator of water resources development.

The main argument that the thesis presents is that socialist Czechoslovakia, especially since the 1960s, has participated extensively in the development of water resources in African countries as part of its development activities. Like the United States or the Soviet Union, it had its own hydropolitics, which was used to pursue or support its foreign policy objectives or to strengthen its own, or its partners', positions. Czechoslovak hydroexpertise was an active part of global hydroexpertise. Furthermore, the thesis answers such questions as how the forms, practices, and goals of the Czechoslovak hydroexport model changed from the 1960s to the 1980s and contributes to the discussion on the permeability of Cold War ideological and physical boundaries. Finally, the thesis conveys the perspective of hitherto neglected actors, the bearers of expertise - hydroexperts - on their mission, agency, and role in Czechoslovak hydro-politics vis-à-vis the states of the Global South.

The thesis is structured into one introductory and five thematic chapters. The first thematic chapter is a contribution to the history of the Cold War scientific and technological internationalization. It explains how Czechoslovakia became one of the water leaders of the Eastern Bloc. It charts the formation of Czechoslovakia's industrial and expert capacities in the field of water management and focuses on the hitherto neglected export of Czechoslovak water management expertise and technology from the 1930s to the 1980s, represented mainly by the state company Hydroprojekt. It also explains how, given the domestic needs and the state of construction, these capacities were made available for use abroad. The chapter also analyses the motivations and forms of such applications, which changed significantly from the 1950s to the 1990s. The second, third and fourth chapters are de facto case studies of the specific exports of Czechoslovak hydroexport equipment and technology to Africa. Each of them focuses on one country - Ghana and Egypt in the 1960s and Ethiopia in the 1980s. Chapter 5 looks at the bearers of "socialist" hydro expertise at home and abroad, i.e., the Czechoslovak experts. Using a sample of six selected individuals, it views the experts not only as actors in the process of Cold War internationalisation and the global circulation of knowledge, but it also portrays them as being creatures of flesh and blood.

## Abstrakt

Ghana, Guinea, Egypt, Alžírsko, Zambie, Etiopie a mnoho dalších afrických zemí. Zde všude je možné nalézt vodní díla, stroje, hydrologické mapy či pomyslné „otisky bot“ vodohospodářských expertů z Československa, které se sem dostaly zejména před rokem 1989. Jak je něco takového v případě vnitrozemského, středoevropského státu bez koloniální minulosti možné?

Dekolonizace Afriky zejména v 50. a 60. letech dala vzniknout celé řadě nových států. Tyto země, donedávna politicky i ekonomicky zcela závislé na svých koloniálních metropolích, nyní hledaly nejvhodnější politický, ekonomický a společenský model svého budoucího směřování. V rámci úplného osamostatnění se horečně snažily zmodernizovat svou ekonomiku, což kromě doplnění chybějící infrastruktury znamenalo i lépe využít své často značné přírodní bohatství. Představa cesty k modernizaci skrze rozsáhlou industrializaci a k ní nutnou elektrifikaci vedla africké vůdce ke snahám lépe využít vodní zdroje, které jejich země skýtaly. S ohledem na nedostatek vlastních finančních prostředků, expertů a technologií byly vlády nových států v otázkách rozvoje vodních zdrojů většinou odkázány na spolupráci se státy globálního severu. Rozvoj vodních zdrojů, respektive export k němu nutných technologií a expertízy, se tak stal politickým nástrojem, který státy globálního severu začaly hojně využívat k dosahování implicitních či explicitních politických cílů v regionu. Tento jev odkazuje k tzv. *technopolitice/hydratechnopolitice/hydropolitice*, kterou se v podobném duchu pokusili definovat např. G. Hecht, Ch. Sneddon či T. Mitchell. Československo, poté co na počátku 60. let dokončilo svou domácí vodohospodářskou výstavbu, začalo aktivně nabízet svou hydroexpertízu zemím globálního jihu, za účelem podpory svých zahraničněpolitických či ekonomických cílů nebo podpory pozic svých socialistických spojenců.

Tato disertační práce se na hydropolitiku a developmentalistické snahy států globálního severu v oblasti globálního jihu zejména na poli rozvoje vodních zdrojů dívá perspektivou socialistického Československa. Samotný vodohospodářský rozvoj, hlavně budování přehrad a velkých vodních děl, vnímá coby globální fenomén (podobně jako práce V. Legendijka a F. Schultzeho). Období studené války potom vnímá především coby akcelerační rozvoj vodních zdrojů.

Hlavním argumentem, který práce přináší je, že socialistické Československo se zejména od 60. let v rámci svých rozvojových aktivit v hojné míře účastnilo rozvoje vodního hospodářství afrických států. Podobně jako Spojené státy či Sovětský svaz mělo svou vlastní hydropolitiku, jíž využívalo k naplňování či podpoře cílů své zahraniční politiky nebo posilování pozic svých či svých partnerů. Československá hydroexpertiza byla aktivní součástí hydroexpertízy globální. Dále práce odpovídá na otázky jako jak se měnily formy, praxe a cíle modelu vývoz československé vodohospodářské expertízy od 60. do 80. let a přispívá do diskuze o propustnosti studenoválečných ideologických a fyzických hranic. V neposlední řadě práce zprostředkovává pohled dosud opomíjených aktérů, nositelů expertízy – hydroexpertů, na jejich poslání, působení a roli v československé hydropolitice vůči státům globálního jihu.

Práce je strukturována do jedné úvodní a pěti tematických kapitol. První tematická kapitola je příspěvkem k dějinám vědeckotechnické internacionalizace za studené války. Vysvětluje, jak se Československo stalo jedním z vodních lídrů východního bloku. Mapuje formování československých průmyslových a odborných kapacit v oblasti vodního hospodářství a zaměřuje se na dosud opomíjený export československých vodohospodářských znalostí a technologií od 30. do 80. let 20. století, reprezentovaný především státním podnikem Hydroprojekt. Vysvětluje také, jakým způsobem byly vzhledem k domácím potřebám a stavu výstavby tyto kapacity poskytovány k využití v zahraničí. Kapitola rovněž analyzuje motivace a formy tohoto využití, které se od 50. do 90. let 20. století výrazně měnily. Druhá, třetí a čtvrtá kapitola jsou de facto případovými studii konkrétních vývozdů československých hydroexportních zařízení a technologií do Afriky. Každá z nich se zaměřuje na jednu zemi – Ghanu a Egypt v 60. letech a Etiopii v 80. letech. Pátá kapitola se zaměřuje na nositele "socialistické" hydroexportní expertízy doma i v zahraničí, tedy na československé odborníky. Prostřednictvím vzorku šesti vybraných osobností nahlíží na experty jako na aktéry procesu internacionalizace studené války, globální cirkulace znalostí, ale také jako na bytosti z masa a kostí.

**Keywords**

Cold War; Africa; Czechoslovakia; Global Hydroexpertise; Czechoslovak Hydroprojekt;  
Water management; Dams; Malka Wakana; High Aswan Dam; Ghana.

**Klíčová slova**

Studená válka; Afrika; Československo; globální hydroexpertíza; Hydroprojekt;  
vodohospodářství; přehrady; Malka Wakana, Vysoká Asuánská přehrada; Ghana.



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## List of Abbreviations

- ABS – Security Forces Archive of the Czech Republic
- AMZV – Archive of the Ministry of Foreign Affairs of the Czech Republic
- CCP – Convention People's Party
- Comecon – The Council for Mutual Economic Assistance
- ČSAV – Československá Akademie věd (Czechoslovak Academy of Sciences)
- ČTK – Československá tisková kancelář (Czechoslovak Press Agency)
- ČVUT – Czech Technical University Prague
- Derg – Provisional Military Administrative Council (PMAC)
- EELPA – Ethiopian Electric Light and Power Authority
- FTC – Podnik zahraničního obchodu (Foreign Trade Company)
- GSE – Geological Survey of Ethiopia
- IAWPR – International Association on Water Pollution
- IBRD – International Bank for Reconstruction and Development
- ICID – International Commission on Irrigation and Drainage
- ICOLD – International Commission on Large Dams
- KSČ – Komunistická strana Československa (Czechoslovak Communist Party)
- LEIDEN – African Studies Centre Leiden
- MFA – Ministerstvo zahraničních věcí (Ministry of Foreign Affairs)
- MFT – Ministerstvo zahraničního obchodu (Ministry of Foreign Trade)
- NA – Národní archiv (National Archive of the Czech Republic)
- NTM – Národní technické muzeum (National Technical Museum)
- ORSTOM – Office of Scientific and Technical Research Overseas
- PRAAD – Public Records and Archives Administration Department – Accra, Ghana
- SNB – Sbor národní bezpečnosti (National security corps)
- StB – Státní bezpečnost (Czechoslovak intelligence/counterintelligence/security service)
- TNA – The National Archives London – Kew
- TVA – Tennessee Valley Authority
- UN – The United Nations
- UNDP – United Nations Development Programme
- UNEP – United Nations Environmental Programme

UNESCO – United Nations Educational, Scientific and Cultural Organization

USA – United States of America

USSR – Soviet Union

ÚV KSČ – Ústřední výbor KSČ (General Committee of the Czechoslovak Communist Party)

VALCO – Volta Aluminium Company

VRA – Volta River Authority

VUT – Vysoké učení technické (Technical University Brno)

VÚVH – Výzkumný ústav vodního hospodářství

WB – World Bank

WHO – World Health Organization

## Introduction

*"A few days ago, four men stepped off a plane at Prague's Ruzyně Airport, bronzed despite the autumn and almost winter weather. A glance at their passports would explain the origin of their fried skin: they were four engineers... [...] employees of the Prague company Hydroprojekt, who had just returned from the forests of western Ghana, from the basins of the Pra, Ankobra and Tano rivers. (...) The Ghanaian public particularly appreciated the fact that the experts from the faraway Czechoslovakia had brought their work to a successful conclusion in less than half a year, whereas the English had only been promising to carry out a similar survey for several years [...] Ghana, a former English colony, is now a free and independent state, building its own modern industry. The Socialist Republic of Czechoslovakia, like other socialist states, supports the African peoples in their quest for economic and political independence. The four Prague engineers have made a significant contribution to this effort of the Republic of Ghana."<sup>1</sup>*

*Jan Kaštánek – Our Engineers in Ghanaian Rainforests*

The four tanned men disembarking from the cabin of the Tupolev that had just landed at Prague Airport in December 1961 were greeted by their families and representatives of the press, such as Jan Kaštánek, a Rudé právo journalist, and the administration. After all, these were some of the first Czechoslovak hydroexperts officially sent to Africa to facilitate the development of the newly formed states! They brought with them a hydropower study of the region and the promise of a future contract for the construction of two hydroelectric power plants. The four men, who until then had not even visited the nearby Vienna, could hardly have found themselves in a more exotic setting than that of the tropical forests of southwestern Ghana. But how did the hydro experts from the "faraway Czechoslovakia", a Central European country with no colonial past, no mighty rivers, which was then part of the Eastern Bloc, get there?

The decolonisation of Africa, particularly in the 1950s and 1960s, gave rise to several new states. These countries, until recently totally dependent politically and

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<sup>1</sup> Personal collection of Antonín Petlach, Blansko. KAŠTÁNEK, J.: *Naši inženýři v ghanských pralesích – Významný přínos čs. odborníků – Úspěšný průzkum povodí tří ghanských řek*, in: Rudé právo, December 1962.

economically on their colonial capitals, were now looking for the most appropriate political, economic, and social model for their future direction. As part of full independence, they were feverishly trying to modernise their economies, which, in addition to supplementing their lack of infrastructure, meant making better use of their, often considerable, natural resources, ranging from minerals to water. Rapid industrialization, and the electrification associated with it, were seen by the leaders of the newly formed countries as a necessary precondition for future development. Given the geographic layout of many regions of Africa, with their large rivers offering considerable irrigation and hydropower potential, the development of their water resources was soon viewed as a key priority by the new administrations. The prospect of readily available, sustainable, and cheap energy was appealing.

Water resource development concepts formed part of the modernization models of the Global North and were seen as a prerequisite to the broad social transformation of "developing" areas through the introduction of sanitation (drinking water, sewerage), but also through mechanization and electrification (hydropower). Given the lack of their own funds, experts and technologies, the governments of the new states were mostly dependent on cooperation with the states of the Global North for water resources development.<sup>2</sup> Hydro development, or the export of the necessary technology and expertise, thus became a political tool that Global North states began to use extensively to achieve implicit or explicit (geo)political objectives in the region. This phenomenon refers to so-called *technopolitics*, which others have attempted to define in a similar vein.<sup>3</sup> Given the relatively narrow and specific area of technopolitics that this paper is concerned with, the term *hydrotechnopolitics/hydropolitics* has been chosen.

Participation in the development/modernization of African states through the construction of dams and the development of water resources in Africa has not been the exclusive domain of superpowers or of the former colonial powers. If they had sufficient

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<sup>2</sup> In this thesis, I have prevalingly targeted the geographical axis of "global north" vs. "global south". By Global North, I mean the richer, industrialized countries, both capitalist and communist. Global South comprises the poorer, especially African countries, often with a colonial past. Sometimes the term 'developing countries' or 'third world' is used for linguistic variety, and here, in the context of Africa and the Cold War, it also functions as a synonym.

<sup>3</sup> E.g., HECHT, G.: *Entangled Geographies, Empire and technopolitics in the global Cold War*, Cambridge 2011, p. 43. SNEDDON, CH., FOX, C.: *Cold War, The US Bureau of Reclamation, and the technopolitics of river basin development, 1950-1970*, in *Political Geography*, vol. 30, 2011, p. 452; MITCHELL, T.: *Rule of Experts, Egypt, Techno-Politics, Modernity*, London 2002, pp. 41-42.

expertise, productive capacity, contacts, or capable intermediaries, hydrogeopolitics, as a tool for spreading modernity and as a political instrument, could also be used by smaller states. One of the states that did just so was socialist Czechoslovakia.

Written mainly from a Czechoslovak perspective, this work demonstrates, using the example of three specific projects, that Czechoslovakia was present in Africa from the early 1960s to the late 1980s and actively participated in the modernization of "developing countries" through participation in the development of local water resources. It made targeted use of hydrogeopolitics to pursue its objectives in Africa. Another point being made here is that the Czechoslovak hydroexpertise, later exploited actively all over the world from the Korean peninsula to Latin America, became strongly intertwined with the global hydroexpertise precisely in this African space, namely through its participation in dozens of contracts. By "hydroexpertise", I mean expertise - a body of knowledge related to water management. This includes, for example, the disciplines needed to build dams, be it the civil-engineering ones – i.e., those related to the construction of the dams themselves - or the mechanical engineering ones, which take care of their machinery components, i.e., turbines, generators and other equipment. In general, they can also be divided into "design" and "manufacture". However, hydroexpertise also encompasses the more "theoretical" fields, whose outputs do not take the form of the actual resulting fill dams, concrete dams or steel turbines, rather the form of studies, maps, and datasets. These include hydrology, hydrogeology, hydro physics, hydrometeorology, etc. I see the term 'hydrotechnology' as being a complex of technical equipment and technologies used in water management. In this thesis, it is then mainly turbines, generators, and other equipment of hydroelectric power plants (sluices, gates, etc.), or in a broader sense, the related power infrastructure (substations, substations, high voltage lines, etc.).

The aim of the thesis is also to analyse how the forms, actual practices, and objectives of the model of export of Czechoslovak water management expertise and technology - de facto Czechoslovak foreign hydrogeopolitics - have been changing. The thesis draws on the Cold War context, which it sees as an accelerator of the process, and contributes to the ongoing debate on the practices and motivations of the Eastern Bloc's modernization efforts in the space of the Global South.<sup>4</sup> Within this analysis, I descend

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<sup>4</sup> E.g., IANDOLO, A.: *Arrested Development, The Soviet Union in Ghana, Guinea, and Mali, 1955-1968*, Cornell University Press, 2022; SANCHEZ-SIBONY, O.: *Red GlobalizaFon, The PoliFcal Economy of Soviet Cold War*

from the level of the state, represented by state institutions, to the level of the "grassroots" actors – the field experts. Thus, the theme of the relationship between the state and 'its' experts comes to the fore.

### **Development of Water Resources and Cold War Modernity**

The concept of water resources development is based on the perception of the river basin as a whole, being suitable for comprehensive planning and development. The strength of this concept stems from the idea that a river basin is an integrated and natural complex. However, the river basin is also a social construct, as it is used primarily by states, but also by other actors, to achieve certain political or ideological goals.<sup>5</sup> Historically, the manipulation and control of watercourses has always been linked to the exercise of political and economic power.<sup>6</sup> The concept of water resources development has its roots in the mid-18<sup>th</sup> century, yet it did not gain prominence until the following century. The Industrial Revolution turned river basins into key production sites and made water an indispensable raw material for the production process. Water management development thus grew from local to regional or national scale, with a side effect of e.g., shifting the decision-making to administrative centres, which were often far from the riverbanks concerned. The control of river flows, which required advanced technology, became an integral part of the 'civilizing mission' pursued by the states of the Global North.<sup>7</sup>

Critical geography understands the notion of a river as being a set of sociotechnical processes. The insights of this sub-field of geography include the notion of water resource development as a major symbolic, material, and technical aspect of modernisation. They further see water as an interplay of water policy and technical discourses, and, finally,

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from *Stalin to Khrushchev*, Cambridge 2014; GERITS, F.: *The Ideological Scramble for Africa, How the Pursuit of AnFcolonial Modernity Shaped a Postcolonial Order, 1945-1966*, Cornell University Press, Ithaca and London 2023.

<sup>5</sup> MOLLE, F.: *River-basin planning and management, the social life of a concept*, in: *Geoforum*, vol. 40, 2009, p. 492.

<sup>6</sup> WORSTER, D.: *Rivers of empire, Water, aridity, and the growth of the American West*, New York 1985, - adapted from SNEDDON, CH., FOX, C, p. 453.

<sup>7</sup> MOLLE, F.: *Planning and managing water resources at the river-basin level, Emergence and evoluFon of a concept*, in: *International Water Management Institute. (IWMI Comprehensive Assessment Research Report 16)*, p. 4.



they view water in the landscape as a complex of ecological, economic, and technical processes.<sup>8</sup>

Great water projects have always been closely linked to the idea of modernisation. The idea of what is and what is not “modern” was first established during the Age of Enlightenment. The Enlightenment discourse took the Western (or Northern) model as an example and benchmark of societal progress, while, at the same time, it introduced the counterpoints of “barbarians and civilised”, “us and the others” or “nations with and without history”. Reflections on the “non-West” de facto helped define the West itself. As David Slater so aptly observes, the West was in this sense an idea rather than a geographical concept.<sup>9</sup>

Water development itself became an important symbol of Western-inspired modernization during the rise of colonial empires. Hydrological studies and the subsequent project implementations were e.g., closely linked to, and helped legitimise, French colonialism in North Africa during the 19<sup>th</sup> and 20<sup>th</sup> centuries. The French government used the development of waterways as a means of consolidating its position as a progressive colonizer and a way to demonstrate its power, as the “taming” of the hydrologically complicated Maghrib, full of seasonal rivers, irregular rainfall and a dry climate, was also a test of its imperial ambitions.<sup>10</sup> In her study, Sara Pritchard even speaks of a so-called ‘hydro-imperialism’, in which water resources, their development and hydraulic know-how reveal and create an unequal power relationship based on a politically or economically oriented expansionism, in this case by France towards the North African region, but also, in more general terms, by the centre towards the periphery (the development of water resources according to the centre's vision).<sup>11</sup> In my view, ‘hydro-imperialism’ is not a suitable term for the post-colonial context because it does not reflect the ambitions and role of domestic actors. The development of water resources in the monitored period did not necessarily entail an unequal power relationship. Indeed, the geopolitical situation in Third World regions made for the conditions of rivalry and de

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<sup>8</sup> AKHTER, M.: *The Hydropolitical Cold War, the Indus Water Treaty and state formation in Pakistan*, in: *Political Geography*, vol. 46, 2015, p. 66.

<sup>9</sup> SLATER, D.: *The geopolitical imagination and the enframing of development theory*, in: *Transactions of the Institute of British Geographers*, Vol. 18, 1993, p. 421.

<sup>10</sup> PRITCHARD, S.: *From hydroimperialism to hydrocapitalism, “French” hydraulics in France, North Africa and beyond*, in: *Social Studies of Science*, Vol. 45, No. 4, pp. 594-595.

<sup>11</sup> *Ibidem*, p. 592.

facto competition, which may have given domestic states the choice of what know-how to accept, from whom and under what conditions. Moreover, states could take advantage of offers from multiple parties, often at the same time, as was the case e.g., of Ghana during the Kwame Nkrumah era. Pritchard considers the sharing of know-how on the development and use of water resources in the world in the second half of the 20<sup>th</sup> century, when nature, or water respectively, was de facto commodified (and often privatised), to become a specific form of hydro-imperialism. She calls this form 'hydrocapitalism' – to be understood more generally as a term to reflect the capitalist relations of the turn of the 20<sup>th</sup> and 21<sup>st</sup> centuries in the functioning and development of water resources.<sup>12</sup> A specific offshoot of hydroimperialism and hydrocapitalism is then 'hydrosocialism'. A concept developed by the hydrocrats (water technocrats) of the socialist states, based on a Soviet modernity vision viewing water as a prerequisite for building socialism.<sup>13</sup>

The imperialism of the 19<sup>th</sup> and of the first half of the 20<sup>th</sup> century found justification in ideologies that judged the degree of humanity's maturity by looking at the advances in industrial technology, Western science, and medicine. During the Cold War, however, there was a reversal - according to Western ideologues, democracy and technology could work together. According to capitalist modernization theory, any society could, under certain conditions, climb up the ladder of progress, at each rung of which industrialization was combined with democratization. The Soviet vision of modernity, by contrast, offered a path leading to socialism as the ideal ordering of society, through large-scale industrialization. Except for the rejection of free market principles, however, the Soviet model did not differ much from the Western one. Through a set of characteristics of modernity, both capitalism and communism claimed the power to objectify what was or was not modern and to generalize emerging nations as "developing/underdeveloped."<sup>14</sup>

For Leffler and Westad, the Cold War in the Third World was a conflict over the future and direction of the new states, a clash between the two versions of "northern"

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<sup>12</sup> Ibidem, pp. 592, 602.

<sup>13</sup> JANÁČ, J.: *Building Hydrosocialism in Czechoslovakia*, in: *Global Environment*, Vol. 13, No. 3, 2020, p. 615.

<sup>14</sup> HECHT, p. 5.

modernity that socialism and liberal capitalism could offer.<sup>15</sup> In the mid-1950s, after the clash of superpowers had moved to the Third World regions, "bringing development" became a strategy of competition in addition to the instrument of industrialization itself. The US-USSR confrontation used modernization and development to some extent as an instrument to expand political and cultural influence.<sup>16</sup>

The U.S. government viewed the newly emerging African and Asian states as developing, economically and politically immature regions potentially influenced by the Soviet Union to the detriment of American interests. Concerns about the growing radical left and about the strengthening Soviet influence in the Third World led to one of Washington's main motives in Africa, Asia, or Latin America being to contain communism and prevent the new states from allying with the Soviet Union. In addition, influential Western modernization theorists in the 1950s expressed worries that the Soviet Union, with its economic successes at the time, might provide a more suitable model of development for the new states than the United States. This fear of the "Soviet threat" kick-started the contemplations about development as a possible strategy for the U.S. foreign policy toward the Third World, and led to water development becoming, in Chris Sneddon's words, an important "weapon" of Cold War machinations.<sup>17</sup> Ideologies, expert knowledge and technologies in the context of Cold War geopolitics have been the subject of a number of studies.<sup>18</sup>

The idea that the introduction of technology and capitalism promotes the spread of civilization and freedom (in the form of American modernity, of course) became a cornerstone of Washington's foreign policy ideology after World War II. The basic idea was to present the benefits of capitalist economic development with the explicit goal of protecting American commercial interests and potential markets. The transfer of funds in the form of development aid and expert support was intended to help achieve this goal.<sup>19</sup>

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<sup>15</sup> WESTAD, A. O., LEFFLER M. P.: *The Cambridge History of the Cold War, Vol. 1, Origins*, Cambridge University Press, 2010, p. 10.

<sup>16</sup> ESCOBAR, A.: *Encountering Development, The making and unmaking of The Third world*, Princeton 1995, p. 34.

<sup>17</sup> SNEDDON, CH.: *Concrete Revolution, Large Dams, Cold War Geopolitics, and the US Bureau of Reclamation*, Chicago 2015, p. 12; SNEDDON, FOX, p. 452; ESCOBAR, p. 34.

<sup>18</sup> AKHTER, p. 68; ADAS, M.: *Dominance by design, Technological imperatives and America's civilizing mission*, Cambridge 2006; HECHT; SNEDDON, FOX; SNEDDON, CH.: *The sinew of development: Cold War geopolitics, technical expertise, and water resources development in Southeast Asia, 1945-1975*, in: *Social Studies of Science*, Vol. 42, No. 4, pp. 564-590.

<sup>19</sup> SNEDDON, *Concrete revolution*, p. 11; AKHTER, p. 68.

This idea was already mirrored in Harry S. Truman's inaugural address of 20 January 1949, in which he announced a "fair deal" programme for the whole world, at the heart of which was an appeal to the US and the world to address the problems of "developing areas". In Truman's vision, capital, science and technology formed the ingredients of the recipe for the American dream of peace and abundance for all the people around the planet.<sup>20</sup> Washington's geopolitical vision and ambitions were, among other things, put into practice under the guise of "technical assistance in water management", primarily through the so-called *Bureau of Reclamation*, the most important US government agency for water resources development, whose involvement in US foreign affairs began after World War II.<sup>21</sup>

The so-called Tennessee Valley Authority (TVA) project is considered an important (domestic) landmark that influenced US Cold War practices and the concept of water resources development. This was a massive project launched in 1933 under Roosevelt's New Deal programme to help develop one of the poorest parts of the USA. The TVA was unrivalled in scale and size and became the direct predecessor of all major American regional development programmes. The TVA not only aimed at complete control of the river system, which was to be brought about by a system of dams providing flood protection and power generation, it was also intended to avert poverty, provide jobs, promote agriculture, protect the soil, facilitate reforestation, fertiliser production, improve sanitation and support local businesses.<sup>22</sup>

The TVA project, an embodiment of the concept of social development through water resources development, has shown that large dams can be not only an instrument of modernization but also a state-building or state-supporting element. Because of its democratic ethos, in line with the *policy of containment* and the support of American companies, the TVA became the new 'export commodity' of US Cold War policy in the 1950s and gained worldwide acclaim.<sup>23</sup> Under the TVA, several regional development

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<sup>20</sup> ESCOBAR, p. 4.

<sup>21</sup> More about the agency and its activities, particularly in Southeast Asia, in Chris Sneddon's studies. SNEDDON, FOX, p. 451.

<sup>22</sup> MOLLE 2006, pp. 8-9.

<sup>23</sup> MOLLE 2006, p. 12; EKBLADH, D.: "Mr. TVA," *grass-roots development, David Lilienthal, and the rise and fall of the Tennessee Valley Authority as a symbol for U.S. overseas development, 1933-1973*, in *Diplomacy History*, Vol. 26, 2002.

corporations emerged in all areas of the Third World, and models of national, regional and sectoral planning became indispensable to the 'export of development'.<sup>24</sup>

However, as Vincent Lagendijk, for example, has argued, the TVA project was not a unique concept from a global perspective, not even in the United States, and Sneddon's interpretation has thus become the subject of considerable critical research in recent years. Considerations of river basin development in the United States were part of an interconnected global water knowledge and its circulation. The 1930s saw the construction of a cascade of dams on the Dnieper (Dnieproges), the creation of large-scale plans for the Rhone River basin in France, or activities in the Japanese-dominated Manchuria and Korea. As Lagendijk further points out, in addition to being interconnected, these examples of water development were often rooted in colonial hydrological experiments. The circulation of water management expertise, he argues, has its roots in the 19<sup>th</sup> century, if not earlier. Evidence can be seen, for example, in the expert exchanges of British hydro engineers between Egypt and India, or the later involvement of colonial experts and administrators in international organizations, such as the World Bank. Then there was the work of leading American experts, e.g., the architect of the Hoover Dam, John L. Savage, in Australia, Hawaii, Afghanistan and even in the Soviet Union. Hugh Lincoln Cooper, the architect of the Wilson Dam, had previously served as chief engineer for the construction of the Dnieper Dam in the 1920s. There are dozens of examples of similar exchanges around the world.<sup>25</sup>

Under the influence of the Soviet Union, the communist regimes of the Eastern Bloc saw water as a fundamental pillar of building socialism. The scarcity of water as a key raw material was generally perceived as an impediment to "progress" - whether it was perceived in real time or foreseen within the context of the intended leapfrog industrialization.<sup>26</sup> Based on Stalinist political economy, massive multi-purpose dams became synonymous with electrification, industrialization, and mechanization. As Jiří Janáč argues, these dams had several main purposes in terms of the socialist ideology - for example, they demonstrated new socialist technologies, they contributed to the

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<sup>24</sup> ESCOBAR, p. 38.

<sup>25</sup> LAGENDIJK, V.: *Streams of knowledge: River development knowledge and the TVA on the river Mekong*, in: *History and Technology*, Vol. 35, No. 3, pp. 318-319.

<sup>26</sup> OLŠÁKOVÁ, D., JANÁČ, J.: *The Cult of Unity, Stalin's Plan to Transform Nature in Czechoslovakia (1948-1964)*, Prague 2018, p. 161.

transformation of nature to help meet the needs of socialist society, in the countryside they helped to "pave the way for the proletarian revolution" by introducing electricity and irrigation, and finally - they were a symbol of rapid socialist industrialisation.<sup>27</sup> This was not only true of the Soviet Union; the vision of Soviet modernity was actively adopted by other socialist states, too. If they had the right disposition and capacity, as Czechoslovakia did, then this vision also reflected in the development of water resources, and the tools of such development started to be exported to the countries of the Global South from a certain point.

In his book *Concrete Revolution*, Chris Sneddon describes the Cold War era and its geopolitical order as a near-perfect environment for the rapid implementation of dams and watershed development projects.<sup>28</sup> Around the world, some 40,000 large hydro projects were built during the Cold War, many of them in Africa.<sup>29</sup> The Cold War can thus be seen as an accelerator of water development, which gave more opportunities for smaller actors to get involved, and as a stimulant of global hydroexpansion. But when does Czechoslovakia enter the "story of global dam building" on this continent?

### Czechoslovak Modernisation Mission in Africa

The activities of Czechoslovakia in Africa were first studied by Petr Zídek and Karel Sieber in connection with the opening of the Czech archives. Their texts provided a basic insight into diplomatic relations with African states, later Jan Záhořík also focused on this dimension.<sup>30</sup> Among the authors of "non-Czech" origin, it is worth mentioning the comprehensive, yet descriptive and largely based on Petr Zídek's work, publication *Czechoslovakia in Africa* by Philip Muehlenbeck.<sup>31</sup>

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<sup>27</sup> JANÁČ, pp. 617-618.

<sup>28</sup> SNEDDON, p. 4.

<sup>29</sup> CONCA, K.: *Governing water, ContentFous transnaFonal poliFcs and global insFtuFon building*, Cambridge 2006. A large dam is generally considered to be a work with a dam height of at least 15 m.

<sup>30</sup> ZÍDEK, P., SIEBER, K.: *Československo a subsaharská Afrika v letech 1948–1989*. Ústav mezinárodních vztahů, Praha 2007; ZÍDEK, P., SIEBER, K.: *Československo a Blízký východ v letech 1948–1989*. Ústav mezinárodních vztahů, Praha 2009; ZÍDEK, P.: *Československo v konžské krizi 1959–1961*. in: *Historie a vojenství*, 2006, No. 3, pp. 23–33; SIEBER, K.: *Československo a občanská válka v Nigérii (1967–1970)*. in: *Historie a vojenství*, 2002, No. 2, pp. 267–302. ZÁHOŘÍK, J.: *Czechoslovakia and Congo/Zaire under Mobutu, 1965–1980*, in: *Canadian Journal of History*, 2017, Vol. 52, Issue 2, pp. 290-314; DVOŘÁČEK, J., PICKNEROVÁ, L., ZÁHOŘÍK, J. (eds.): *A History of Czechoslovak Involvement in Africa: Studies from the Colonial Through the Soviet Era*. The Edwin Mellen Press, Lampeter 2014; YLÖNEN, A., ZÁHOŘÍK, J. (eds.), *The Horn of Africa since 1960s*, Routledge, London 2017.

<sup>31</sup> MUEHLENBECK, P.: *Czechoslovakia in Africa, 1945-1968*, Palgrave Macmillan, 2016.

Czechoslovakia's interest in Africa was influenced by the attitude of the Soviet Union. Moscow's attention to Africa, or rather to the Third World, was not awakened until the second half of the 1950s, after Nikita Sergeevich Khrushchev became General Secretary of the Communist party of Soviet Union. Unlike Joseph Stalin, who focused more on building a protective buffer zone in Eastern Europe and marginally on events in East and South-East Asia, Khrushchev recognised the potential of the 'black continent'. The Soviet Union in the Khrushchev era began to use the decolonization of African territories, especially in West Africa, for economic penetration and for the promotion of its own ideological and social model. It sought to take advantage of the fact that socialism, unlike capitalism, was not associated with a colonial past in the eyes of many Africans, and thus it was not discredited.<sup>32</sup>

In the early 1960s, Czechoslovakia benefited from a network of diplomatic and trade relations with some African countries. These links, as well as the functioning embassies and commercial representations in, for example, Egypt and Ethiopia, had already been established in the pre-war period. In the early 1960s, Czechoslovakia had the largest number of embassies in Africa of any Eastern bloc country, actually one more than the Soviet Union did.<sup>33</sup> Prague's growing interest in Africa can also be seen in the establishment of a separate African Department in the Ministry of Foreign Affairs on 1 November 1959. Until then, the agenda of African states had fallen under the joint Afro-Asian Department, reflecting the low priority attributed to mutual relations and the care of them.<sup>34</sup> An important factor that positively influenced Czechoslovak activities in Africa was economic maturity - a high level of industrialization, expert potential in economic development, and the good reputation of Czechoslovak industry and goods in the world.<sup>35</sup>

In this thesis, I often use the term "minor/small actor" in the context of state actors, and I mean Czechoslovakia. But how to imagine a "minor/smaller actor"? There are many approaches to defining "actor size" and all of them are relative and artificial. Among the frequently used markers are population, territorial size, international position,

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<sup>32</sup> For more e.g., see: TELEPNEVA, N.: *Cold War LiberaFon, The Soviet Union and the Collapse of Portuguese Empire in Africa, 1961-1975*, The University of North Carolina Press, 2021, pp.12-29.

<sup>33</sup> ZÍDEK, p. 31.

<sup>34</sup> ZÍDEK, p. 30. The Department had only 10 employees during its first year of operation, which quickly proved insufficient in light of the creation of 17 new states.

<sup>35</sup> KOURA, J., PEŠTA, M.: *Československo a studená válka v Africe, Přístupy, interpretace a rovinny zkoumání*, in: Paměť a dějiny, Vol. XIV, No. 3, 2020, p. 4.

military strength, economic maturity or self-identification.<sup>36</sup> Compared to most other Eastern Bloc countries, Czechoslovakia boasted a mature industry and a stronger, export-oriented economy. Its position on the international scene was not weak either - Prague was home to a number of prestigious international organizations (International Organization of Journalists, International Union of Students World Federation of Trade Unions, World Peace Council, etc.) and was therefore sometimes nicknamed "Communist Geneva" or "Geneva of the East".<sup>37</sup> In terms of its territorial area and population of about 13.5 million at the beginning of the 1960s, it was a rather medium-sized state on both European and "Eastern" scale. Denominating Czechoslovakia as a "minor actor" would therefore not make much sense, not even within the Eastern bloc. Contrary to some other relevant works, which usually distinguish only between superpowers and "small actors", I chose to work with the term "smaller/medium actor", which in my opinion describes the Czechoslovak position more accurately.<sup>38</sup> However, in the water sector, for example, which is being scrutinised in this thesis, the "smaller actor" of Czechoslovakia could almost be considered a big player.

In the context of activities in the Third World, the status of a "smaller" or "small" actor entailed certain specificities in relation to the newly emerging states. These countries, or their leaders, often preferred cooperation with "smaller" or "small" countries (Czechoslovakia, East and West Germany, Scandinavian countries, Switzerland, etc.), as they believed doing that would not entail the same risks of dependence (political, economic) as cooperation with superpowers or former colonial powers.<sup>39</sup> Texts written by historians such as Tony Smith and Pierre Gleijeses have contributed to the fact that these "minor players" have ceased to be understood by historiography as mere satellites of the

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<sup>36</sup> The population marker is used, for example, by Theodora K. Dragostinova. DRAGOSTINOVA, T. K.: *The Cold War from the Margins, A Small Socialist State on the Global Cultural Scene*, New York, 2021.

<sup>37</sup> The author of the metaphor is the French historian Annie Kriegel, popularised by the Czech historian and publicist Karel Bartošek. BARTOŠEK, K.: *Report on Wandering in Communist Archives. Prague - Paris (1948-1968)*. Prague 2000, p. 103.

<sup>38</sup> E.g., CRUMP, L., ERLANDSSON, S.: *Margins for Manoeuvre in Cold War Europe the Influence of Smaller Powers*, London 2020.

<sup>39</sup> For more see e.g., KOURA, J., WATERS, R. A.: "Africanos" versus "Africanitos" the Soviet-Czechoslovak CompeFFon to Protect the Cuban RevoluFon, in: *The International History Review*, Vol. 43, Issue 1, 2021, pp. 72-89.



superpowers, but are rather viewed as active participants in the Cold War rivalry with a considerable degree of autonomy in decision-making and activities.<sup>40</sup>

Czechoslovakia was traditionally known to the world as a major arms exporter. There is a general consensus among historians that it was the supply of Czechoslovak (and Soviet) arms to Nasser's Egypt in 1955 that started the penetration of Eastern Bloc countries into Africa.<sup>41</sup> Czechoslovakia, as one of the most active supporters of liberation movements and new states in general in later years, supplied arms to Libya, Algeria, Guinea, etc.<sup>42</sup> The other extensive activities that socialist Czechoslovakia pursued in Africa are often overshadowed by its military cooperation and arms exports. Whether it was synergy in education, including student exchanges in particular, or running the so-called University of 17<sup>th</sup> November in Prague, which, after the Herder Institute at the University of Leipzig and Patrice Lumumba University in Moscow, became the third institution in the Eastern Bloc to offer study programmes for students from Third World countries<sup>43</sup>. Or the economic cooperation - mainly involving the supply of capital equipment and machinery, including water works projects and facilities. Or perhaps the provision of loans and credits. One of the principal manifestations of (not only) Czechoslovakia's activity in Third World countries was the so-called *development technical assistance* consisting, besides the supply of various investment units and equipment, of expert placements. These experts, doctors, teachers, technicians, geologists, etc., were posted there on the basis of bilateral or multilateral contracts in order to promote Czechoslovakia, socialism, to open the way for further cooperation and, last but not least, to bring hard currency (dollars or pounds) to the state treasury. Through their activities, they helped to shape the image of Czechoslovakia in African countries and the image of Africa at home, in Czechoslovakia.<sup>44</sup>

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<sup>40</sup> SMITH, T.: *New Battles for New Wine: A Pericentric Framework for the Study of the Cold War*, in: *Diplomatic History*, 2000, Vol. 24, No. 4, pp. 567-591; GLEIJESESES, P.: *Conflict Missions: Havana, Washington, and Africa, 1959-1976*, University of North Carolina Press, Chapel Hill 2002.

<sup>41</sup> For more on arms exports to Egypt, see e.g., LARON, G.: *Logic dictates that they may attack when they feel they can win: The 1955 Czech-Egypt Arms Deal, the Egyptian Army, and Israeli Intelligence*, in: *Middle East Journal*, Vol. 63, No. 1, 2009, pp. 69-84. ZÍDEK, P., SIEBER, K.: *Czechoslovakia and the Middle East in 1948-1989*, Prague: Institute of International Relations, 2009.

<sup>42</sup> For more see e.g., PEŠTA, M., RICHTEROVÁ, D., TELEPNEVA, N.: *Banking on Military Assistance: Czechoslovakia's Struggle for Influence and Profit in the Third World 1955-1968*, in: *International History Review*, Vol. 43, Issue 1 2021, pp. 90-108. LARON, G.: *Cutting the Gordian Knot. The Post-WW2 Egyptian Quest for Arms and the 1955 Czechoslovak Arms Deal*, in CWHIP, Working paper No 55 (February 2017).

<sup>43</sup> More about this institution: HOLEČKOVÁ, M. E.: *The Story of a Forgotten University, University of 17 November (1961-1974) and its place in the Czechoslovak educational system and society*. FF UK, Prague 2019.

<sup>44</sup> More on the topic of Czechoslovak experts: MACKOVÁ-JUNOVÁ, A.: *Export of Experts. Czechoslovak Academy of Sciences and Iraq in the 1960s*, *Práce z dějin Akademie věd*, 2018, No. 2, pp. 47-76. MÁDROVÁ,

One possible division of Czechoslovak experts is into civilian and military. This thesis focuses on civilian experts, specifically in the field of water management, at various levels.<sup>45</sup> One of such research levels is represented by the aspect of everyday living of our experts abroad, and in this direction, it follows up on the works by Petr Zídek, Barbora Buzássyová and Barbora Menclová in particular.<sup>46</sup>

Czechoslovakia was also active in the field of intelligence, with prominent leftist intellectuals such as Mehdi Ben Barka and Amílcar Cabral appearing on the payroll of the intelligence section of the State Security Service (StB).<sup>47</sup> Czechoslovakia was also involved in placing experts from various fields into Africa - including water management professionals.

A question suggests itself as to what motivated Czechoslovak foreign policy to engage in Africa? Czechoslovak economy was built around exports, and one of the reasons thus must have been the search for new markets for its engineering products. During the 1960s, Czechoslovakia tried to promote socialism as being the best model for modernising society. The effort to export this model to Africa was more prominent in Czechoslovak foreign policy up until the mid-1960s, while a high degree of economic pragmatism can be observed past the year 1970, outweighing the efforts to export the socialist modernisation model.<sup>48</sup> The reasons behind this idealistic resignation were probably the disillusionment caused by the lukewarm attitude of African governments to putting socialism into practice, the non-repayment of loans granted and the poor political results of mutual cooperation. Last but not least, Czechoslovakia sought to gain foreign exchange

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K.: *Development and Strategy of the Czech Technical University's Contacts with Third World Countries in the 1960s*, *Práce z dějin Akademie věd*, 2018, No. 2, pp. 21–44, MENCLOVÁ, B.: *Czechoslovak Forest Experts in Cold War Angola*, in: *Prague Papers on the History of International Relations* [online], No. 1-2, 2021, pp. 79-92.

<sup>45</sup> For more on Czechoslovak military experts see e.g. RICHTEROVA, D., PEŠTA, M., TELEPNEVA, N.: *Banking on Military Assistance. Czechoslovakia's Struggle for Influence and Profit in the Third World, 1955-1968*, in: *International History Review*, Vol. 43, No. 1, 2021, pp. 90-108.

<sup>46</sup> BUZÁSSYOVÁ, B.: *Socialist Internationalism in Practice: Shining Patterns of the Czechoslovak Educational Aid Programmes to Sub-Saharan Africa, 1961-1989*, dissertation, Department of the History of Science and Technologies, Institute of History of Slovak Academy of Sciences. MENCLOVÁ, B.: *Between Global Ambitions and Economic Pragmatism: Czechoslovak Experts in Angola and Mozambique in the Cold War*, dissertation, Faculty of Social Sciences, Charles University, 2023.

<sup>47</sup> For more, see for example KOURA, J.: *A Prominent Spy: Mehdi Ben Barka, Czechoslovak Intelligence, and Eastern Bloc Espionage in the Third World during the Cold War*, in *Intelligence and National Security*, 2020, pp. 318-339. TELEPNEVA, N.: *'Code Name SECRETARY': Amílcar Cabral, Czechoslovakia and the Role of Human Intelligence during the Cold War*, in: *The International History Review*, Vol. 42, Issue 6, 2020, pp. 1257-1273.

<sup>48</sup> KOURA, PEŠTA: p. 7.

and raw materials from Africa. The zeal to access "hard" foreign currencies, such as the dollar or the pound, was motivated by the inconvertibility of the Czechoslovak koruna. It was therefore virtually impossible to use it to buy Western goods that were scarce on the Czechoslovak market (technologies, electronics, luxury consumer goods, etc.).<sup>49</sup> In terms of raw materials, Czechoslovakia was mainly interested in precious metals or "goods from the colonies", such as chocolate beans, cotton, or coffee.

This thesis focuses on the export of Czechoslovak hydroexpertise and hydrotechnology to Africa. One might think that this kind of export would be similar to, for example, the notorious export of Czechoslovak arms. However, 'weapons' and 'dams or turbines' are not the same 'export commodity', even if they may show similarities in terms of ideology, should we view modernisation as a 'weapon'. Nevertheless, in the context of the construction of large water works, as opposed to the supply of tanks, missiles or the construction of a munitions factory, hydroexpertise and hydrotechnology require a high degree of transnational cooperation. Whether the supply of individual components, exploration or design work are concerned, these almost always involve the presence of multiple state and non-state actors from around the world, as the expertise is relatively narrow. Also unique is the linkage between water management or water resource development expertise and modernization models and ideas.

## Literature Overview

The literature on developmentalist activities in postcolonial Africa has produced a number of works, particularly in the last decade. Frank Gerits has focused on how African leaders in the 1950s and 1960s tried to find their own path to modernization.<sup>50</sup> The Soviet Union and its endeavours have been the subject of works by Alessandro Iandolo and Natalia Telepneva, for example.<sup>51</sup> Oscar Sanchez-Sibony came up with an economic explanation of the Soviet Union's motivations for its activities in the space of the Global South.<sup>52</sup> Sara

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<sup>49</sup> ZÍDEK, P.: *Československo a francouzská Afrika 1948–1968*, Praha 2006, p. 164.

<sup>50</sup> GERITS, F.: *The Ideological Scramble for Africa: How the Pursuit of AnFcolonial Modernity Shaped a Postcolonial Order, 1945–1966*, Cornell University Press 2023.

<sup>51</sup> IANDOLO, A.: *Arrested Development, The Soviet Union in Ghana, Guinea, and Mali, 1955–1968*, Cornell University Press 2022. TELEPNEVA, N.: *Cold War LiberaFon, The Soviet Union and the Collapse of the Portuguese Empire in Africa, 1961–1975*, University of North Carolina Press 2022.

<sup>52</sup> SANCHEZ-SIBONY, O.: *Red GlobalizaFon: The PoliFcal Economy of the Soviet Cold War from Stalin to Khrushchev*, Cambridge University Press 2014.

Lorenzini also contributed to the debate on the changing motivations of the foreign policy of the Eastern bloc states, talking about the gradual disappearance of developmental euphoria in the late 1960s and early 1970s and its replacement by political pragmatism and economic rationality based on "mutual advantage".<sup>53</sup> According to Max Trecker, the emphasis on economic rationality and the principle of mutual benefit in the East's approach to cooperation with the new states of the Global South has always existed, but has been given different meanings.<sup>54</sup> Furthermore, according to him, by the end of the Cold War, neither the political-ideological intentions nor the desire to create an enclosed socialist system as an alternative to the West had disappeared from the foreign policy of the Eastern Bloc.<sup>55</sup>

Authors writing about Cold War hydropolitics or the development of water resources in the countries of the Global South tend to focus on the superpowers, while the influence of international organizations and smaller actors, such as Czechoslovakia or the GDR, has been rather neglected.<sup>56</sup> Studies have also mostly focused on a few large projects, such as the aforementioned TVA. If we look at the existing studies from a geographical point of view, they are devoted to Cold War water resources development in Southeast Asia, South Asia, the Middle East and Europe, with Africa and Latin America as an area that has not been well covered so far.<sup>57</sup>

The literature on Czechoslovakia's general engagement in Africa is reviewed above in the introduction, so I will not revisit it. Instead, I will focus on three specific case studies

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<sup>53</sup> LORENZINI, S.: *The Socialist Camp and the Challenge of Economic Modernization in the Third World*, in: N. NAIMARK, N., PONS, S., QUINN-JUDGE, S., eds.: *The Cambridge History of Communism*, Cambridge: Cambridge University Press, 2017.

<sup>54</sup> TRECKER, M: *Red Money for the Global South East-South Economic Relations in the Cold War*, London, New York: Routledge, 2020.

<sup>55</sup> TRECKER, p. 170.

<sup>56</sup> A different perspective than that of the superpowers is offered by e.g., LAGENDIJK, V.: *Streams of knowledge: river development knowledge and the TVA on the river Mekong*, in: *History and Technology*, Vol. 35, No. 3, pp. 316-337.

<sup>57</sup> AKHTER, p. 66; SNEDDON, 2012; CULLATHER, N.: *The hungry world: America's Cold War battle against poverty in Asia*, Cambridge 2010; EKBLADH, D.: *The great American mission: modernization and the construction of an American world order*, Princeton 2010; KLINGENSMITH, D.: "One Valley and a Thousand": *Dams, Nationalism, and Development*, New York 2007; ALATOUT, S.: *Hydro-imaginaries and the construction of the political geography of the Jordan River, The Johnston Mission, 1953-1956*, in: DAVIS D., BURKE, E. (Eds.): *Environmental imaginaries of the Middle East and North Africa*, Athens 2011, pp. 218-245; SNEDDON, FOX 2011; KAIKA, M.: *Dams as symbols of modernization: the urbanization of nature between geographical imagination and materiality*, in: SWYNGEDOUW E.: 'Technonatural revolutions: the scalar politics of Franco's hydro-social dream for Spain, 1939-1975', in: *Transactions of the Institute of British Geographers*, Vol. 32, No. 1, pp. 9-28; SWYNGEDOUW, E.: 'Not a drop of water...': *state, modernity and the production of nature in Spain, 1898-2010*, in: *Environment and History*, Vol. 20, No. 1, pp. 67-92.

that I have chosen for this thesis. Firstly, on the water development of the three selected African countries. For Ghana, the key texts originate from the pen of the Swiss-born American historian Stephan Miescher, crowned by the monograph *A Dam for Africa, Akosombo Stories from Ghana*.<sup>58</sup> This work looks at the planning, implementation and consequences of the Volta River Project from many angles, but also touches, for example, on the Bui Dam, a project planned since the 1960s which was completed only recently with Chinese 'help'. Using a broad source base, Miescher analyses Ghana's water development very precisely, but completely omits the involvement of smaller state actors from the Global North, such as the Hungarians and Czechoslovakians. Many works have been written on Egypt's water development, especially within the context of the Nile, from different temporal and thematic perspectives. In particular, the Norwegian historian and geographer Terje Tvedt has analysed several decades of the British "dominion" over the Nile waters and the subsequent postcolonial relations between the states in the basin that had a real impact on the states' development.<sup>59</sup> The subject of the construction of the High Aswan Dam is then dealt with directly in Elizabeth Bishop's two-volume work from the 1990s.<sup>60</sup> Benjamin Brendel examined Aswan in the context of modernity.<sup>61</sup> However, no existing work to date captures the potential involvement of the smaller Eastern Bloc states in the project. The development of Ethiopia's water resources has always been examined more from the perspective of international relations in the Nile Basin, particularly with respect to Egypt and Sudan. This perspective has been made relevant again particularly by the construction of the Grand Ethiopian Refinement Dam (GERD) launched in 2011, which has raised tensions in the region.<sup>62</sup> Only the technical literature has so far dealt with the story of the Malka Wakana hydroelectric project directly, and only very sporadically then.<sup>63</sup>

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<sup>58</sup> MIECHER, S.: *A Dam for Africa, Akosombo Stories from Ghana*, Indiana University Press, 2022.

<sup>59</sup> TVEDT, T.: *The Nile in the Age of the British, Political Ecology and the Quest for Economic Power*, London: Tauris 2004. See also, for example, WATERBURY, J.: *Hydropolitics of The Nile Valley*, Syracuse 1979 or COLLINS, Robert, *The Nile*, London 2002.

<sup>60</sup> BISHOP, E.: *Talking Shop: Egyptian Engineers and Soviet Specialists at the Aswan High Dam*, Vol. 1-2, Chicago, 1997.

<sup>61</sup> BRENDDEL, B.: *Side Effects of Modernity, Dam Building, Health Care, and the Construction of Power in the Context of the Control of Schistosomiasis in Egypt in the 1960s-1970s*, in: *Naturwissenschaften, Technik und Medizin*, 2017, Vol.25, No. 3, pp. 349-382.

<sup>62</sup> See e.g., SANDSTRÖM, E., JÄGERSKOG A., OESTIGAARD, T.: *Land and Hydropolitics in the Nile River Basin, Challenges and New Investments*, New York 2016.

<sup>63</sup> CHERYACHUKIN A., P., SITNIN, O. V.: *Malka Wakana Hydroproject on the Webi Shebeli River in Ethiopia*, in: *Hydrotechnical Construction*, Vol. 34, Nos. 8-9, 2000, pp. 115

## Methodology

In this dissertation thesis, I decided to use the perspectives and approaches of global history to place Czechoslovak water management activities in a global context. Sebastian Conrad refers to global history as a form of historical analysis that places phenomena, events, and processes in a global context. When trying to deal with something "global", historians, according to Conrad, most often take one of the three following approaches. They usually conceptualize global history as a "history of everything" in the sense of writing a history of something that happens all over the world. The second commonly used approach rests on the "history of exchange and connections" view. And the third approach may be that of a history based on the concept of integration.<sup>64</sup> For my chosen story, a combination of all these three approaches has proven to be most appropriate.

The development of water resources (especially in the form of dam building, but any water management projects in general can be seen as such, too) in the 20<sup>th</sup> century is a global phenomenon, as confirmed, for example, by the research done by Vincent Legendijk. In order to build a massive concrete dam capable of holding millions of cubic metres of water, considerable financial and material resources, diverse expertise and sophisticated technology need to be concentrated in one place. Only few entities are able to provide all of these on their own, so mostly the contract has to be "fragmented" into dozens, sometimes hundreds of subcontracts. Thus, the implementation of a water project can be imagined as a "thick steel rope" that is knitted from numerous thinner threads – i.e., from many small contracts awarded by the relevant government department of the contracting country. It was therefore not rare for a company from Japan to handle the hydrogeological survey of the site, a second company from the GDR to take care of the preparatory studies, a third from Italy to be in charge of the design part, a fourth, also from Italy, in cooperation with local material suppliers to execute the construction implementation, a fifth from the United States to deliver the machinery of the hydroelectric plant and a sixth from the United Kingdom to provide the transmission network. In addition, the individual companies were employing individual experts internally or externally, often from all over the world. In practice, such projects involved dozens of entities from different countries around the world, which were forced to

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<sup>64</sup> CONRAD, S.: *What is Global History*, Princeton University Press, 2016, pp. 485-489.

cooperate with each other regardless of whether they were, seen through the lens of Cold War geopolitics, from the West or the East. This is de facto a multi-level form of global cooperation. Lagendijk takes the construction of the Low Aswan Dam (1902), in which a great number of state and non-state actors from many countries participated for the first time, as a turning point in this regard.<sup>65</sup> The Cold War period and its geopolitical climate, in combination with decolonization, acted as a catalyst in this process. Decolonisation alone did not have such a dramatic effect, as evidenced by the example of Latin America, where colonial empires were already collapsing during the 19<sup>th</sup> century and there was no boom in the construction of waterworks.

The Czechoslovak hydroexpertise has always been an active part of the global expertise, which can be demonstrated, for example, by the fact that Czechoslovakia was one of the founding members of the International Commission on Large Dams (ICOLD) in 1928. After the Czechoslovak state started a targeted export of this expertise abroad in the early 1960s, Czechoslovak experts became an even more prominent part of the global exchange and circulation of hydroexpertise. This perspective fully corresponds to Conrad's second type of approach to global history, working with the idea that human lives and specific human activities have always been interconnected through mobility and traceable interactions.<sup>66</sup> In this case, it is the interactions in the planning and execution of water works, in which 'experts from all over the world can participate'. Given that the implementation of major water works entails a broad integration of global expert circles, and often also of society in general, there is also an intersection with Conrad's third type of approach to global history.

This dissertation thesis works with three examples of water management projects in which Czechoslovakia participated in the period from the 1960s to the 1980s. Unlike, for example, Lukasz Stanek, who in his *Architecture in Global Socialism* works with a broader space including Eastern Europe, Africa, and the Middle East, the three examples I have chosen are all geographically linked to Africa.<sup>67</sup> There is a logic to this. Africa was a key global region during the Cold War, where other countries, whether of the Global North or South, were actively engaged in various forms of mutual conflict and cooperation; this

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<sup>65</sup> LAGENDIJK, p. 319.

<sup>66</sup> CONRAD, p. 9.

<sup>67</sup> STANEK, L.: *Architecture in Global Socialism, Eastern Europe, West Africa and the Middle East in the Cold War*, Princeton University Press, Princeton and Oxford 2020.

is confirmed, for example, by the work of Arne Odd Westad.<sup>68</sup> Since the colonial era, Africa, unlike other regions, has in many ways also functioned as a kind of 'laboratory', allowing a range of expertise, including water management, to try out what was not possible in Europe.

### **Structure, Sources and Goals**

The aim of the thesis is to show that Czechoslovakia was present in Africa from the beginning of the 1960s to the end of the 1980s and actively shared in the modernization of "developing countries" through participation in the development of their water resources. It is also argued that it purposefully used hydropolitics to pursue its foreign policy and economic goals in Africa, or supported through hydropolitics the goals of its allies (such as the Soviet Union). By analysing and comparing three specific examples, the changes in the forms, practices, and objectives of the Czechoslovak model of exporting hydropower expertise and technology will be mapped. The analysis should answer these questions: what sort of hydroexpertise did Czechoslovakia export, with what aim, to what extent, in what way, what difficulties did it encounter in doing so, how did it interact with other state actors, how successful were the contracts, and how did all these factors change, particularly in the most active period, i.e., from the 1960s to the 1980s?

Another thesis presented here is that Czechoslovak hydroexpertise in the area of Africa was significantly intertwined with global hydroexpertise. The main questions here are: what was the position of the Czechoslovak hydroexpertise in Africa, what was the form of links and mutual dynamics of relations between Czechoslovak experts and experts from other countries of the global North, as well as the relations with local experts?

The work also points to the permeability of the "ideological boundaries" of the Cold War world, in which cooperation across power blocs took place, albeit with certain limitations. Further it is asserted that the space of the Global South was perceived by the states of the Global North (belonging to both the 'East' and the 'West') principally in a very similar way.

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<sup>68</sup> WESTAD, O. A.: *The Global Cold War, Third World Interventions and the Making of Our Times*, Cambridge University Press 2005.



Last but not least, the thesis provides a view of the hitherto neglected actors, the carriers of expertise – hydroexperts, on their mission, their activities and their role in the Czechoslovak hydro-politics towards the states of the Global South.

Leaving aside the methodological and structural overview provided in the introductory part of the thesis, the text is divided into five main chapters.

**The first chapter** is a contribution to the history of the scientific and technological internationalization of the Cold War. It explains how Czechoslovakia became one of the water leaders of the Eastern Bloc. It charts the formation of Czechoslovakia's industrial and expert capacities in the field of water management and focuses on the hitherto neglected export of Czechoslovak water management expertise and technology from the 1930s to the 1980s, represented mainly by the state enterprise Hydroprojekt Praha. It also explains how, given the domestic needs and the state of construction, these capacities were made available for the use abroad. The chapter also analyses the motivations and forms of such a use, which changed significantly from the 1950s to the 1990s. It provides the example of the foreign activities of the Czechoslovak company Lanna a.s. to demonstrate the links between the 'old and new' system and the continuity of the internationalisation of Czechoslovak hydroexport. It provides insight into the functioning of the Czechoslovak "hydrocracy" and the thesis that Czechoslovak hydroexperts were an active part of the global hydroexpert community through their activities from the 1930s on, and especially in the 1960s.<sup>69</sup>

It has been compiled using the materials from the funds of the Lanna company and the Water Works company (both in the State Regional Archive in Prague). It has also been drawn up using artefacts originating from the personal collections and estates of the individual experts, namely Alois Kraus (National Technical Museum), Jaroslav Balek (autobiographical book *Agentem ve vlastních službách*), René Sameš (Private family archive). The testimony of Otto Hofmann, who worked as a commercial and technical representative of Foreign Trade Company (FTC) Škodaexport in Ethiopia in the 1980s,

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<sup>69</sup> "HYDROCRACY / HYDROCRATS" - a kind of epistemic community - a network of respected experts who claim authoritative, if not exclusive, expertise in a particular sphere of public policy. In addition to key state institutions (ministries), research organizations and technical universities, this group has profiled itself within engineering organizations (Society of Engineers and Architects - SIA) and through publications in professional journals. JANÁČ, J.: *Hydrocrats and the Czech Water Mission in the Twentieth Century (1930-1960)*, in: *Soudobé dějiny*, Vol. 24, No. 1-2, 2017, p. 20.

provides an insight into the functioning of foreign trade companies. In order to map the export of Czechoslovak hydroexpertise since the 1950s, I have found it very helpful to analyse the entire series of a specialised scientific and technical journal for design, implementation and planning in water management and related environmental fields - *Vodní hospodářství*, which has been published regularly since 1951.

**The second, third and fourth** chapters are de facto case studies of the specific exports of Czechoslovak hydroexport and technology to Africa to achieve political goals. Each of them focuses on one country - Ghana, Egypt and Ethiopia. They always have a similar structure, containing an introduction to bilateral relations with Czechoslovakia, the importance of water resources development for the country in question, and an example of mutual cooperation in this area, with a detailed focus on one particular major project. In terms of chronology, the second and third chapters cover the period of the first half of the 1960s when exports were strongly activated due to the release of domestic expert and production capacities. The third chapter covers the 1980s. The choice of the countries detailed in the studies was guided by the availability of resources, the importance of the projects and the desire to cover the period from the 1960s to the 1980s.

### Ghana

In a broader context, the chapter presents the story of Kwame Nkrumah, the leader of an African country whose regime oscillates between East and West, accepting development aid and awarding contracts to states from both rival blocs on the basis of quality and expediency rather than ideology. The chapter traces in detail the specific export of water expertise and technology from Czechoslovakia to Ghana during the 1960s and its role in the development of the water resources of the recently formed African state. It builds on the aforementioned work of the Swiss-born American historian Stephan Miescher. Through a detailed analysis of the Czechoslovak role, based on documents from both Czechoslovak and Ghanaian institutions and testimonies of specific experts, it fills in some of the hitherto white spaces in the story of Ghana's water development. The chapter is partly based on my study *Československý Hydroprojekt v Africe* published in the journal *Paměť a dějiny*.<sup>70</sup>

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<sup>70</sup> MAZANEC, J.: *Československý Hydroprojekt v Africe*, in: *Paměť a dějiny*, Vol. XIV, No. 3, 2020, pp. 33-41.

The chapter is mainly based on documents produced by the Czechoslovak Ministry of Foreign Affairs, primarily the funds Teritoriální odbory – tajné (Territorial department – secret) and Teritoriální odbory – obecné (Territorial department – common). Information from these funds dating back to the 1960s is often intertwined with materials from the Archives of the Communist Party of Czechoslovakia, specifically from the "Antonín Novotný" fund, i.e., from the presidential archive of Antonín Novotný, which is administered by the National Archives of the Czech Republic (NAČR). The overall picture is supplemented by information obtained from the so-called secret collaborators' funds stored in the Archive of Security Forces, which keeps the expert René Sameš on record (codename ZDENĚK VESELÝ), and also from the company archive of SWECO, a.s, one of the successor companies of Hydroprojekt. In the case of Ghana, it was possible to add information from foreign archives. These are mainly the Public Records and Archival Department (PRAAD) in the Ghanaian capital Accra, which replaced The National Archives in 1997, and whose collections are in surprisingly good condition. It is possible to find 'mirror' documents (e.g., from FTC Technoexport) relating to Czechoslovak exports to the country, which probably should have been in the Czech Republic in the collections of the former Ministry of Foreign Trade, but have not survived. I have also made marginal use of their holdings relating to the Volta River Project. Also very helpful, especially for the Ghana case, were the British "Foreign Office", "Prime Minister's Office" or "Cabinet papers" holdings at The National Archives in London-Kew (TNA). This source is important considering the plans for the development of Ghana's water sector have their roots in the pre-independence period of British colonial administration. Another reason why British sources are so important is that, even after the declaration of independence, Britain had significant economic interests in the country and many British people continued to serve in senior positions in the administration of the newly formed state. I also used documents from the World Bank and the International Bank for Reconstruction and Development.

### Egypt

Construction of a giant waterwork in Egypt, which is commonly presented as a huge symbol in the first place, has provided a powerful background to this chapter. From Moscow's point of view, it is a symbol of socialism and its success, a seal of future dominance in the Global South, which is why Moscow wants to have the project

completely under its own control and does not want to risk possible complications arising from a mistake on the part of one of its allies. The chapter aims to explore the use of water management technologies and expertise in Czechoslovak foreign policy towards "Nasserist Egypt". It attempts to map the hitherto completely neglected interest in it by historiography and the specific efforts of Czechoslovakia's involvement in the construction of the Aswan High Dam, which can be chronologically placed in the years 1958-1961. The chapter also reveals the dynamics of communication between socialist countries, especially Czechoslovakia and the Soviet Union, in connection with water projects in Africa.

From the point of view of the materials used, the tracking of the Aswan affair in the Czechoslovak archives resembles a detective story. Documents from state institutions (the Ministry of Foreign Affairs and the Ministry of Foreign Trade in this case), or from various companies involved, usually contain a lot of information about successfully completed projects, while records of suspended or abandoned ones are not preserved or do not appear to such an extent. The Czechoslovak involvement in the implementation of Aswan is corroborated equally well by what has not been found in the otherwise well organized and preserved archives (archive of MFA or n.p. Vodní Stavby) as by what I have managed to trace. This chapter utilises materials from the collections of the territorial departments of the MFA. Then there are the Telegrams - Sent and Telegrams - Received funds, which contain instructions on applying for the contract for the construction of the Aswan High Dam. I am also working with documents from the Ministry of Foreign Trade and its enterprises (Polytechna fund, MFT fund), but it should be mentioned here that these funds are disorganized, difficult to access, or completely unpreserved, which makes any research painfully difficult. This fragmentation of information has probably made some Czech scientists mention in their writings the participation of Czechoslovaks in Aswan, if with no additional details, even though it did not actually materialise in the end.<sup>71</sup>

Although Egypt, together with Syria, formed a federal state entity known as the United Arab Republic (UAR) in the period under review, for the sake of simplicity I have chosen to work mainly with the name "Egypt" in this chapter. In fact, the events I am

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<sup>71</sup> VAVREČKOVÁ, V.: *Czechoslovakia and Egypt in 1945-1968*, dissertation, Institute of History, Faculty of Arts, University of Hradec Králové, 2019, p. 174.

concerned with almost exclusively affected only the Egyptian part of the UAR; Czechoslovak diplomatic sources work with both variants.

### Ethiopia

At the centre of the Ethiopian story, the Soviets and Czechoslovaks no longer view the dam as a symbol, despite the official rhetoric. Its construction is becoming a de facto systemic issue, a kind of norm. It is still a very important issue, but for the first time ever, the mechanisms of international cooperation within the Eastern bloc have been successfully set up - Moscow is happy to allow its allies to join in the project. Motivations of all the involved are essentially pragmatic. The chapter covers Czechoslovak water exports to Africa in the 1980s. It uses the building of the Malka Wakana hydroelectric plant as an example of technopolitics in practice. The example shows the dynamics of relations between Czechoslovakia, Ethiopia, and the Soviet Union, which also participated in the construction. It also touches on the position of the experts themselves in the project, as well as on their working and living conditions on the site. This large hydroelectric project aside, the chapter also traces the activities of Czechoslovak hydrogeologists working in Ghana during the de facto identical period, as well as the continuation of cooperation after 1989.

The chapter is based on the funds of the territorial departments of the Ministry of Foreign Affairs. Additional sources include information from the press (Ethiopian Herald, Rudé právo), personal documents and interviews with Czech hydrogeologist Jiří Šíma, who, as an expert sent in by FTC Polytechna, worked on hydrological mapping of Ethiopia in 1984-1988. Šíma returned to Ethiopia at the beginning of the millennium, already as an expert working for a private company, and continued in the work begun in the 1980s. Later, he was recognized for his long-standing contribution by the government of Ethiopia, by the professional circles, and, for promoting the good name of the Czech Republic abroad, also by representatives of the Czech diplomacy. I have also drawn on the testimony of Otto Hofmann, who worked in Ethiopia for about two years, starting from 1986, as a commercial and technical representative of the FTC Škodaexport. Hofmann was the de facto chief executive of the Malka Wakana project, participating in most of the negotiations and ensuring the smooth running of the contract and the service for the Czechoslovak experts on the ground.

For the sake of comparison, I have observed the following factors in the individual case studies: 1) Czechoslovakia's motivation for exporting hydroexpertise and technology to the selected countries, 2) correlation with the goals and practices of foreign policy towards the given country, 3) specific forms and shapes of contract implementation and their changes over time, 4) interdependence and dynamics of Czechoslovak hydroexpertise and technology in contact with foreign expertise and technology. The comparison should suggest answers to the questions of how the objectives, forms, and practices of Czechoslovak technopolitics towards the African states changed over the period from the 1960s to the 1980s. Furthermore, it should identify what the role and position of our water experts was in terms of these practices.

In the **fifth chapter**, the thesis focuses on the bearers of "socialist" water management expertise at home and abroad, i.e., the Czechoslovak experts. Using a representative sample of six selected individuals, it looks at the experts not only as being actors in the process of Cold War internationalisation and the global circulation of knowledge, but also as human beings made of flesh and blood. The selected experts have served in prominent positions within international organizations or have repeatedly and successfully applied their expertise abroad. The chapter also presents a probe into the selection process, pre-departure preparation and especially the daily life of experts in a foreign, often alien environment and challenging geographical conditions. The chapter is partly based on my study *Margins of Everyday Life of Czechoslovak Experts in Africa. Motivation - Nomination - Preparation - Emigration?* published in the Prague Papers on History of International Relations.<sup>72</sup> The chapter builds on Snadrine Kott's thesis that the Cold War was not merely a kind of "dead period" of political and cultural internationalism, but rather a living period stimulated by the rivalry between universalist models of East and West. Kott considers cooperation, whether intergovernmental or inter-agency, to be the most visible manifestation of internationalism.<sup>73</sup> This paper focuses specifically on

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<sup>72</sup> MAZANEC, J.: *Margins of Everyday Life of Czechoslovak Experts in Africa. MoFvaFon - NominaFon - PreparaFon - EmigraFon?* in: Prague Papers on the History of International Relations, Prague: Institute of World History, NO. 1-2, 2021, pp. 66-79.

<sup>73</sup> KOTT, S.: *Cold War Internationalism*, in SLUGA, G., CLAVIN, P.: *Internationalisms a Twentieth-Century History*, Cambridge University Press: 2017, pp. 340-341.

scientific and technological internationalism, which may include the export of hydroexpertise and hydrotechnology from Czechoslovakia to African countries.

The chapter is based on interviews with experts, and it also uses their own documents, or estates held by their families (e.g., René Sameš, Antonín Petlach), or transferred to the care of the Archives of the National Technical Museum (ANTM). Here, the funds of "Ladislav Votruba" and "Alois Kraus" are being used. The estate contains diary entries, biographical documents, professional materials of a technical nature, records from business trips, academic work, and photographs. Their published and unpublished memoirs proved to be a rich source of information, especially that on the everyday life of experts abroad. Of course, this type of sourcing should also be handled with care, as it may contain subjective views of experts, potentially tinged positively in their favour. Jaroslav Balek wrote down his memoirs in the book *Agentem ve vlastních službách*, which he self-published in 2005.<sup>74</sup> Alois Kraus did the same in his unpublished-yet book *Inženýrský životaběh* in the early 1990s.<sup>75</sup> René Sameš also briefly wrote his own curriculum, but never published it; it remained unpublished along with other materials in his estate. Antonín Petlach gave several interviews to the media and a memorial magazine of the regional Museum of Blansko outlining his experiences in Ghana and other events.<sup>76</sup>

This thesis also uses interviews I conducted with experts Antonín Petlach, Jiří Šíma, Otto Hofmann, Zdeňka Věříšová, Věra Samešová (wife of René Sameš) and Renée Trnková, nee. Samešová (daughter of René Sameš).

I chose the aforementioned hydroexperts because they were all successful professionals in their field. In addition to major projects in Czechoslovakia, they were successfully involved abroad too, and thus contributed to the export of Czechoslovak hydroexpertise to the Global South countries, whether on the territory of international organisations (Kraus, Balek, Sameš) or in the framework of foreign contracts of Czechoslovak companies (Petalch, Šíma). In all cases, these were men - women rarely worked in the field of hydroexpertise, and even more rarely went abroad. Furthermore, these are experts "from the field" so to say, who had at least a few months of hands-on

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<sup>74</sup> BALEK, J.: *Agentem ve vlastních službách*, Lulu: Tábor 2008.

<sup>75</sup> KRAUS, A., *Inženýrský životaběh*, Praha 1992 (unpublished manuscript).

<sup>76</sup> PETLACH, A.: *Vzpomínky blanenského rodáka na půlroční působení v Ghaně v roce 1961 v rámci československé komplexní skupiny techniků pro hydroenergetický průzkum*, in: Sborník Muzea Blansko. Muzeum Blansko, Blansko 2006, pp. 101–108.

experience abroad. Another reason for this selection is that their active years cover the period from the 1930s up to present. Kraus went out in the 30s and 40s, Petlach in the early 60s, Sameš in the 60s-70s, Balek in the 60s-80s and Šíma has been posted internationally since the early 80s to this date. This temporal coverage allows for a good comparison with each other.

In addition to "field experts", a second group of top experts involved in water exports could be "office experts". These would include academics (such as Theodor Ježdík, Ladislav Votruba or Jan Smetana) who have from time to time produced a report or an assessment, and administrators in management positions in the relevant ministries or companies. However, this work does not focus on them.

The chapter also draws on materials from the Archive of Security Forces (ABS), in particular the funds "Bundles of Secret Collaborators (TS)". Due to regular trips abroad, many experts were monitored or listed as collaborators at various levels of cooperation. This source should be handled with the utmost caution, as some of the experts may not have been fully informed about this "cooperation" and the bundle may have been "built up", for example, only on the basis of regular interrogations after their return from abroad. I have worked with the bundles of experts Jaroslav Balek (codename "KALÁB"), René Sameš (codename "ZDENĚK VESELÝ") and Alois Kraus (codename "PIONÝR").

In the sections focusing on the everyday life of the experts, I have supplemented the perceptions of the water experts along with the perspectives of some other Czechoslovak experts or their family members. These are the physician Jan Foustka, pharmacists Zdeňka and Otomar Věříš, Věra Samešová and Renée Trnková, nee. Samešová. There is certain logic for me to have proceeded in this way - hydroexperts abroad usually did not form separate groups, they travelled with their families and were in contact with other Czechoslovak (and other) emigrants.<sup>77</sup> Using their perspectives also allows for a broader scope of research vision and intersects with reality all the better.

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<sup>77</sup> According to the entry in Antonín Petlach's diary, Jan Foustka and his wife Eugenia even met Sameš's group on 27 November 1961 in Sekondi Takoradi.



## Chapter 1

### Global Entanglements of Czechoslovak Hydroexpertise

*"Our hydro engineers have a wealth of experience originating from the huge investment constructions in Czechoslovakia, their technical skills and maturity have contributed to the good name of Czechoslovak science, technology and industry abroad. The importance of their activities abroad can be assessed in terms of technical, commercial and political contribution to our national economy and to the further development of science and technology [...]. For example, Hydroprojekt and its experts have participated significantly in all activities abroad in the field of hydrotechnical, hydropower, sanitation and water management [...]." <sup>78</sup>*

*Josef Holoubek – Participation of Czechoslovak Hydro Engineers Abroad*

Czechoslovakia was one of the leaders of the Eastern Bloc in the field of industry and water management. As early as 1950s, it began to export its water management know-how and technology. Initially it was to the friendly socialist countries, later to the so-called global south countries and then to countries with links to capitalist countries, or even directly to them. How did Czechoslovakia turn out to be one of the global hydraulic actors? When, to whom, how and why did it start exporting its capacities in this field? Despite the geopolitical realities of the Cold War, there was a vigorous global circulation of knowledge in the field of water expertise, and Czechoslovak expertise was part of it, almost continuously.

The first part of this chapter focuses on the formation of Czechoslovak water management expertise and technology. This introduction is necessary to understand why Czechoslovakia was able to actively send its hydroexperts and machinery almost worldwide after 1960. It draws heavily on Jiří Janáč's texts dealing specifically with Czechoslovak "hydrocracy".

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<sup>78</sup> HOLOUBEK, J.: *Účast československých vodohospodářů v zahraničí*, in: *Vodní hospodářství*, No. 5, 1960, pp. 221-222.

The second part offers an insight into the first attempts to export water technologies, which took place before the communist coup in 1948. Using the example of the foreign activities of the Czechoslovak company Lanna a. s. and the expert Alois Kraus, it demonstrates the links between the "old and new" system and the continuity of the internationalisation of Czechoslovak hydroexpertise.

The third part analyses the objectives and forms of Czechoslovak water exports and their development in the period 1948-1989 using specific cases. It also offers some periodization of these activities in the context of the Cold War. Abroad, the most active part of the Czechoslovak water sector was played by the state-owned company Hydroprojekt. The experts of this company, in the words of its long-time director Josef Holoubek, *participated to a significant extent in all activities abroad in the field of hydrotechnical, hydropower and sanitation water management*. However, Hydroprojekt was not the only entity operating abroad, and therefore later in this chapter I will, at least marginally, discuss other institutions and companies performing especially in the field of water research, too.

## **Formation of Czechoslovak Hydroexpertise**

Water management structures have a long-standing tradition in Czechoslovakia. The history of the first "modern" water works dates back to the Austro-Hungarian period. At the end of the 19<sup>th</sup> century, the first dam made of quarry stone was built in Slovakia in the Korytnická valley (1882), the second brick dam was the 16 m high Mariánské Lázně dam (1896), the purpose of which was to supply the nearby spa town with utility water. At the same time, the first retention reservoirs were built in Moravia and in the Jizera Mountains to protect adjacent settlements against floods. Then, at the beginning of the 20<sup>th</sup> century, dams began to be built to supply water to the developing industry, e.g., the 41.5 m high dam near Chomutov (1904). The history of dams in the Czech lands also contains certain dark chapters - in 1916, the recently completed dam on the Bílá Desná River broke, killing dozens of people, with an additional effect being the elicitation of a general distrust of earth dams. Because of this incident, no major dam of this type was built in Bohemia for the next 30 years.<sup>79</sup> Water engineering started to develop dynamically in the Czech lands

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<sup>79</sup> VOTRUBA, L.: *Naše velké vodní stavby socialismu*, Prague 1954, pp. 22-28.

at the same time when the famous Delta Barrage, the Low Aswan Dam (Egypt) or the Tansa Dam (India), etc., were built.

Although plans for the construction of high dams on Czech rivers appeared as early as at the beginning of the twentieth century, construction projects focused mainly on small hydroelectric power plants until the 1930s, accompanied by the construction of weirs and navigation facilities, while reservoirs were built mainly for flood protection and water storage.

Already during the 1920s and 1930s, a capable expert community was growing in Czechoslovakia and the country was gradually building a well-established and institutionalized hydraulic bureaucracy (aka hydrocracy). Furthermore, as Jiří Janáč notes, there was a vision of a national programme of development of water resources. This programme was articulated in the first half of the twentieth century in line with a general concept of a 'hydraulic mission', i.e., as a blueprint for the industrialisation of Czech and Slovak rivers.<sup>80</sup>

It is only after the Communist takeover of 1948 that one can see a decisive shift towards preference for hydropower, high dams, and centralised river basin management.

In the process of accumulation of knowledge on dam construction, a specialised institute for designing water structures, the Hydroprojekt company, emerged to play a key role. Following the Soviet example, the Czechoslovak government initially gathered all formerly private construction engineering agencies and united them under an umbrella institution, the Stavoprojekt. Later, though, it also established a specialised Central Water Management Authority. Around that time, virtually all East European socialist countries created local mutations of the original Soviet Gidroproekt Institute with the same aim: to enable a rapid industrialisation and modernisation through water development.<sup>81</sup> Since 1952, Hydroprojekt had been a crucial constituent of the Czechoslovak hydropower dam-building programme and designed virtually all Czechoslovak dams.

By the mid-1950s, the Central Water Management Authority, together with scientific institutions (especially the Committee for Large Dams of the Czechoslovak

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<sup>80</sup> JANÁČ, J.: *Building Hydrosocialism in Czechoslovakia*, in: *Global Environment*, Vol. 13, No. 3, October 2020, pp. 610-633.

<sup>81</sup> *80<sup>th</sup> Anniversary of the Birth of Academician Sergei Yakovlevich Zhuk*, in: *Hydrotechnical Construction*, Vol. 6, no. 9 (1972), p. 893. JOSEPHSON, P. R.: *Industrialized Nature: Brute Force Technology and the Transformation of the Natural World*, Washington DC: Island Press/Shearwater Books, 2002), pp. 36-17.

Academy of Sciences and the Water Research Institute), domestic producers of hydropower machinery (ČKD Blansko, Sigma Olomouc and Škoda Plzeň, at that time known as V. I. Lenin Works) and water-construction companies, formed a large industrial complex aimed at a rapid transformation of Czechoslovak rivers. Within a decade, between 1953-1963, the volume of water retained in reservoirs multiplied and so did the production of hydropower. Between 1955 and 1960, 4-5 new dams were completed each year, and between 1960 and 1965, the installed output from hydropower dams grew by 200MW a year. The number of dams grew from 33 in 1950 to 88 in 1970, with the total installed output of hydropower increasing from 58 MW to 1120 MW and the volume of water retained in reservoirs multiplying dramatically from 254 to 3,088 mil. cubic meters.<sup>82</sup>

In the process (rather than prior to it), Czechoslovak institutions rapidly formed and accumulated the scientific, engineering, and technical capacities needed to meet the ambitious objectives of the water management plan and especially of the hydropower programme. Besides learning by doing (i.e., following and adopting the Soviet example) and organising study trips to the USSR, Czechoslovak side utilized Soviet experts also directly, as they were involved in the development of Czechoslovak large-dam projects acting as advisors. Their participation consisted for the most part in the supervision of the dams' engineering design, construction plans, and scientific principles on which they were supposed to function, i.e., dynamic hydrology methods, which calculated the impact of new structures on the hydraulic regime based on the idea that it can be, more or less, freely altered. Soviet engineers also provided technical plans and calculations for the use of new materials (types of concrete) and technologies (higher capacity turbines for higher gradients/heads). It can be assumed that these facts brought the Czechoslovak and Soviet expert community closer together, along with technological standardisation, enabling better communication and encouraging better sharing of experience.

As Jiří Janáč reports, in the late 1950s, the Czechoslovak government – in response to Stalin's death, subsequent destalinisation of economy, and the economic crisis of 1958 - had halted new project of the hydropower programme. Post-Stalinist economic expertise considered the use of 'multipurpose' dams for energy production economically

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<sup>82</sup> KRAUS, A.: *Vývoj výstavby vodních přehrad ve světě a v ČSSR*, in: *Vodní hospodářství*, No. 8, 1965, pp. 365-375.

less effective than the thermal (coal-based) or emerging nuclear power technologies. Czechoslovak experts (represented by Hydroprojekt and the relevant committee of the Academy of Sciences) opposed this view and, aside from mounting a spirited defence of dams, pointed out that would be a huge waste to break up such a well-functioning dam-building industry. They did not manage to reverse the policy decision though. Czechoslovak dam-building expertise found itself in a position where it would either face a grim future - or find new opportunities elsewhere.<sup>83</sup>

### **Early Export of Czechoslovak Hydroexpertise**

The export of Czechoslovak hydroexpertise and technology abroad took off in full swing in the early 1960s, however, several attempts had been made earlier. Hydroexpertise and technology were already among the successful trade items before the communist takeover in 1948. At that time, of course, it was not the state to get directly involved in the transactions, rather private companies. Among the most important exporters of water management construction projects, machinery for power plants, etc. were Škoda a. s. and Lanna, a. s. While Škoda specialised mainly in the field of engineering, Lanna had dozens of large infrastructure projects in Czechoslovakia related to rail and ship transport (tunnels, dams, locks, etc.). Both of these Czechoslovak companies often cooperated in winning and implementing foreign contracts.

Lanna was active in the Middle East in the 1930s. It managed to win many contracts in Iran, for example building massive grain silos in Tehran.<sup>84</sup> It also built a water pipeline in the capital. Immediately after the Second World War, they then participated in the Saveh Dam project, which was to replace the old arch dam from the Shafi'i period (16<sup>th</sup> century). The client was the Iranian Ministry of Agriculture, and prominent experts Ladislav Votruba and Professor Theodor Ježdík, the father of Czechoslovak dam building, contributed to the project as external consultants. During the implementation of the Saveh dam project, in the spring of 1948, the Lanna company was nationalised and transformed into a newly established company Československé stavební závody.<sup>85</sup> The Iranian side did not care for

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<sup>83</sup> National Archive of the Czech Republic (hereinafter referred to as NA), archival group Czechoslovak Communist Party - Central Committee 1945-1989, Prague, Presidium 1962-66, vol. 71, Memorandum on the importance of hydroelectric power plants and on the construction of hydroelectric works, item 75/14.

<sup>84</sup> Státní oblastní archiv Praha (hereinafter referred to as SOA Prague), f. LANNA, a.s, carton 3, Pošta Teherán 1938 (Letters from Tehran 1938).

<sup>85</sup> GERŠLOVÁ, J., SEKANINA, M.: *Lexikon našich hospodářských dějin*. Prague: Libri 2003, p. 184.

the nationalization, considering it an internal matter of the company, and the contract continued.<sup>86</sup>



**Fig. 1: Inspection of Czechoslovak experts at Saveh Dam, Iran, (1940s).**  
Source: Archive of ČVUT, f. Theodor Ježdík, k. 71, 9/6/2/ Saveh (Írán).

In January 1948, Lanna sent one of its experts, who had already had experience of longer working stays abroad and had a command of foreign languages, on an initial six to twelve-month trip to India. This was the engineer Alois Kraus. He had previously worked on the construction of the aforementioned grain silos in Iran, and, after the war, he had himself suggested to the company's management that the failing Tehran branch office should be transferred to India, where extensive waterworks construction was envisaged after the British left. Kraus's task in India was to establish contacts, map export opportunities, monitor situation in the construction industry and the general conditions for Lanna's penetration of the country.<sup>87</sup>

Kraus travelled extensively during his stay in India. He visited many of the old water works built by the British in Punjab, Bikaner and other areas of the Indian subcontinent since the late 19<sup>th</sup> century. He also visited works under construction or planned at the

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<sup>86</sup> SOA Prague, f. LANNA, a.s, cartons 2, 23, Přehrada Saveh (Saveh Dam), 1939-1950.

<sup>87</sup> Archive of the National Technical Museum (hereinafter referred to as NTM), f. 718 - Alois Kraus, ing., carton 1, Smlouva s firmou Lanna (Contract with Lanna Company), 29.11.1947.

time, such as the American Bhakra Dam project on the Setley River.<sup>88</sup> He also held talks with many local experts and administration officials. He was opened the door to higher circles by former Kapurthala State Prime Minister Dewan Jarmani Dass, to whom Lanna's management had contacts from the company's days in Tehran in the second half of the 1930s.

As a result of Kraus's work, a preliminary agreement was reached with the Ministry of Public Works of the Indian state of Patiala to build the 150 m high concrete Dochi Dam (also known as the Ashni River Project) in the Himalayas.<sup>89</sup> Furthermore, a Czechoslovak-Indian construction company with a 50% Indian share was to be formed. Czechoslovakia was to supply the "organisation and brains", the Indians the money (about a million rupees) and the whole company would operate "under Indian coating". According to Kraus's analysis, after the British left, most of the British experts moved to Pakistan, which was more friendly towards them. India did not have enough experts of its own, but it also wanted to demonstrate that it was in control of the situation. Hence the 'Indian smear'.<sup>90</sup> Kraus concluded the aforementioned agreements subject to the approval of the Czechoslovak government. During his stay, however, Lanna was nationalised in the spring of 1948 and incorporated into the national company Czechoslovak Building Plants. Kraus was recalled back to Prague in April and the top authorities of the company issued a negative opinion on the Indian involvement. However, the Ministries of Foreign Trade, Foreign Affairs, Finance, Industry and the National Bank of Czechoslovakia were interested in doing business in India and the original negative opinion of the company was revised. However, due to the delays and the unclear position of Czechoslovakia, the Indian side eventually awarded the project to the Americans.<sup>91</sup> The latter were also very active in the area and Kraus already saw them as strong competitors in his first reports from India: *'We are encountering the strongest competition from the Americans. For the construction of a dam in northern India, the Indians invited the best American expert, Sawage. The Americans are interested in India. They are expensive, they ask for dollars, but they are the*

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<sup>88</sup> KRAUS, A.: *Inženýrský životaběh*, p. 18. (manuscript)

<sup>89</sup> Between 1948 and 1956, i.e., when Alois Kraus was working there, there was the so-called *PaFala and East Punjab States Union (PEPSU)* in the Indian subcontinent. It was a union of 8 small states with Pa+ala as their capital. This union dealt with the development of its water resources completely autonomously. Today, Pa+ala is part of the Indian Union State of Punjab.

<sup>90</sup> NTM, f. 718 - Alois Kraus, Carton 1, Dopis Kraus-Lanna (Letter Kraus-Lanna, Delhi), 4.3.1948.

<sup>91</sup> NTM, f. 718 - Alois Kraus, carton 1, Překlad dopisu od Jarmani Dasse (Translation of letter from Jarmani Dass), 25.5.1948.

*fastest in delivery, execution and the best in quality.*"<sup>92</sup> Kraus cited the Swiss and Scandinavians (especially the Swedes) as other strong competitors of Czechoslovakia for water exports to India, where he said the Indian government did not perceive such a risk of "economic and political domination" as with the Americans and therefore often favoured them.<sup>93</sup>

Alois Kraus did not want his work to go to waste, he perceived the Indian contracts as a great opportunity and pressed the Czechoslovak institutions in every possible way not to throw away this opportunity. He therefore proposed the establishment of a Czechoslovak engineering office in India to prepare further projects and monitor the local situation and conditions. Although Kraus's idea was approved by the inter-ministerial council and a three-member expert group consisting of Jan Mudra, Alois Kraus, and Zdeněk Jiroušek was to travel to India in April 1949, and everything was to be handled administratively by FTC Kovo, the departure did not take place. Alois Kraus was recalled by decision of the Central Committee of the Communist Party of Czechoslovakia to deal with the crisis of the Orava Dam construction, and without his personal contacts and knowledge of the environment, the vision of the office in India was meaningless. The Indian project was thus cancelled.<sup>94</sup>

The case of the 'Indian engagement' demonstrates the 'importance of the experts themselves, their personal connections and individual experience for the success of Czechoslovak water exports and for their continuity. It then goes on to show that 1948, the communist takeover and the nationalisation of companies in some respects did not create a sharp break in the history of the export of water know-how and technology. The new regime needed the old experts and, in many cases, built on the foreign activities of private companies. The case of Alois Kraus, on the other hand, shows that the experts often concentrated on the technical execution of the projects themselves, and the political dimension did not play much of a role for them - they did not worry too much about whether the contract would take place under the banner of Lanna or under a nationalised company and they adapted accordingly. The historians Štaif, Spurný and Rákosník also write about the continuity through 1948 in their book on the milestones of

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<sup>92</sup> NTM, f. 718 - Alois Kraus, carton 1, Zpráva č. 2 (Report No. 2), Bombay, 14.1.1948.

<sup>93</sup> NTM, f. 718 - Alois Kraus, carton 1, Zpráva o Indii II (Report on India II), June 1948.

<sup>94</sup> NTM, f. 718 - Alois Kraus, carton 1, Dopis Král-Kraus (Lef er Král-Kraus), Prague, 19.2.1949.



Czech modern history. According to them, the communist seizure of power in February 1948 did not represent a sharp break, but rather the culmination of a kind of "moderate phase" of the revolution that had already begun in 1945.<sup>95</sup> Changes in the structures or personnel of institutions, companies and society occurred gradually during the 1950s.

### **Czechoslovak Hydraulic Institutions, Companies, and their Changes**

Czechoslovak water management institutions played a key role in the export, so this section presents their development.

The process of organizational and institutional formation of water management in Czechoslovakia was quite complex and with frequent changes. The nationalisation, which did not avoid large construction companies such as Lanna, a. s., has already been mentioned. In the first post-war years, the management and planning of water construction in the country was shared by many regional authorities and offices. This situation began to change in the period 1949-1951, when the sector was centralised, and new organisations were set up.

In 1951, the existing State Research Institute of Hydrology and Hydraulic Engineering in Prague and part of the State Institute of Hydrology and Meteorology in Bratislava became the Water Research Institute (VÚVH) with branches in both cities. These institutes had hydraulic laboratories capable of handling various calculations, simulations, and measurements. Other collaborating institutions were engaged in the research of hydropower (Research Institute of Energy Prague), meteorology, hydrology, or geology and related fields (Civil Engineering Geology Prague, Academy of Sciences, Czech Technical University Prague, Brno University of Technology, etc.).<sup>96</sup>

In 1952, the regional water management offices were merged into the Water Development Centre (VRS), which acted as the main investor of water structures. At the same time, the hydrological and hydrographic services were transferred to the VRS.<sup>97</sup>

From the point of view of designing new works, the establishment of the Hydroprojekt company with its headquarters in Prague was crucial. The company was

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<sup>95</sup> RÁKOSNÍK, J., SPURNÝ, M., ŠTAIF, J.: *Milníky moderních českých dějin, krize konsenzu a legifmity v letech 1848-1989*, Argo: Praha 2018, pp. 169-170.

<sup>96</sup> ŠEMBERA, J.: *Řízení a organizace vodního hospodářství*, in: *Vodní hospodářství*, Series A, No. 5. 1985, p. 117.

<sup>97</sup> ŠEMBERA, p. 117.

established in 1952 mainly from the specialised Stavoprojekt, which was a state design organisation, part of the Czechoslovak Construction Plants, n.p., created by nationalisation of many design offices and private designers in 1948. Hydroprojekt was inspired by the Soviet model (Gidroprojekt Institut) and had branches in Brno, Blansko and Bratislava. In the mid-1950s, when domestic water construction was at its peak, Hydroprojekt Praha had five departments with about 25 employees each.<sup>98</sup> From the 1970s onwards, its Slovak branch, Hydroprojekt Bratislava (in 1966 renamed Hydroconsult Bratislava), also became active in the international arena.<sup>99</sup> The company was able to take care of all stages of project preparation: from bidding and surveying, through preparatory works and comprehensive documentation, and all the way to actual implementation. This centralisation of majority of human expert capital in one main water agency enabled care for personnel growth of the expert community and was thus a significant factor in favour of export. Unlike in Yugoslavia, for example, where there existed several expert agencies (Hidrotechnika, Hidroelektra Niskogradnja, Ingra, Energoprojekt), Czechoslovakia did not experience phenomena such as a tug-of-war between experts of competing (albeit state-owned) companies, which could potentially hamper foreign projects.

In its foreign activities, Hydroprojekt often used the services of research institutions, especially those specialised in water management, that is, the Research Institute of Water Management (VÚVH).

The Soviet influence in the Czechoslovak water industry at the beginning of the 1950s was manifested not only in the structure of the new institutions, but also in the profiles of the experts. Experts who had transferred to the new institutions from the original ones or from companies such as Lanna, a.s., were gradually joined by experts who had spent part of their studies in the Soviet Union and transferred this experience to Czechoslovakia.<sup>100</sup> Soviet experts were directly involved as consultants, for example, in the construction of the Orlik dam.<sup>101</sup>

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<sup>98</sup> Biography of René Sameš, Sameš family archive, Prague.

<sup>99</sup> ZMEŠKAL, K.: *Třidsať roků Hydroconsultu BraFslava*, in: *Vodní hospodářství*, No. 9, 1982, pp. 225-227. <sup>100</sup> For more on the Sovietisation of Czechoslovak water management see JANÁČ, J.: *European Coasts of Bohemia. Negotiating the Danube-Oder-Elbe Canal in a Troubled Twentieth Century*, dissertation, Charles University, 2012, pp. 133-145.

<sup>101</sup> KREDBA, M.: *Využití zkušeností z vědecko-technické spolupráce se Sovětským svazem ke zřizování našich velkých vodních staveb*, in: *Vodní hospodářství*, No. 6, 1957, pp. 141-144.

In the mosaic of Czechoslovak organisations and institutions associated with water management, the educational institutions that produced new experts must not be missing. It was already possible to study water management in the pre-war period, but the closure of Czechoslovak universities by the Nazis in 1939 also affected the technical universities in Prague and Brno. In the first post-war years, the pre-war curricula continued to be followed until the great reorganisation of 1950-1953. At that time, two courses of study were set up at the faculties of civil engineering in Prague, Brno and Bratislava - water management and construction and transport. The new curricula reflected the current water management tasks, especially the work on the State Water Management Plan. The length of the studies was 9 months, later 5 years. In the mid-1980s, the three universities mentioned above produced about 270-300 experts per year, which was less than the sector needed and could employ. Then there was a period in the 1960s when only 130-150 new experts graduated annually.<sup>102</sup> Turbine experts studied at the mechanical engineering faculties in Prague and Brno, and later also in Bratislava. Hydrologists and hydrogeologists at the Faculty of Science of Charles University in Prague.

After 1989, most institutions underwent further transformation, for example, the state company Hydroprojekt was transformed into Sweco a.s. after privatisation in 1992, etc.<sup>103</sup> The continuity in the Czechoslovak/Czech water sector thus de facto continues to this day.

## **Under the Auspices of the Ministry of Foreign Trade: Export of Czechoslovak Hydroexpertise since 1960s**

Czechoslovakia started exporting its water management knowhow in the early 1950s. Czechoslovak export activities can be classified as taking place in four main areas: 1) preparation of water management projects, 2) sending experts, 3) recruitment of foreign students in relevant fields to study in Czechoslovakia or their training directly at foreign universities, and 4) supply of technological projects and machinery.

Before 1960, exports were heading almost exclusively to the socialist countries of Central and Eastern Europe or to the friendly non-European countries, such as China or

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<sup>102</sup> BROŽA, V., MASIAR, E.: *Čtyřicet let výchovy inženýrů-vodohospodářů na stavební fakultě*, in: *Vodní hospodářství*, Series A, No. 5, 1985, pp. 135-137.

<sup>103</sup> SWECO, a.s., <https://www.sweco.cz/o-sweco/>, Accessed: 23.3.2023.

North Korea. In early 1960s, in connection with a new direction of Czechoslovak foreign policy which reflected the process of decolonisation, especially in Africa (and undoubtedly also as a result of the phasing out of the Czechoslovak hydropower programme), the export of water technologies and experts began focusing on so called developing countries. This shift was driven by several factors. First of all, Czechoslovakia thereby found good use for its hydropower industrial complex, whose potential, despite its excellent quality and professionalism, could no longer be fully used at home. The era of rapid construction of large waterworks in Czechoslovakia had passed. In contrast, the newly emerging, mainly African states saw development of water management as a great opportunity: after all, it was partly both the capitalist and the communist model of modernisation. But their governments usually lacked the necessary expertise, technology, money and therefore looked abroad. This climate of 'hydro demand' very well suited the Czechoslovak 'hydro supply' offer. Aside from this, Czechoslovak hydro-expertise was also brought to use in various development projects of international organisations from the late 1960s onwards.

The export of Czechoslovak hydro-expertise was largely based on a successful domestic model of planning and construction of water resources which developed in the 1950s under the influence of the Soviet Union and rested on a technocratic, developmentalist notion of developing society through a comprehensive management of water resources. The model thus relied not only on technical solutions but also on planning mechanisms (elaboration of water management plans) and their scientific basis (hydrogeological mapping, energy network planning). One thus could not simply separate dam construction from the overall perception of hydro-exploitation as a tool of managing the relationship between water and society.

Czechoslovak hydraulic companies were since 1960s represented in the acquisition and implementation of foreign tenders by so-called foreign trade companies (FTC), which functioned under the auspices of the Czechoslovak Ministry of Foreign Trade. This institution had its roots in the pre-war period of the so-called First Czechoslovak Republic (it functioned from 1920-1922, then it was abolished). In connection with the changes in the economy and the liquidation of private companies after the communist takeover in Czechoslovakia in 1948, foreign trade was gradually monopolised. It continued to be conducted only through the so-called foreign trade companies (FTCs), which had

monopolies on the import and export of all goods, raw materials, expertise and technology. The Ministry of Foreign Trade coordinated these companies, its representatives acted as commercial attachés directly in embassies around the world, and the FTCs often had their so-called commercial and technical representatives there. Their task was mainly to search for business opportunities, deal with tenders, and maintain contacts. Over the years, companies were established, disappeared or transformed in various ways, so their number fluctuated, but it was in the lower dozens. In terms of internal structure, the FTCs were usually divided into departments according to the territories to which they directed their activities. For example, FTC Škodaexport had three main divisions in the early 1980s - Latin American, Afro-Asian and Chinese.<sup>104</sup>

Most important of these companies for our case were FTC Polytechna (est. 1959), which focused on recruitment and sending of experts, FTC Strojexport (est. 1953), FTC Škodaexport (est. 1965), and FTC Technoexport (est. 1953), which in addition to sending experts also supplied equipment and technologies.

### **Transformations of Czechoslovak Hydropolitics during the Cold War**

Czechoslovak hydropolitics underwent several transformations during the Cold War. In general, the following periodisation can be proposed based on the facts described above. Each period will then be discussed in more detail:

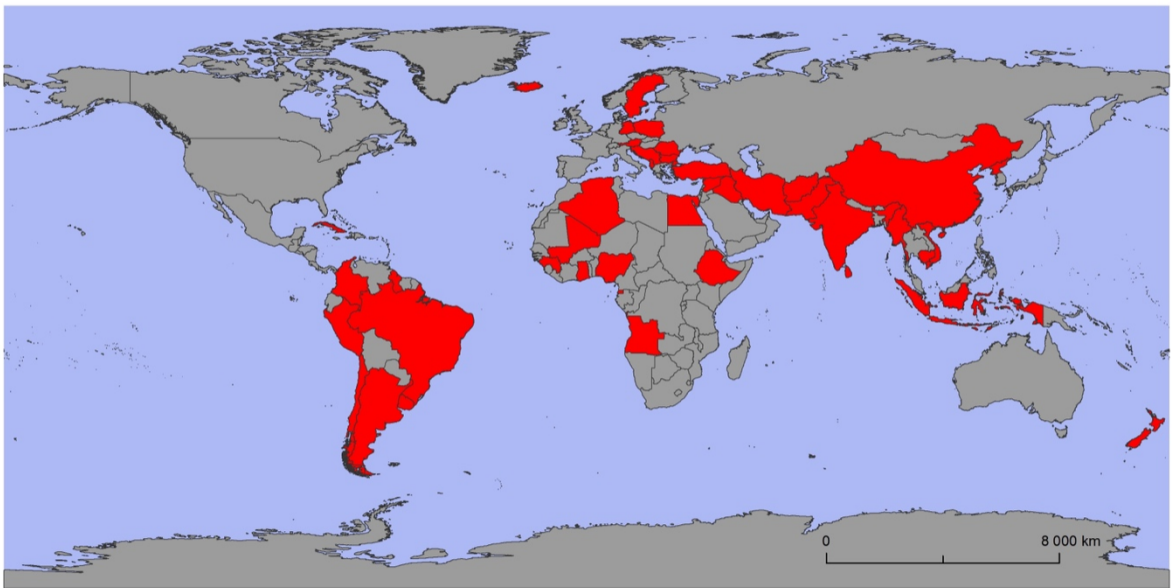
- 1) Throughout the 1950s, export focused on the provision of assistance to ideologically friendly states based on bilateral agreements on scientific and technical cooperation. One could thus speak of a 'period of bilateral brotherly assistance'.
- 2) After 1960, Czechoslovakia started to become more involved in international tenders and export of water management shifted more towards the sale of expertise and technology in exchange for hard currency. During this period, export of hydro expertise and technology is being transformed into a 'hydro money machine'.
- 3) From the 1970s onwards, one can speak of a 'period of involvement in global development projects and trade'. Czechoslovakia in effect gave up on efforts to

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<sup>104</sup> Interview with Ofo Hofmann , Říčany, 25.7.2023.

export socialist ideology and its model of modernisation (especially to developing countries). Instead, it focused on maximising financial gain from the export of water expertise and technology through its foreign trade companies (FTCs). During this time, it had also become much more involved in international development projects, where - aside from prestige - a significant part of motivation was, once again, economic gain.

#### **Export of Czechoslovak Hydraulic Expertise and Technology (1930s-1989)**



#### **"Fraternal Aid" and Water Exports in the Comecon**

Already in the 1950s, experts from Hydroprojekt were significantly involved in the planning and preparation of hydrotechnical and hydropower projects in the socialist countries of Central and Eastern Europe. In addition to assisting with the preparation of documentation for particular hydroelectric works or hydropower plants, they also helped with the development of hydrological plans and establishment of design, survey, and research institutions in the countries concerned. This cooperation was usually based on bilateral agreements on scientific and technical cooperation, one-off 'brotherly socialist brigades', or regular synergies within the framework of the Comecon.

In Poland, Czechoslovak hydro experts assisted during this period for instance with the planning and construction of the Oleszna, Brzeg, Dolny, and Kowonowo hydropower

plants and were involved in the planning of the possible uses of the San River. In Romania, they helped with the creation of a national hydropower plan, prepared comprehensive project documentation for the Lenin hydropower plant on the Bystriti River, technological documentation for Jiu I, II, and III hydropower plants, and participated in the planning and construction of the Remetti and Arges dams (Škoda). In collaboration with the Bulgarian Energohydroprojekt, they provided complete project documentation for five hydropower plants and offered to develop many others. Engineer Jiroušek assisted with the development of Bulgaria's national water management plan. In early 1960s, Hydroprojekt was involved in several consultations pertaining to Bulgarian water sector.<sup>105</sup> Hydroprojekt offered the government of GDR a project for the largest pumped storage hydropower plant in Central Europe, the Amalienhöhe. In Yugoslavia, the Czechoslovak Research Institute of Water Management participated in hydraulic research of the first concept of Jablanica hydropower plant.<sup>106</sup>

Speaking of non-European activities in the 'friendly people's democracies', Czechoslovaks were involved in China and North Korea before 1960. In China, this activity consisted in the preparation of water construction in the Yunnan Province and a broader assistance provided to Chinese experts at the State Project Institute in Kunming, which involved geologists, energy engineers and also water engineers. As far as North Korea is concerned, assistance took the form of repeated consultations, advice on the reconstruction of war-damaged waterworks and help with the construction of new hydropower stations. Hydroprojekt provided project documentation for all stages for the Chang-Chin-Gan I, II, and III, Budengan, and Khochen-Gan, as well as bidding projects for the Kange and Don-Ro-Gan powerplants.<sup>107</sup> This cooperation took place within the framework of the Czechoslovak-Chinese Cooperation Treaty of 1957, which was enabled by the Treaty of Friendship and Cooperation Between People's Republic of China and the Republic of Czechoslovakia signed in the spring 1957.

In many cases, including quite prominently the Chinese one, Czechoslovak assistance followed up on earlier traditions of cooperation. Interwar Czechoslovakia was intensively involved in non-European markets - and energy was one of its exports. In

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<sup>105</sup> JEŽEK, J.: *Úpravná vody pro zásobení Sofie*, in: *Hydroprojekt*, No. 3, 1969, pp. 14-16.

<sup>106</sup> HOLOUBEK, J.: *Účast československých vodohospodářů v zahraničí*. In: *Vodní hospodářství*, No. 5, 1960, pp. 221-222.

<sup>107</sup> *Ibidem*.

China, Czechoslovakia had before the Second World War participated in the construction of one of the first industrial powerplants. In the 1950s, during the 'golden age' of Czechoslovak-Chinese relations, Czechoslovakia sent a considerable number of experts and supplied engineering equipment for thermal powerplants (Škoda) based on agreements on technical cooperation.<sup>108</sup> In terms of the scope of assistance as a whole, hydropower was just a marginal item (which was in line with Chinese energy policy). The construction of dams, which began on a massive scale in the 1950s, was driven by the need for irrigation, while electricity generation relied mostly on coal. In this context, the participation of Czechoslovak experts in the preparation of the Yunnan cascade can be viewed as a significant contribution to the origins of Chinese hydropower - and as such it was also presented in Czechoslovakia. Subsequent worsening of relations between the USSR and China unfortunately prevented further cooperation on a bilateral level.<sup>109</sup>

### **Development Activities and Foreign Trade**

In the late 1950s, Hydroprojekt took further steps to venture outside Europe. Export of hydroexpertise came to be seen as another way of boosting foreign trade and profits in 'hard currency'.<sup>110</sup> The initiative as a whole was very well aligned with the objectives of Czechoslovak foreign policy.

The winning of contracts to supply equipment for two sewage treatment facilities in Alexandria (1958-1959) and in Cairo North, Cairo South, and El-Minio waterworks corresponded with the government's efforts to strengthen ties with the Nasser regime and boost Czechoslovakia's overall position in Egypt. The Cairo South project was the first successful export undertaking of the Czechoslovak water industry. Experts believe that one of the reasons underlying the success of both this and various future similar projects was the original (patented) technical solution, different from that offered by various Western companies which tended to use more standardised, mass-produced machinery setups.<sup>111</sup>

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<sup>108</sup> JIANG, L.: *Development of Relations Between China and Czechoslovakia and Its Successor States, Czechia and Slovakia*, in: Chinese Journal of Slavic Studies, Vol. 2, No. 1, 2022, pp. 100-113.

<sup>109</sup> LAUEROVÁ, M.: *Vývoj ekonomických vztahů Československa a Čínské Lidové Republiky v letech 1949–1989*, (MA diss., Prague University of Economics and Business, Prague 2007).

<sup>110</sup> Czechoslovak koruna was non-convertible. One thus in effect could not use it to purchase Western goods, which was in short supply in the Czechoslovak market (electronics, luxurious consumer goods, etc.).

<sup>111</sup> HULÍK, K.: *Projekt a výstavba úpravní Cairo-Jih*, in: Sborník k 20. výročí založení Hydroprojektu, Praha: Hydroprojekt, 1972, p. 91.



Subsequently, Hydroprojekt got also involved in the construction of the Aswan High Dam. According to Cairo's initial idea, Czechoslovakia was to take responsibility for a timely and correct execution of the entire construction, which was to be based on an English design, constructed using Soviet supplies, and executed in cooperation with local contractors. Ultimately, though, Prague (much like the Soviet Union did earlier) rejected these demands, citing unrealistic terms and conditions. Instead, it decided to participate in this giant project by providing experts who functioned as consultants to Egyptian engineers.<sup>112</sup> This was one of the first major involvements of Czechoslovak hydro experts in the developing world.

As decolonisation progressed and interest in Africa - and the developing world in general - grew, Czechoslovakia went on to conclude agreements on scientific and technical cooperation with several of the newly established states. This opened the door to all kinds of experts, including the hydrotechnical ones. As early as 1959, René Sameš participated with Armenian engineers from Hidroproject Yerevan in explorations in Mali and Guinea. The survey concerned the potential use of energy of the Konkouré River above Souapiti Falls. The Soviet side later lost interest in further cooperation on this project, so the results of this survey were put aside, only to be used many years later by the French.<sup>113</sup>

Some experts helped with the development of water management in developing countries directly, that is, from positions within the state administration or scientific institutions. In early 1960s, Karel Viták served as head of the Water Management Department of the Ministry of Public Works in Guinea, while a Water Planning Institute was established in Iran (1973) at the suggestion of Milan Jermář.<sup>114</sup>

Further cooperation based on bilateral agreements began in 1961 with the Kwame Nkrumah regime in Ghana. This assistance involved the dispatch of a three-member group of experts who would conduct a hydrological survey of south-western Ghana and try to identify suitable sites for future hydropower dams. The mission bore fruit: two years later,

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<sup>112</sup> Archives of the Ministry of Foreign Affairs, (hereinafter referred to as AMZV), f. Teritoriální odbory (TO) - Ordinary (O), 1945-1959, United Arab Republic (SAR), carton 9, Záznam o poradě o rozsahu a formách čs. technické účasti při stavbě Asuánské přehrady (Record of a meeting on the extent and forms of Czechoslovak technical participation in the construction of the Aswan Dam), 7 March 1959.

<sup>113</sup> Biography of René Sameš, Sameš family archive, Prague.

<sup>114</sup> VITÁK, K.: *První skupinový vodovod v Guinei*, in: *Vodní hospodářství*, No. 1, 1961, pp. 451–454; Biography of René Sameš, Sameš family archive, Prague; JERMÁŘ, M.: *Rozvoj a problémy vodního hospodářství Íránu*, in: *Vodní hospodářství*, No. 10, 1973, pp. 269–272.

Hydroprojekt won a contract to design the Hemang and Tanoso hydropower dams.<sup>115</sup> Records of negotiations between the Czechoslovak President Antonín Novotný and Kwame Nkrumah at the 15<sup>th</sup> session of the UN General Assembly in New York in 1960 indicate that on the table was even Czechoslovak involvement in the construction of one of the largest hydroelectric works in Africa, the Akosombo Dam.<sup>116</sup> Although direct Czechoslovak participation was eventually dropped, the fact that it had been discussed can be seen as attesting to the high quality and good international reputation of Czechoslovak hydroexpertise in the early 1960s.

Among Hydroprojekt's other important non-European contracts, its cooperation with Cuba should be also mentioned (1962). Soon after the Cuban revolution, Czechoslovakia became involved in development aid and one of the first results was the supply of projects and power equipment for the nascent Cuban energy programme.<sup>117</sup> Czechoslovak companies supplied turbine generators for the Hanabanilla hydroelectric dam, a dam on the Rio Yara, which - in keeping with the concept of hydro development - went hand in hand with electrification, irrigation, and construction of a town and a clinic. Hydroprojekt also prepared documentation for a treatment facility of Havana's wastewater on the Almendares River and managed the supply of mechanical and technological equipment. Aside from this, Czechoslovak experts also taught at the Technological University of Havana.<sup>118</sup> Later, in the 1980s, Hydroprojekt built pumping plants in Cuba.<sup>119</sup>

An interesting example of Hydroprojekt's direct cooperation with Western companies can be found in the case of Guyana (1974), where Hydroprojekt (represented by René Sameš), commissioned by, and in cooperation with, Philipp Brothers, an American aluminium company, prepared a study on the use of Guyana's water resources to supply water and electricity to a foundry in Linden, whose construction had only just started. The

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<sup>115</sup> SAMEŠ, R.: *Vodní díla Hemang a Tanoso*, in: *Vodní hospodářství*, No. 11, 1968, pp.487-490.

<sup>116</sup> NA, Archiv ÚV KSČ, f. Antonín Novotný, carton 99, Ghana, Pomoc ČSSR při industrializaci Ghany, 30 October 1960 (Czechoslovakia's Assistance in the Industrialisation of Ghana), 30 October 1960, p. 19.

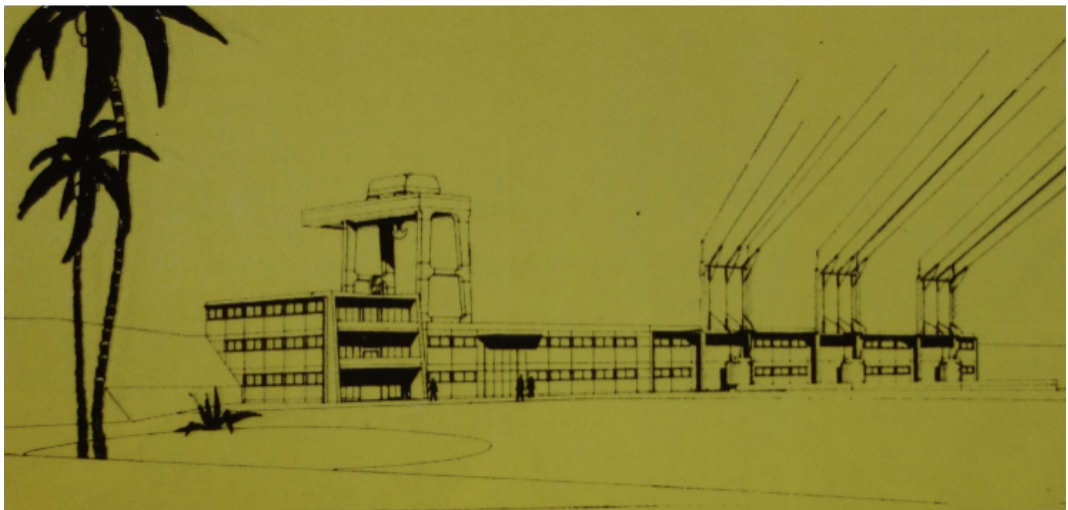
<sup>117</sup> BORTLOVÁ, H.: *Czech Tractors, Cuban Oranges: Economic Relations between Socialist Czechoslovakia and Revolutionary Cuba*, in: *Central European Journal of International and Security Studies*, Vol. 7, No. 3, 2013, pp. 77-95.

<sup>118</sup> JANOTA, J.: *Vodní hospodářství Kuby*, in: *Vodní hospodářství*, No. 1, 1963, pp.11-14.

<sup>119</sup> BENEŠ, J.: *Mezinárodní spolupráce ve vodním hospodářství*, in: *Vodní hospodářství*, No. 5, Series A, 1985, pp. 126–128. Cf. also SUCHÝ, Z., PAWIGER, E.: *Přečerpávací vodní elektrárna na Kubě*, in: *Hydroprojekt*, Vol. 6, No. 18, 1981; UHER, P.: *Zásobení tepelné elektrárny Felton na Kubě chladící vodou*, in: *Hydroprojekt*, Vol. 22, No. 3, 1985, pp. 33–34.

project involved plans to build a dam on the Upper Mazaruni River and modification of the profile of the Kuribrong River.<sup>120</sup>

As mentioned above, besides Hydroprojekt, various research institutions also participated in the export of Czechoslovak hydroexpertise. Among their non-European engagements, we can mention for instance the guarantee measurements at the Uda-Walawe hydropower station in Sri Lanka, research on the sluice gates of the Bariri hydropower station in Brazil on the Tietá River (tributary of the Paran), or hydrotechnical research on the Samarra hydropower station, which was part of the Wadi Tharthar hydroelectric project on the Tigris. These projects were mostly facilitated by FTC Technoexport and carried out by the Research Institute on Water Management in Bratislava.<sup>121</sup> Later, in early 1980s, the Research Institute of Energy in Prague conducted a study on electrification of Central Angola.<sup>122</sup>



**Fig. 2: Hydroelectric power station at Sammarra (Iraq) planned by Hydroconsult Bratislava**

Source: Czechoslovak Foreign Trade, Vol. 16, No. 1, January 1976, p. 26.

The abovementioned Bariri dam project, together with the construction of a dam supplying the new Brazilian capital Brasilia, became probably the most visible result of Czechoslovak hydroexport in terms of domestic propaganda. Several documentaries (weekly journals) dedicated to both constructions emphasised the contribution of

<sup>120</sup> Biography of Ren Sameš, Sameš family archive, Prague.

<sup>121</sup> HAINDL, K., ŠTICH, O.: *Uplatnní eskoslovenskho vodohospodrskho vzkumu v zahranii*, in: *Vodn hospodrstv*, No. 5–6, Series A, 1970, pp. 135-140.

<sup>122</sup> ONDRUŠEK, V.: *Možnos energieckho využit vodnch tokov v Angole*, in: *Vodn hospodrstv*, No. 1, Series A, 1986, pp. 17–20.

(unnamed) Czechoslovak engineers as representatives of the developed world to improving the lives of the 'natives' and transforming the society of far-away countries along the direction of modernist ideals inherent in state socialism. Czech technology (turbines) thus contributed to the spread of the 'socialist' model of modernisation, whose aim - at least on a rhetoric level - was to achieve a secular, economically and ethnically classless society emancipated from the limitations of natural environment and historical development. This is how we can read the following enthusiastic statement which appeared in one of these films: *'Bariri was not, however, the end. It was the beginning of an invasion of Czech turbines to Brazil.'*<sup>123</sup> *Bariri*, together with other projects developed in Latin America in the 1960s, documents the preference of Czechoslovak foreign policy for 'business as usual' regardless of the nature of local political regimes. While in Cuba, Ghana, or Egypt, the export of Czechoslovak hydroexpertise corresponded to the general foreign policy of the Soviet Bloc, which was directed at providing support to ideologically aligned governments, the political situation in Brazil was less straightforward in this respect: Brazil remained Czechoslovakia's most important trading partner in the region even after the 1964 coup d'état, which brought a military dictatorship to power.<sup>124</sup>

Nevertheless, *Bariri* opened a new chapter in the Czechoslovak dam export. ČKD Blansko provided the technical equipment needed for a successful Czechoslovak bid in the tender, thus embarking on what proved a successful reorientation from the domestic market towards the foreign ones. In particular, from the markets in socialist Europe towards those in developing countries. Still in the 1960s, ČKD (mostly in cooperation with Hydroprojekt) supplied turbines for hydropower dams in Cuba, Brazil, Pakistan, Iceland and several other countries.<sup>125</sup>

Hydroconsult, the Slovak branch of Hydroprojekt, became active in the international arena a little later than its Prague sister. In addition to the contract in Guinea, it also managed to win contracts in Algeria in the 1970s, mainly for urban studies for residential and industrial construction and for the planning of roads and wastewater

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<sup>123</sup> BŘEZINOVÁ, K.: *Turbines and Weapons for Latin America: Czechoslovak Documentary Film Propaganda in the Cold War Context, 1948-1989*, in: *Central European Journal of International and Security Studies*, Vol. 7, No. 3, 2013, pp. 38-58.

<sup>124</sup> *Ibidem*.

<sup>125</sup> POLÁK, K., PLUHAŘ, Z.: *ČKD Blansko Závody Jiřího Dimitrova n.p. 1698–1973*, Blansko: ČKD Blansko 1973), pp. 23-24.

treatment plants. Over 70 Czechoslovak experts from various companies and organisations went on to work on those contracts.<sup>126</sup>

Since 1969, the company Vodní stavby has been building water towers and reservoirs in Kuwait in cooperation with Military Constructions o. p. and Armabeton n. p. All dealings with the investor, which was the Ministry of Energy and Water of Kuwait, were handled by FTC.<sup>127</sup>

In the 1980s, Czechoslovakia, together with other Comecon states, participated in the development of Vietnamese economy, which has been disrupted by the prolonged conflict. Czechoslovaks were involved mainly in supplying machinery for irrigation. Sigma Olomouc supplied socialist Vietnam with several dozen pumping units, which were used on coffee plantations in the Gai Lai Kon Tum province.<sup>128</sup> Export of machinery was of great importance to Czechoslovakia, which had (and still has) an export-oriented economy with a long tradition in engineering. Technological equipment for hydropower plants and other water management infrastructure (waterworks, irrigation, etc.) was therefore an important ingredient of export. The most successful item in foreign export turned out to be the so-called technological units, which included both design and supply. In addition to Sigma Olomouc, Hydroprojekt also cooperated with such companies as ČKD Blansko (the main supplier of technology), Škoda Plzeň (the main supplier of generators), EZ Praha (which supplied the electrical part of projects) and FTC Škodaexport and Strojexport, two companies responsible for mediating contracts and representing suppliers abroad.

In the 1970s, four comprehensive technological projects were finalised: a pumped-storage hydropower plant in Kadana, India, a hydropower plant in Agua dei Toro, Argentina, a pumped-storage hydropower plant in Los Reyunos, Argentina, and a hydropower plant in Penitas, Mexico. The value of equipment exported for these projects totalled over USD 25 million.<sup>129</sup> Another successful Latin American engagement in the

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<sup>126</sup> Archives of the Czech Academy of Sciences, collection Commission of the Presidium of the Czechoslovak Academy of Sciences for Complex Research on Developing Countries, book 6, Letter of Director Zmeškal to the Commission of the Presidium of the Czechoslovak Academy of Sciences for Complex Research on Developing Countries, 4 September 1980.

<sup>127</sup> SOA Prague f. Vodní stavby, příloha 5, carton 116, Organizační řád výstavby vodních věží a nádrží v Kuvajtu (Tendr č. 7.) (Organizační Regulační podmínky pro výstavbu vodních věží a nádrží v Kuvajtu (Tender No. 7)), 14.4.1971.

<sup>128</sup> METELKA, K.: *Problema Fka závlah ve Vietnamské socialistické republice*, in: *Vodní hospodářství*, No. 2, series A, 1981, pp. 41–44.

<sup>129</sup> BEDNÁŘ, P.: *Pomoc Hydroprojektu při vývozu technologického zařízení vodních elektráren a přečerpávacích*

1970s was Hydroprojekt's participation in an extension of an underground hydropower plant for Electropera, known as "Machu Picchu" in Aguas Calientes, Peru, where the design was co-authored by René Sameš.<sup>130</sup>

In addition to the selected projects presented above, which had been implemented and completed, there were also projects that remained in the form of a mere bid or proposal. From the 1960s until early 1990s, Hydroprojekt staff and experts from other Czechoslovak companies and institutions prepared dozens of bid projects for various international competitions around the world. These included bids for the design of all kinds of waterworks and technological equipment for hydroelectric power plants in Albania, Argentina, Brazil, Indonesia, Pakistan, Sweden, Turkey, Syria, Uruguay, India, Indonesia, Colombia, Iceland and New Zealand.<sup>131</sup>



**Fig. 3: Advertisement of the company Sigma Olomouc in Czechoslovak Foreign trade journal**

Source: Czechoslovak Foreign Trade, Vol. 16, No. 4, April 1976, p. 26.

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*Elektráren*, in: Hydroprojekt, No. 1, 1982, pp. 9–10.

<sup>130</sup> Biography of René Sameš, Sameš Family Archive, Prague.

<sup>131</sup> Various issues of *Vodní hospodářství*, e.g., HOLOUBEK, J.: *20 let Hydroprojektu*, in: *Vodní hospodářství*, Vol. 22, No. 3, 1972, pp. 53.

## International Organisations

Czechoslovakia long sought to be an active international player, using its water management know-how to do so. This section discusses its involvement in international organisations and their projects.

Through FTC Polytechna, Czechoslovakia participated in the development activities sponsored by the United Nations (especially UNDP, UNESCO, WHO), etc., many of which were related to the construction of water infrastructure such as wells, waterworks, water treatment plants, dams, electrification, etc. FTC Polytechna usually handled communication with agencies, administrative agenda and selection of the pre-departure preparation of experts. The actual execution of the contract tasks then lay with the experts or professional companies such as Hydroprojekt, Hydroconsult or a research institute. The projects also often involved multiple contractors from different countries.

An example of this happening is the study of comprehensive use of the Sava River basin in Yugoslavia (1968-1975), which was carried out by Hydroprojekt (60% of the contract scope) in consortium with the Italian firm Carlo Lotti (40% of the contract scope) under contract with UNDP.<sup>132</sup> Another international project was the construction of the Hydraulic Laboratory in Phnom Penh and the project of a large river model of the Mekong River in the Quatre Bras area (Cambodia) in 1968, which was carried out for UNESCO by VÚVH Bratislava in cooperation with Hydroconsult.<sup>133</sup> Then, in the late 1970s and early 1980s, Hydroconsult, in cooperation with other Czechoslovak institutions, was awarded a large contract by the World Meteorological Organization (WMO) under the UNDP. The contract amounted to almost half a million USD. It was for the development of a water management plan for Central Guinea.<sup>134</sup>

Czechoslovak hydroexperts active in international institutions achieved high and responsible positions. This was partly due to the system of filling these positions, which tried to respect a kind of an East vs. West balance, and partly because Czechoslovakia had enough experienced professionals in this sector. For example, René Sameš, who had

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<sup>132</sup> BAŠTA, B.: *Studie komplexního využití řeky Sávy v Jugoslávii*, in: *Vodní hospodářství*, No. 6, Series A, 1976, pp. 201-207.

<sup>133</sup> HAINDL, K., ŠTICH, O.: *Uplatnění československého vodohospodářského výzkumu v zahraničí*, in: *Vodní hospodářství*, No. 5–6, Series A, 1970, pp.135-140. Contract between UNESCO and Czechoslovak Foreign Trade Corporation and Technical Cooperation (Polytechna) National Hydraulics Laboratory at Phnom Penh CAM.9, Cambodia, in FR PUNES AG 08 Secretariat Records, item A/293/3.2, UNESCO Archives, Paris.

<sup>134</sup> Letter from Director Zmeškal, LIŠKA, K.: *Vodohospodářský plán střední Guiney*, in: *Vodní hospodářství*, No. 9, Series A, 1982, pp. 246-249.

extensive experience gained from many foreign trips, managed the so-called Three Reservoir Project in Burma (today's Myanmar) in 1968-1971, which dealt with the water supply of the then rapidly growing capital Rangoon (then 3.7, now 6 million inhabitants) and the large provincial cities of Moulmein and Akyab by building high dams for water supply, massive overhead pipelines and pumping stations. This was a joint project contracted between UNDP and the Burmese government. In his capacity as "UNDP Project Manager", he prepared and designed these structures in collaboration with the local technical staff and, despite the precarious security situation, on site in Burma.<sup>135</sup> Ladislav Votruba, Chairman of the Czechoslovak Dam Committee and one of the pupils of the father of Czech dam building, Professor Theodor Ježdík, was elected Vice President of the International Commission on Large Dams (ICOLD) in the 1970s.<sup>136</sup>

Jaroslav Balek became a senior official of the United Nations Environment Programme (UNEP) in 1987 and coordinated many international projects from the organisation's headquarters in Nairobi, Kenya.<sup>137</sup> Prior to that, Balek had run training courses for hydrologists from "developing countries" under the auspices of UNESCO - the first such course was held in Zambia in 1972. His aim was to offer short-term training in various fields of water management to local experts in their own country without the need for expensive travel to Europe for training, and thus to help increase their numbers. *Several post-graduate courses have been organised in Europe and the United States, attended by engineers from African countries. However, the graduates have mostly filled key administrative posts in ministries, international organisations, etc. There is little interest in field work. The problem is mainly one of salaries and social prestige. There are also known cases where a less attractive field position is held in combination with another profession, an example being the head of the Upper Nile regional office who, in addition to measuring key Nile profiles, runs a tailoring shop and a general merchandise store.*<sup>138</sup> Balek organised similar courses for UNESCO in the early 1980s in Zimbabwe, India and other places.<sup>139</sup>

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<sup>135</sup> Biography of René Sameš, Sameš Family Archive, Prague.

<sup>136</sup> BROŽA, V. et al.: *Ladislav Votruba, DrSc. (1914-2002)*, Prague: ČVUT 2014.

<sup>137</sup> BALEK, J.: *Agentem ve vlastních službách*, Tábor: Lulu 2008, p. 183.

<sup>138</sup> BALEK, J.: *Hydrologie v rozvojových zemích tropické Afriky*, in: *Vodní hospodářství*, No. 6, Series A, 1973, p. 141.

<sup>139</sup> BALEK, J.: *Agentem ve vlastních službách*, p. 140, 157.



Despite the geopolitical realities of the Cold War, there was a vigorous "global circulation of knowledge" in the field of water expertise. Czechoslovak water management was practically in constant contact with the world's expert circles. In addition to membership in international professional organisations such as ICOLD, International Commission on Irrigation and Drainage (ICID), International Association on Water Pollution Research (IAWPR), etc. Experts from Czechoslovakia regularly and actively participated in major professional conferences, world congresses and symposia (e.g., the V World Energy Conference in Vienna - 1956, the VII Dam Congress in Rome 1961, etc.).<sup>140</sup>

Close international cooperation and coordination of certain activities between water managers took place on a regular basis also within the framework of the Comecon structures, for example, various excursions and study tours. One such trip took place in 1958, when a group of experts from several Czechoslovak water management institutions (ČVUT, Ingstav Brno, VÚS Bratislava, Hydroprojekt Prague) went to the Soviet Union for 22 days to study hydromechanisation. The programme included excursions to completed and ongoing water structures (the Volga-Don Canal, the weirs on the Dnieper in Kremenchuk), research and design institutions (e.g. the Laboratory of Soil Mechanics of the USSR Academy of Sciences) and meetings with experts in Stalingrad, Moscow, Leningrad, Kiev, Kremenchuk and in the field.<sup>141</sup> In 1954, Ladislav Votruba and František Malý from the Czech Technical University made a study tour of Bulgaria with a focus on boulder dams and the potential for their possible use in Czechoslovakia. They also visited construction sites, design offices and experts at universities.<sup>142</sup> There were dozens of such excursions to "friendly countries".

Czechoslovak water experts also made business trips to western capitalist countries. For example, in May 1964, Alois Kraus, as Chairman of the State Commission for the Development and Coordination of Science and Technology, together with Leoš Hobst from the Research Institute of Engineering Construction, visited the 8<sup>th</sup> ICOLD Dam Congress in Edinburgh. As part of the congress, the two experts visited a number of

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<sup>140</sup> VÁŠA, J.: *Československá hydrologie v období závažných národních i mezinárodních akcí*, in: *Vodní hospodářství*, No. 8, Series A, 1973, pp. 133-134.

<sup>141</sup> NTM, f. 711 - Ladislav Votruba, carton 18, *Zpráva o cestě do SSSR pro studium hydromechanizace (Report on a trip to the USSR to study hydromechanization) 1958.*

<sup>142</sup> NTM, f. 711 - Ladislav Votruba, carton 18, F. Malý: *Balvanité přehrady v Bulharsku (Boulder dams in Bulgaria)*, July 1954.

completed and under construction dams in the British Isles, including the recently completed Ffestioniog, the largest pumped storage power station, and the Trawsfynydd nuclear power station.<sup>143</sup> A year later, in June 1965, Alois Kraus, together with Deputy Ministers of Construction Henrik Ramić and Jan Rychtář, even went on a study tour to Canada and the United States to learn about the preparation and construction of large hydroelectric projects in America. In Canada, the delegation visited nine water works, held talks with state investor organisations, representatives of the Secretariat for Science, the National Science Council and visited laboratories in Ottawa. In the U.S., they saw 10 dams in 7 states, held discussions with the Deputy Secretary of State, the leadership of the Corps of Engineers - U.S. Army, Federal Power Commissioners, the leadership of the Bureau of Reclamation, and visited their technical laboratories in Denver. In September of the same year, a reciprocal visit of the Americans to Czechoslovakia took place, which included excursions to six dams, a visit to the Water Research Institute in Prague, and the production of water turbines at ČKD Blansko. The visits included an extensive exchange of technical data and knowledge.<sup>144</sup> Several exchange trips were made to capitalist countries, including, for example, to France, the Netherlands, and Switzerland. After their return, the knowledge from the trips was disseminated in reports sent to selected institutions and companies, or the experts elaborated it into articles published in professional periodicals (e.g., the journal *Vodní hospodářství*).

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<sup>143</sup> NTM, f. 718 - Alois Kraus, carton 7 Státní komise pro rozvoj a koordinaci vědy a techniky, Výskumný ústav inženýrských stavieb, Poznatky z cesty po anglických přehradách (State Commission for Development and Coordination of Science and Technology, Research Institute of Engineering Construction, Notes from a trip to English dams) May 1964.

<sup>144</sup> NTM, f. 718 - Alois Kraus, carton 7, Státní komise pro techniku, Ministerstvo stavebnictví, Zpráva ze studijní cesty do USA a Kanady (State Commission for Technology, Ministry of Construction, Report from a study trip to the USA and Canada), June 1965. Note: For more information on this trip, see Chapter 5.



**Fig. 4: Study journey of Czechoslovak hydroexperts in USA and Canada (1965).**

Source: Archive of National Technical Museum, f. 718 – Alois Kraus, k. 7, USA a Kanada (1965).



**Fig. 5: Czechoslovak experts in Washington, USA (1965). Vaško, Ramič, F. E. Dominy, Kraus, Rychtář.**

Source: Archive of National Technical Museum, f. 718 – Alois Kraus, k. 7, USA a Kanada (1965).

## Conclusion

Czechoslovakia was one of the leaders of the Eastern Bloc in water management know-how and technology. The prerequisites for this position were a long water management tradition enabling the accumulation of experience and expert personnel, and an advanced machinery industry, especially for hydropower. An important moment was the centralisation of the design part of the sector into one leading agency - Hydroprojekt, established in 1952. Another cornerstone of success was the functional water management plan drawn up between 1949 and 1953, whose hydroelectric power branch in particular proved its worth.

Apart from the above-mentioned factors, the export of water management know-how and technology, in which Czechoslovakia was one of the world leaders after 1960, was preceded by several other factors. One of them was the establishment of a functional industrial complex under the leadership of Hydroprojekt, which was able to provide the design parts of foreign contracts and engineering companies such as ČKD Blansko, Škoda, Sigma, etc., which could offer pumps, turbines and other necessary equipment for hydroelectric power plants and other water management facilities. The high level of Czechoslovak water management research, in which the Research Institute of Water Management, the Czechoslovak Academy of Sciences and technical universities had the greatest share, also contributed to the success. The catalyst for the success of water exports to the Global South in the 1960s was a combination of the Cold War climate, the emergence of new states, and what I would describe as the 'aura' of a smaller state actor that was not so dangerous to work with.

Continuity is typical for Czechoslovak hydroexpertise. In principle, socialist Czechoslovakia directly followed the foreign activities of private companies in the field of water engineering and technology, which were nationalised after the communist coup in 1948 (e.g., the company Lanna a. s.). The key to this was the personal contacts of experienced "old-school" experts who were indispensable to the new regime. They themselves were mostly profiled as professionals who perceived the political dimension of water exports as the rhetoric of the times, rather than being passionately in tune with it or vigorously opposed to it. After 1989 and the change of regime in Czechoslovakia, many water companies were privatised (Hydroprojekt, Stavební geologie), but many

contracts continued or were created on the basis of contacts of individual experts during the socialist period.

In general, a rough periodization of Czechoslovak exports of water management knowledge and technology during the Cold War can be proposed. In the 1950s, exports focused on providing assistance to ideologically friendly states on the basis of bilateral agreements on scientific and technical cooperation. Thus, we can speak of a "period of bilateral fraternal assistance". After 1960, Czechoslovakia became more involved in international tenders, and water exports shifted more towards the sale of expertise and technology for hard currency, which the state desperately needed. In this period, the export of water management expertise and technology de facto turned into a kind of "water money machine". From the 1970s onwards, we can speak of a 'period of involvement in global development projects and trade'. Czechoslovakia basically abandoned its earlier efforts to export its socialist ideology and its model of modernisation (especially to developing countries). Instead, it focused on maximising financial gain from the export of water management knowledge and technology through its foreign trade companies (mainly Technoexport, Strojexport, Škodaexport, KOVO, etc.). At this time, it also became much more involved in international development projects where - apart from prestige - economic profit was again an important part of the motivation.

In some cases, the Czechoslovak government tried to use the success of hydroexpertise and technology to strengthen its political position in the target countries.

Czechoslovak experts regularly and actively participated in international conferences, congresses and symposia. They also undertook study trips to socialist and capitalist countries to exchange experience and share know-how. They were part of a global community of experts and participated in the circulation of water knowledge, which flourished despite the Cold War.

The success of the Czechoslovak water industry can be proven by the reputation of Czech and Slovak experts and the hundreds of signed foreign contracts. Many of the experts have won prestigious positions in international organisations (UNDP, UNESCO, UNEP, ICOLD, etc.) or in foreign agencies. More about them in Chapter 5.

## Chapter 2

### President's Cold War Gamble? Involvement of the Czechoslovak Hydro-Technopolitics in Ghana

*"The conclusions of our work may be beneficial to the development of south-western Ghana, where there are vast reserves of bauxite, manganese, iron ore, gold, diamonds and precious timber. [...] We have convinced both the common people and the President Dr. Nkrumah of that Czechoslovakia has a good name here. And our work, as we hope, has strengthened these good relations."<sup>145</sup>*

*René Sameš – Czechoslovaks Helping in Ghana*

These are the words of a leading Czechoslovak hydraulic expert, René Sameš, a lifelong employee of Hydroprojekt, who in the 1960s repeatedly travelled to Ghana to fulfil contracts that Czechoslovakia had concluded with this West African country. Almost immediately after the declaration of independence, Ghana became a very lucrative African country for Prague for several reasons. The first part of this chapter will outline the motivations and practices of Czechoslovak foreign policy in Ghana through an excursus into the development of Czechoslovak-Ghanaian relations. The idealistic, even utopian, notion of exporting and spreading socialism in Africa slowly faded when confronted with the reality, different mentality and needs of local leaders. Unpaid loans, delayed payments for investment units, ideological coldness, complicated functioning of the companies being established. In the second half of the 1960s, deeper pragmatism started to prevail in Czechoslovak-Ghanaian relations as well, which was further strengthened by the pro-Western coup of 1966, when the pro-socialist President Kwame Nkrumah was removed from power.

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<sup>145</sup> SAMEŠ, R.: *Čechoslováci pomáhají v Ghaně (Czechoslovaks helping in Ghana)*, Hydroenergetický průzkum pracovníky Státního ústavu pro projektování vodních staveb, Reportáž, in: *Svět v obrazech*, 1962, s. 10-11.

From the beginning of its presence in Ghana, Czechoslovakia actively sought to participate in government tenders for various development projects that were intended to help Ghana accelerate its economic, social, and economic transformation. The Kwame Nkrumah regime saw large-scale industrialisation and the necessary electrification as central to Ghana's transformation from a former colony into a self-reliant and independent African state. Its engine should be the massive water development, which is the subject of the second part of this chapter, aiming to demonstrate its importance.

The heart of the construction efforts was to be the so-called Volta River Project, particularly the Akosombo Dam. This iconic project was the focus of the research of Stephan Miescher, whose work I am following in this regard.<sup>146</sup> However, the development of the Volta River was not the only water project on the Ghanaian government's negotiating table in the early 1960s. Czechoslovakia, thanks to the capabilities of its hydroexpertise and its technological complex, was actively involved in Ghana's water development. This involvement, coordinated with Prague's foreign policy objectives in the country, serves a good example of Cold War "smaller actor" technopolitics. Czechoslovak water managers and Czechoslovak hydro technology were intended to strengthen Prague's position in Ghana and directly assist in fulfilling its foreign policy objectives. The reflection of this intention in practice is also reflected in Sameš's opening quote: *"And our work, we hope, has strengthened these good relations"*. The broader story of the link between Czechoslovak foreign policy and the export of hydro supplies and agricultural technologies to Ghana is described in the fourth part of the chapter. The fifth then focuses on one particular 1961 mission of the Czechoslovak Hydroprojekt that was crucial for Czechoslovak hydro export in Ghana, as its success opened the door for further engagement.

## **Czechoslovakia and Ghana - Evolution of Bilateral Relations**

Ghana, a former Gold Coast colony, was one of the first decolonised African countries to come under the spotlight of Czechoslovak foreign policy in the spring of 1957, shortly after

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<sup>146</sup>See e.g., MIESCHER, S., *Dam for Africa: Akosombo Stories from Ghana*, Indiana University Press 2022. MIESCHER, S., "'Nkrumah's Baby': The Akosombo Dam and the Dream of Development in Ghana," in: *Water History*, Vol. 6, No. 4 (2014), pp. 341-66. MIESCHER, S., TSIKATA, D., *"Hydro-Power and the Promise of Modernity and Development in Ghana: Comparing the Akosombo and Bui Dam Projects,"* in: *Ghana Studies*, Vol. 12/13 (2009/2010), pp. 55-75.

the declaration of independence from Great Britain. Official diplomatic relations were established in October 1959, following the example of the Soviet Union, and a few months later the Czechoslovak embassy in Accra opened.<sup>147</sup> The first ambassador was Josef Antoš (1924-2005), who had already had experience of leading a diplomatic mission in India.<sup>148</sup> Prague's motivation for the Ghanaian engagement was similar to that of other so-called Third World countries at the time. It was primarily about finding new outlets for engineering products, promoting socialism, and gaining raw materials. A significant motivation was also the gain of hard currencies (US dollar, British pound, Swiss franc), which, unlike the Czechoslovak koruna, could be bought on foreign markets.

The ideology of the Convention People's Party (CPP), the party of Ghana's first President Dr Kwame Nkrumah (1909-1972), was described by the Czechoslovak Foreign Ministry as "a colourful mixture of Marxist terminology and African nationalism". Ghanaian Minister of Defence, Kofi Baako (1926-1984), described it as a "non-atheistic socialist philosophy". The ideological cocktail of "nkrumahism" was mixed from the idea of a socialist-type society, the concept of the Pentecostalism and strongly anti-colonialist attitudes. It espoused capitalist freedoms, tribal tolerance, belief in God, world peace and the pursuit of social change through non-violent means. "Nkrumahism" initially raised hopes in Prague for the country's future drift towards socialism, although its full implementation was feared by Ghanaians.<sup>149</sup> Even with Kwame Nkrumah's socialist leanings, Czechoslovakia was not the only Eastern Bloc country to engage in Ghana; the governments of the GDR and Hungary, for example, were also interested in the country.<sup>150</sup> It was not rare for socialist states to compete with each other in their efforts to win

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<sup>147</sup> National Archive Prague (hereinafter referred to as NA), Archiv ÚV KSČ (Archives of the Central Committee of the Communist Party of Czechoslovakia), f. Antonín Novotný, k. 99, Ghana, Jednání o navázání diplomatických styků mezi Československem a Ghanou, (Negotiations on the Establishment of Diplomatic Relations between Czechoslovakia and Ghana), 19.9.1959, p. 17.

<sup>148</sup> Antoš started at the Czechoslovak embassy in India, which he temporarily managed as chargé d'affaires after the death of Ambassador Durdil. Ghana was his first posting as ambassador (1959-1962). Subsequently, he was posted as ambassador to Morocco (1965-1969). However, due to the astute of his office after the Soviet invasion of 1968, he was stripped of his membership of the Communist Party and finally fired from the MFA in December 1971, despite a critical shortage of experts on Asia and Africa. DEJMEK, J.: *Diplomacie Československa, Díl II. Biografický slovník československých diplomatů (1918-1992)*. Prague 2013, p. 273

<sup>149</sup> NA, Archiv ÚV KSČ, f. Antonín Novotný, k. 99, Ghana, Návštěva prezidenta republiky Ghana dr. Kwame Nkrumaha v ČSSR, (Visit of the President of the Republic of Ghana Dr. Kwame Nkrumah to the Czechoslovakia), August 1961 (undated), p. 25.

<sup>150</sup> For example, in 1966 Poland was building a sugar factory in Atsusuare, Yugoslavia a military port in Sekondi Takoradi, etc. Archive of the Ministry of Foreign Affairs of the Czech Republic (hereinafter AMZV), f. TO - T 1965-69, Ghana, k. 2, Postavení socialistických zemí (mimo ČSSR) v Ghaně (Status of Socialist Countries (except Czechoslovakia) in Ghana), Political Report No. 18/1967, 8.12.1967.



contracts from African governments - further weakening the earlier perception of the Cold War as an exclusive clash between 'East' and 'West'.

An important shift in relations between Czechoslovakia and Ghana occurred when President Antonín Novotný (1904-1975) met his Ghanaian counterpart Kwame Nkrumah (1909-1972) in September 1960 during the 15<sup>th</sup> session of the UN General Assembly in New York. The subject of the talks was possible future cooperation, especially in the field of Ghana's economy and industrialization.<sup>151</sup> The same year, the first delegation of the Ghanaian Parliament visited Prague. Czechoslovak representatives went reciprocally to Accra, where they signed agreements on trade, scientific, technical, and cultural cooperation in November 1960.

The trade agreement ensured trade on the basis of free currencies and opened the door to the activity of Czechoslovak foreign trade companies (FTCs), e.g. Strojexport, Polytechna, Technoexport, etc.

Czechoslovakia imported from Ghana mainly oilseeds, iron ore and diamonds, and especially cocoa beans - a key raw material for domestic chocolate factories. Later, the Czechoslovaks even built large storage sheds at the new Tema port to facilitate the transport of cocoa beans to Czechoslovakia. It was hoped that they would make it unnecessary to ship the beans via London, as had been the custom up to that time.<sup>152</sup> Given its geographical location and non-colonial past, easy access to these raw materials was not a given for Czechoslovakia.

Exports included mainly engineering products and consumer goods such as shoes, in which Czechoslovakia had a long tradition. The Czechoslovak economy was predominantly an export economy - this was reflected in export statistics compared to other Eastern European countries, and in the late 1950s and early 1960s Czechoslovakia dominated in Ghana.<sup>153</sup>

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<sup>151</sup> NA, Archiv ÚV KSČ, f. Antonín Novotný, k. 99, Ghana, Pomoc ČSSR při industrializaci Ghany (Czechoslovakia's Assistance in the Industrialisation of Ghana), 30.10.1960, p. 19.

<sup>152</sup> PRCHALOVÁ, O.: *Tema – nejnovější města Ghany*, in: *České slovo*, 14.2.1962, Private Collection of Antonín Peltach, Blansko.

<sup>153</sup> Otherwise, however, imports from Eastern Bloc countries into Ghana remained marginal compared to Western countries (especially the UK). The National Archives London-Kew (hereinafter referred to as TNA), DO 35/8657, Report on Economic Relations between Ghana and the Soviet Bloc Countries for the Quarter Ending 31<sup>st</sup> March 1959, May 1, 1959; Ghana's Trade with Soviet Bloc, G.W. Marshal to P. Jenkins, November 18, 1960.

The Scientific, Technical and Cultural Agreement paved the way for the dispatch of civilian experts from the fields of education, health, industry or culture, which began to take place immediately. The Czechoslovak Ministry of Foreign Trade and its companies (FTCs), especially Polytechna, played a key role in the export of expertise. The FTC Technoexport also provided some technical experts, if to a lesser extent. Unfortunately, it is impossible to ascertain the exact number, but hundreds of Czechoslovak experts were posted to Ghana from the early 1960s to the late 1980s.<sup>154</sup> Just a few months after the signing of the agreements, a group of Czechoslovak geologists went to Ghana (and Guinea) in order to conduct research on mineral resources, especially manganese deposits.<sup>155</sup> The agreement also opened the door for the preparation of specific investment projects.<sup>156</sup> These included machinery for sugar factories, breweries, shoe factories, aluminium cutlery and tyres.<sup>157</sup>

The year 1961 can be considered very important in mutual relations, as the Republic of Ghana opened its embassy in Prague and thus became the second country in tropical Africa, after Guinea, to have a permanent diplomatic mission in Czechoslovakia. In February, a three-member delegation led by the Chief of Police of the Republic of Ghana, Erasmus R. T. Madjitey, arrived to sign a special contract. More specifically, it was the supply of three thousand pistols, five hundred submachine guns with ammunition and accessories, and five thousand hand grenades for the needs of the Ghanaian police force. The Czechoslovak Government, after consultation with Moscow, agreed to the delivery, which was worth a total of £44,500 paid in cash, and with Soviet assistance, transported it to Ghana.<sup>158</sup> The “supply of special material” from Czechoslovakia served again as a catalyst deepening mutual cooperation. Later in May, the two countries agreed to provide

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<sup>154</sup> More about the system, selection and living conditions of experts in the chapter on experts.

<sup>155</sup> KUŽVART, M., NEUŽIL, J.: *V Ghaně a Guineji*, in: Ročenka populárně vědeckého, zeměpisného a cestopisného měsíčníku Lidé a Země, Publishing House of the Czechoslovak Academy of Sciences, Prague 1961, pp. 148-156.

<sup>156</sup> More about Czechoslovak experts e.g.; MUEHLENBECK, P., E., TELEPNEVA, N., (eds.): *Warsaw Pact Intervention in the Third World, Aid and Influence in the Cold War*, London 2018; MUEHLENBECK, P., E.: *Czechoslovakia in Africa, 1945-1968*, Palgrave 2016. MACKOVÁ-JÚNOVÁ, A.: *Export of Experts. Czechoslovak Academy of Sciences and Iraq in the 1960s*, Works from the History of the Academy of Sciences, 2018, no. 2, pp. 47-76; RICHTEROVA, D., PEŠTA, M., TELEPNEVA, N., *Banking on Military Assistance. Czechoslovakia's Struggle for Influence and Profit in the Third World, 1955-1968*, in: *International History Review*, Vol. 43, No. 1 (2021), pp. 90-108.

<sup>157</sup> NA, Archiv ÚV KSČ, f. Antonín Novotný, k. 99, Ghana, Jednání vládních delegací ČSSR a Ghany (Negotiations of the Government Delegations of the Czechoslovak Republic and Ghana), 31.12.1960, p. 21.

<sup>158</sup> NA, Archiv ÚV KSČ, f. Antonín Novotný, k. 99, Ghana, Dodávky speciálního materiálu do Ghany (Supplies of Special Material to Ghana), 17.4.1961, p. 24.

a loan of five million pounds sterling for the supply of capital items and industrial equipment. Two months later, Czechoslovakia hosted President Nkrumah in person. During the talks at the presidential level, Nkrumah asked for an increase in the loan to support Ghana's industrialisation by further £20 million, but the Politburo of the Communist Party of the Czechoslovakia only approved the sum of £10 million.<sup>159</sup> Another outcome of the negotiations took the form of the signing of an agreement on air links between Accra and Prague.

Still in the same year, Czechoslovakia, inspired by the Soviet Union, adopted a new foreign policy conception towards African countries, in which Ghana was characterised as a “country of primary interest”. The basic political objective of Czechoslovak foreign policy towards Ghana was to *assist in the liquidation of the remnants of the colonial system, primarily by supporting the efforts of the Ghanaian government to achieve economic independence for the country, especially independence from Great Britain*. It was also about the *correct political orientation of the country - towards socialism*.<sup>160</sup>

An interesting chapter of cooperation opened after the failed assassination of Kwame Nkrumah in August 1962. Ghana asked Czechoslovakia to send state security advisers to help set up a security and counter-intelligence service. This was a very sensitive subject requiring trust. Nkrumah justified his request on the grounds that Czechoslovakia, being also a small country, faced numerous similar challenges as Ghana did, and therefore Ghana relied on its help. Similar reasoning was also used by other Third World leaders, such as Fidel Castro. There was a logic to the preference for cooperation with smaller socialist countries. After all, dealing with them did not involve the risk of unreasonable future commitments as was the case of agreements made with the superpowers.<sup>161</sup> Prague acceded to Ghana's request and promptly dispatched two State Security officers.<sup>162</sup> Then, in November, Ghana asked for a further pyrotechnical examination of the explosives found in another attempted bomb attack in Accra. The examination was

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<sup>159</sup> NA, Archiv ÚV KSČ, f. Antonín Novotný, k. 99, Ghana, Podkladové materiály pro jednání s prezidentem Ghany Nkrumahem (Background Materials for the Meeting with President Nkrumah of Ghana), August 1961 (undated), pp. 25-26.

<sup>160</sup> AMZV, f. TO-T 1960-1964, Ghana, k. 2, Návrh koncepce československé zahraniční politiky vůči Ghaně (Draft Conception of Czechoslovak Foreign Policy towards Ghana), 25.10.1962.

<sup>161</sup> For more see KOURA, J. - WATERS, R.: “Africanos” versus “Africanitos” the Soviet-Czechoslovak Competition to Protect the Cuban Revolution, in: *The International History Review*, Vol. 43, Issue 1, 2021, pp. 72-89.

<sup>162</sup> NA, Archives of the Communist Party of Czechoslovakia, f. Antonín Novotný, k. 99, Ghana, Vyslání poradců v oboru státní bezpečnosti do Ghany (Secondment of State Security Advisers to Ghana), 11.9.1962, p. 31.

carried out by the Criminalistics Institute of the Main Administration of Public Security, which, paradoxically, identified some of the explosives as being a part of a series previously supplied by Czechoslovakia to the Guinean army. Despite the precariousness of the situation, the Ghanaian authorities received complete and unbiased expert information. The purpose of this move was to demonstrate openness and to *paralyse the Western whispers in Ghana that a socialist camp was behind the violence*.<sup>163</sup>

After the turbulent year of 1962, Ghana showed increased interest in contracts in the arms industry, and Czechoslovakia was to help build an arms and munitions plant. However, the implementation of most of the projects was accompanied by problems, because the Ghanaian side, as it turned out, was often unable to ensure the construction of buildings and the necessary infrastructure for the upcoming factories. For example, for a contract originally intended for machinery for the Komenda sugar factory, the Czechoslovak contractor received an additional request to build the entire factory on a turnkey basis, as well as to supply the cane plantations themselves. Prague tried to meet the demands of the Ghanaian government and, in the spirit of the Machiavellian credo "the end justifies the means", even considered cooperation with capitalist firms. The reason for this was the fear of the Ministry of Foreign Affairs that the possible failure of the contracts would endanger the reputation of Czechoslovakia as a supplier of investment units not only in Ghana but also in other countries of tropical Africa.<sup>164</sup> Despite the efforts of the Czechoslovak diplomatic mission in Accra, the representatives of the FTC and the highest officials of the regime, the results of the contracts were not very satisfactory.

Throughout the 1960s, there were also Czechoslovak-Ghanaian student exchanges, mainly connected with the University of 17<sup>th</sup> November, an institution founded in Prague in 1961. This university was to educate scholars from Third World countries and deepen their knowledge in various disciplines and Marxism-Leninism, following the example of the Patrice Lumumba University in Moscow and the Herder

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<sup>163</sup> Ibidem, Požadavek prezidenta Ghany Nkrumaha na provedení pyrotechnické analýzy nevybuchlého granátu (Request by President Nkrumah of Ghana for a pyrotechnical analysis of an unexploded grenade), 16.3.1963, p. 32.

<sup>164</sup> Ibidem, Opatření k realizaci dodávky investičních celků do Ghany (Measures for the Implementation of the Delivery of Investment Units to Ghana), 5.8.1963, p. 35.

Institute at Karl Marx University in Leipzig.<sup>165</sup> As part of the development of scientific relations between the two countries, Professor Oldřich Říha and Elena Zubková, a research aspirant from the Faculty of Arts of Charles University, undertook a trip to Ghana in 1962, which included several lectures in addition to visits to research institutions. Several Czechoslovak academics even worked in Ghana for a long time during the 1960s. For example, the philosopher and publicist Evžen Menert became a prominent figure in the newly established Kwame Nkrumah Institute of Ideology in Winneba.<sup>166</sup> Ferdinand Stočes, an expert on tropical agriculture, in turn lectured for three years as a full professor at the Faculty of Agriculture at the University of Ghana in Accra, serving as dean between 1965 and 1966.<sup>167</sup> Czechoslovak film experts were also sent to Ghana, and a group of Ghanaian trainees arrived at Barrandov seeking qualifications as technicians, editors and cameramen. In July 1961, the Ghanaian national football team played three victorious friendly matches in Prague.<sup>168</sup> Mutual contacts also took place in other sports, such as athletics.

Cooperation between Czechoslovakia and Ghana was largely frozen by the coup d'état of 24 February 1966, which removed the pro-socialist Kwame Nkrumah from power. The change of circumstances in Ghana and the new administration's leaning towards the West gradually brought about a significant cooling of relations with all the countries of the "socialist camp", including Czechoslovakia, accompanied by a deep decline in mutual trade. Ghana broke off relations with most socialist states, its embassies remaining open only in Moscow, Prague and Belgrade. Many of these countries' investments in Ghana were restricted or stopped altogether. The cultural and scientific spheres have also been affected by the cooling, for example, by the decline in the supply and demand for scholarship openings for Ghanaian students. In terms of experts, all Soviet and Chinese experts had to leave Ghana. Later on, the GDR consultants also had to leave, but experts from other socialist countries were allowed to stay in Ghana and, paradoxically, some countries were allowed to send in even more. Czechoslovakia was

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<sup>165</sup> More about this institution HOLEČKOVÁ, M. E.: *The Story of a Forgiven University, University of 17 November (1961-1974) and its place in the Czechoslovak educational system and society*. FF UK, Prague 2019.

<sup>166</sup> He later wrote a book about his time in Winneba. MENERT, E.: *Na západ od Londýna*, Prague 1967.

<sup>167</sup> Public Records and Archives Administration Department (hereinafter referred to as PRAAD), RG-11-2-43, University of Ghana Council Agenda and Minutes, Appointment of F. Stočes as Professor and Head of Department.

<sup>168</sup> AMZV, f. TO-T 1960-64, Ghana, Informace o Ghaně (Information on Ghana), 28.11.1961.

among them.<sup>169</sup> In February of the following year, several socialist journalists and diplomats were expelled, among them the Czechoslovak Press Agency (CTK) correspondent Jiří Pravda and the Czechoslovak commercial attaché Oldřich Hlavička.<sup>170</sup>

The last significant chapter of mutual relations written in the 1960s was an unsuccessful attempt by Czechoslovak intelligence to reverse political developments in Ghana through contacts with the local left. However, the coup (the "ALEX" action), which the intelligence officers had counted on the editor of the local newspaper *Spark*, Kofi Batsa (1931-1991), to lead, turned out to be impossible. Batsa, with whom the Czechoslovak intelligence residency in Accra had established contacts as early as 1963, was among the orthodox Marxists and supporters of Kwame Nkrumah. Initially, he supplied Czechoslovak intelligence with good information on the internal political situation in Ghana. Subsequently, he began to form a group around him, consisting of former prominent figures and several army officers, whose aim was to overthrow the new regime. Gradually, however, as intelligence pressed Batsa to carry out specific tasks, his organisational incompetence became apparent, as did his considerable exaggeration and fabrication when it came to coup preparations. For these reasons, and also because of the Ghanaian counter-intelligence interest in his person, the whole "ALEX" operation was eventually postponed indefinitely.<sup>171</sup> The StB closed its residency in Accra in 1971.<sup>172</sup> Although, for example, student exchanges and limited exports of investment units and experts continued, a "thaw" in relations between Prague and Accra did not occur until after the collapse of the Eastern Bloc in the early 1990s.

## **Water in the Middle of Everything - Ghana and Its Hydraulic Development**

During the British colonial administration, Ghana (the Gold Coast colony) was perceived as a rich, agriculturally oriented territory with mineral wealth suitable for mining. Narrowly focused industrialisation in specific sectors was subordinated to the needs of

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<sup>169</sup> AMZV, f. TO-T 1965-69, Ghana, Postavení socialis+ckých zemí v Ghaně (Status of Socialist Countries in Ghana), 8.12.1967.

<sup>170</sup> Ibidem, Vypovězení sovět. a čs. občanů z Ghany (Soviet and Czechoslovak citizens' expulsion from Ghana), 14.6.1967. TNA, FCO 35/155, Ghana expels four east Europeans, Times 7.6.1967.

<sup>171</sup> Archive of Security Forces (hereinafter referred to as ABS), f. 45044, a. no. 12306, Kofi Batsa, codename "LUPA".

<sup>172</sup> More on the planned coup TELEPNEVA, N.: *Saving Ghana's Revolution. The Demise of Kwame Nkrumah and the Evolution of Soviet Policy in Africa, 1966-1972*, in: *Journal of Cold War Studies*, Vol. 20, No. 4 (Fall 2018), pp. 4-25.

the domestic metropolis, i.e., London. Considerations of developing water resources and exploiting the country's enormous hydroelectric potential, particularly the Volta River, the most powerful stream in the area, emerged as early as the 1920s. However, the explorations begun in 1938 by Duncan Rose were soon interrupted by the Second World War. The damming of the Volta near Akosombo was first proposed by British geologist Albert Kitson. The cheap energy from the hydroelectric turbines was to be used to process the also cheap bauxite from the recently discovered large local deposits. This idea was revived by Rose and his West African Aluminium Co Ltd. after the war.<sup>173</sup> In 1949, the Gold Coast government commissioned Sir William Halcrow and Partners to prepare a report on the potential use of the Volta Basin. The report published two years later then identified Ajena (about two miles north of Akosombo) as the most suitable location for a new dam.<sup>174</sup> As Stephan Miescher notes, this was initially a de facto colonial project. Kwame Nkrumah, after becoming the first prime minister of the then still-independent Gold Coast in 1951, made it the centrepiece of his vision of a modern, and one day possibly free, independent Ghana.<sup>175</sup>

In 1955, after three years of comprehensive research, a report was published by the Volta River Preparatory Commission, under the direction of Robert Jackson, addressing the development of the watershed through a planned multipurpose dam project. Experts associated with the TVA project were involved as consultants to the project. Although the impact of this project is often overstated in the literature, it is demonstrable in particular case of Akosombo. According to the report, three projects may have contributed to better exploiting the potential of the Volta River in the future. These comprised the aforementioned large dam project at Ayena, near Akosombo, with an output of 617 megawatts. A survey of the terrain was carried out in 1958 by the American Kaiser Industries Company, which proposed to move the main dam on the Volta at Ajena about one mile further south in the interests of economy, and raised the question of building another, smaller dam below it. This was to be the Kpong Barrage, with a total output of 15-16 megawatts, and a further 50-60 megawatts in conjunction with the main barrage. The third dam mentioned in the report, the Bui dam, with a production of 65

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<sup>173</sup> E.g. African Studies Centre Leiden (hereinafter referred to as LEIDEN), Ghana, Development Plan (1951), p. 2.

<sup>174</sup> PRAAD, RG-17-2-496A, Volta River Project, Tema Press: 1965, p. 4.

<sup>175</sup> MIESCHER, *A Dam for Africa*, p. 55.

megawatts, was to be built on the Black Volta. The costly construction of all the hydroelectric dams was to be closely linked to the aluminium industry in order to make it worthwhile. The aluminium plant was envisaged as the guarantor of the energy consumption and thus also the return on the huge investment.<sup>176</sup>

From the outset, the ambitious project was accompanied by uncertainty about its financing. This was not dispelled even after Ghana gained independence at midnight on 7 March 1957, quite to the contrary. Problems were caused by the oversupply on the world aluminium market, which led to the withdrawal of a major sponsor, the Aluminium Company of Canada. Then there was the fact that the British government, another potential key investor, logically lost interest in pouring a huge amount of money into the development of a territory that had fallen outside its direct sphere of influence.

Even after gaining independence, water development remained at the heart of the new regime's concerns - as evidenced by all of Ghana's development plans of the time. The so-called Second Development Plan (1959-1964) devoted a lot of attention to the development of water resources, with a whole chapter on hydropower in particular: *"...The Government's ultimate aim is to attempt the total electrification of Ghana, while the immediate aim is to use hydro-electric power to electrify as much of the country as possible and to provide an abundance of cheap electric power for the development of industry..."*<sup>177</sup>

The subsequent development plan, the so-called Seven-Year Plan (1963/64-1969/70), saw the development of water resources, and in particular the Volta River Project, as the cornerstone of industrial, economic, and de facto societal development: *'Completion of the Volta Project will enable us to develop the industrial potential of Ghana. Indeed, the possibilities for our agriculture and industry will be completely revolutionised. First and foremost, the Volta Project will increase by nearly 500 per cent the installed electrical capacity of the country. Nearly one half of this new capacity will be taken up by the aluminium smelter in Tema. But there will be an ample reserve of power for other users, and Ghana will have liberated itself decisively from the possibility of power shortage becoming again a brake on the rate of economic progress.'*<sup>178</sup> The completion of the Volta

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<sup>176</sup> LEIDEN, Ghana, Second Development Plan (1959-1964), p. 68. PRAAD, RG-17-2-496A, p. 4.

<sup>177</sup> LEIDEN, Ghana, Second Development Plan (1959-1964), p. 68.

<sup>178</sup> LEIDEN, Ghana, Seven-Years Plan (1963/64-1969/70), p. xvi.



River Project was a necessity in the eyes of the Ghanaian government. Without it, it seemed impossible to develop, for example, the electro-chemical industry.<sup>179</sup> There was therefore no other choice but to look for strong investors without delay.

Kwame Nkrumah took advantage of the climate of cold war rivalry and played the "game of Akosombo" that made him one of the biggest gamblers of the era in Africa. Manoeuvring between Western and Eastern leaders, he tried to negotiate the most favourable terms for the materialisation of his concrete "baby". While trying to negotiate funding for the Volta River Project in Washington, he set in motion negotiations with the Soviets to build the Bui Dam and eventually to facilitate other water sector cooperation with the smaller Eastern Bloc states. This "practical form of non-alignment policy" put new wrinkles on the foreheads of Western leaders. Nkrumah can also be seen as an illustrative example of the adoption of water development ideas in a country of the Global South. Water development was not directly imposed on Ghana by the countries of the Global North; Nkrumah's own insistence was key to it.

London and Washington were well aware that, after Ghana's independence, increased penetration by the Soviet Union and other Eastern Bloc states into the country itself and into the West African space in general could be expected. Western analysts and politicians were nervous that the Soviets might be involved in any way in the Akosombo construction project. *Nothing would be more effective in opening Ghana to Soviet penetration than the creation of an impression that no effective external help for Volta by the West was likely.*<sup>180</sup> We can talk about the fear of the so-called "Second Aswan" or *avoiding the danger of encouraging a "High Dam mentality" in Ghana*.<sup>181</sup> That is to say, the fear that a major development project, which had the potential to be crucial to consolidating the position of the country and de facto of the whole of Africa, would be taken up by the Soviets due to the hesitation or complete withdrawal of Western countries, had happened in the case of the construction of the High Aswan Dam in Nasser's Egypt a few years earlier. British Prime Minister Harold Macmillan even wrote directly in a telegram to John F. Kennedy in November 1961: *I fear that if you were now to announce that you could not proceed with Volta, there would be a real danger of*

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<sup>179</sup> Ibidem, p. 107.

<sup>180</sup> TNA, T 236/4463, Countering of Soviet Bloc Economic Offensive, Country Studies – Ghana, 7.10.1958.

<sup>181</sup> Ibidem.

*repeating in West Africa what happened in Egypt when Foster Dulles made a sudden and ill-prepared change of line about the Aswan Dam.*<sup>182</sup>

During negotiations with the administrations of President Eisenhower, who was subsequently succeeded by John F. Kennedy, along with the British and World Bank representatives, changes were made to the project. These included the exact location of the dam, as well as future plans for Bui Dam and Kpong Dam. The aluminium industry was to move from the north closer to the coast to Tema, where it was to process imported bauxite until local production could be kick-started.<sup>183</sup> After many rounds of negotiations, the United States (the Export-Import Bank), the United Kingdom and the World Bank (the International Bank for Reconstruction and Development) decided to provide a US\$98 million loan to the Ghanaian government to finance the Volta River Project. Ghana paid the remainder, about US\$98 million more, from its capital reserves built mainly on the production of the cocoa industry.<sup>184</sup> As part of the agreements, the private Volta Aluminium Company (VALCO) was formed, bringing together Kaiser Aluminium and Chemical Corporation and Reynolds Metals Company. The so-called Master Agreement was signed on 22 January 1962 between the Ghanaian government represented by President Kwame Nkrumah and Edgar Kaiser of Kaiser Industries Corporation representing VALCO. The agreement stipulated, among other things, that a substantial portion of the power generated (about 370 megawatts) must be sold on a bargain basis for a period of 30 years to VALCO's aluminium smelter in Tema, or Kaiser Aluminium, which held a majority stake in VALCO.<sup>185</sup>

When Nkrumah administration had secured the necessary funding, the Volta River Authority, a state semi-autonomous water agency created in 1961 and charged with the planning, building, relocating people from areas that were to be flooded, distributing electricity, and operating water projects on the Volta, was able to get underway. The building of Akosombo became a truly international undertaking. It was spearheaded by the Italian consortium Impreglio, which, among other things, was building the large Kariba

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<sup>182</sup> TNA, PREM 11/4824, Foreign Office Telegram No. 8413 to Washington, Message to President Kennedy from the Prime Minister, November 16, 1961.

<sup>183</sup> PRAAD, RG-17-2-496A, The Volta River Project, Tema Press: 1965, p. 6.

<sup>184</sup> CLARK, R. L., MIESCHER, S.: Documentary film – Ghana's Electric Dreams, 2022 (online: <https://ghanaselectricdreams.com/>)

<sup>185</sup> PRAAD, RG-17-2-496A, The Volta River Project, Tema Press: 1965, p. 7. MIESCHER, *A Dam for Africa*, p. 86.

Dam on the Zambezi River.<sup>186</sup> Sub-contractors from 16 countries were also involved, for example from Japan (Hitachi Ltd.), Austria (Waagner-Biro Aktiengesellschaft), Great Britain (Chicago Bridge Ltd.), etc. Of course, Ghanaian companies, mainly focused on logistics, warehousing and labour brokerage (e.g. A. Lang Ltd.), also shared in.<sup>187</sup>

The construction also involved the relocation of more than 80,000 residents. The VRA carried out quite extensive sociological research to this end, and one of the conferences was attended by the Czechoslovak Africanist Luboš Kropáček.<sup>188</sup> Other efforts aside, the changes and benefits of the dam were also to be presented to the general public by a travelling exhibition that toured the whole country.<sup>189</sup> However, the Ghanaian government's promises and compensation to the resettled population did not fall in line with expectations and reality in many cases.<sup>190</sup> The dam was inaugurated in January 1966, about a month before the Kwame Nkrumah regime was swept away in a coup d'état.

However, Ghana's water resources development did not only include Akosombo, even though it was the largest and most important water works and the largest part of the Volta River Project. As mentioned earlier, the development plans proposed another, smaller dam at Kpong (about 24 km downstream of the Akosombo Dam on the Volta) in addition to the Ayena Dam. This dam was implemented between 1977 and 1982, and thus became Ghana's second major water project to be completed.

The Bui Dam on the Black Volta was also discussed in connection with the project. In his speech on 12 December 1960, Kwame Nkrumah openly mentioned that the Soviet-built Bui Dam would electrify and supply "*water to every town, village and cottage for miles and miles*" in Ghana.<sup>191</sup> The contract for the survey and design study of the Bui Dam hydroelectric power station, at a cost of 724,000 rubles, was signed by the Ghanaian government with the Soviet enterprise Technopromexport in 1962. The contract also included a design study for a transmission network from Bui Dam to Kumasi (about 250

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<sup>186</sup> For more on this project, see, for example, TISCHLER, J.: *Light and Power for a MulFracial NaFon. The Kariba Dam Scheme in the Central African FederaFon*, Cambridge Imperial and Post-Colonial Studies Series. Basingstoke/New York: Palgrave Macmillan, 2013.

<sup>187</sup> PRAAD, ADM-5-1-539, Volta River Authority Annual Report for the year 1962, 1963, 1964, 1965.

<sup>188</sup> KROPÁČEK, L.: *Sociological Notes on the Great Ghanaian Project*, in: *Nový Orient*, Vol. XXI, 1966, pp. 80-84.

<sup>189</sup> MIESCHER: *A Dam for Africa*, pp. 44-49.

<sup>190</sup> For more see MIESCHER: *A Dam for Africa*.

<sup>191</sup> OSEI-OPARE, N., *Uneasy Comrades: Postcolonial Statecray, Race and CiFzenship, Ghana-Soviet RelaFons, 1957-1966*, in: *Journal of West African History*, Vol. 5, No. 2, Fall 2019, p. 99.

km) at a cost of 37,800 rubles.<sup>192</sup> Given the potential concurrence with the design and implementation of Akosombo and the ongoing negotiations for its financing, this Ghanaian-Soviet cooperation attracted the attention of Western investors, particularly the World Bank, from the outset. The investors made it clear to the Nkrumah administration that the loan funds would in no way be used for Bui, demanding that *"they will not embark on actions which might endanger successful operation of the project being financed by the Bank, i.e. Akosombo Project. The Bui Project, if Ghana proceeds with it too soon, would be an example of such action."*<sup>193</sup> Even during the Akosombo loan negotiations, the Ghanaian government admitted that the implementation of the Bui Dam was not immediately on the agenda. Although Nkrumah let it be heard in the Ghanaian Parliament on February 21, 1961, that *"the Government have recently reached agreement with the Soviet Union for the design and construction of Bui"*, Herbert Winful, Principal Secretary of the Volta River Project Secretariat, in a meeting with World Bank representatives on February 24, 1961, spoke otherwise.<sup>194</sup> He admitted that there was no commitment to start implementation immediately after the survey was completed, and even admitted the possibility of postponing the implementation for ten or twenty years. The Soviets offered Ghana they would cover about half the costs associated with the projects around Bui Dam, with the repayments to be in the form of exports of goods to Russia. According to Winful, the whole Bui project reflected *"the policy of the Ghanaian government to throw their economic development open to all - both East and West."*<sup>195</sup> One can speculate, therefore, to what extent the situation around Bui Dam might have been used to put pressure on investors in the Volta River Project. Indeed, the implementation of Bui Dam was eventually postponed. During the administrations of Presidents Acheampong in the 1970s and Rawlings in the 1980s, its idea was even shelved

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<sup>192</sup> PRAAD, RG-17-1-310, Bui Power Project, A.B. Futa to Osagyefo the President, DraT from the contract, 20 October 1962.

<sup>193</sup> World Bank Group Archives (hereinafter referred to as WB), A1995-149, other #19, 1761701, Volta Power Project - Ghana - Loan 310 - P00834 - Nego+a+ons - Volume 8, Michael L. Lejeune to Mr. Eugene R. Black, March 8, 1961.

<sup>194</sup> WB, A1995-149, other #19, 1761701, Volta Power Project - Ghana - Loan 310 - P00834 - Nego+a+ons - Volume 8, Ghana: Volta River Project, March 20, 1961.

<sup>195</sup> WB, A1995-149, other #19, 1761701, Volta Power Project - Ghana - Loan 310 - P00834 - Nego+a+ons - Volume 8, Ghana - Volta River Project - Visit of Ghana Delegation to the Bank, March 1, 1961.

altogether.<sup>196</sup> It was not until 2008-2013 that the dam was built by the Chinese company Sino Hydro.<sup>197</sup>

In addition to the dams planned in the Volta Basin as part of the Volta River Project, there had also been discussions from the outset about harnessing the hydropotential of rivers in the southwestern Ghana region to help develop what were previously rather neglected sites. Contracts related to the development of the water resources of the Pra, Tano and Ankobra rivers presented opportunities for additional actors - such as Czechoslovakia.

### **Czechoslovak Role in Ghanaian Hydro Development**

Czechoslovakia was interested in the development of Ghana's water resources practically since the establishment of mutual diplomatic relations. This topic was, if marginally, discussed in most of the official communications between the two countries. Already during the first conversation between Presidents Novotny and Nkrumah at the 15<sup>th</sup> session of the United Nations (1960), the Ghanaian president spoke about the lack of own resources needed for the industrialisation of the country. He mentioned the difficulty of negotiating a loan with the World Bank for the construction of the key Volta hydroelectric project discussed above. It was agreed that Ghana would turn to Czechoslovakia if the Bank set unacceptable terms. Novotny, without outlining specific options, promised all-round assistance. Thus, it seems that even direct involvement of Czechoslovakia in the implementation of one of the largest water works in Africa - the Akosombo Dam - was on the table.<sup>198</sup> Given Czechoslovak practice elsewhere in the world and the economic possibilities available at the time, it is likely that such assistance would have taken the form of expert and technological support rather than the provision of staggering financial loans. Although the idea was eventually abandoned, this can be seen as evidence of the high quality and good international reputation that Czechoslovak hydroexpertise enjoyed in the early 1960s.

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<sup>196</sup> MIESCHER: *A Dam for Africa*, p. 313.

<sup>197</sup> For more information on the later genesis of the construction of the Bui Dam, see, for example, GOCKING, R.: *Ghana's Bui Dam and the Conquest over Hydro Power in Africa*, in: *African Studies Review*, Vol. 64, Issue 2, June 2021, pp. 339-362.

<sup>198</sup> NA, Archiv ÚV KSČ, f. Antonín Novotný, k. 99, Ghana, Pomoc ČSSR při industrializaci Ghany (Czechoslovakia's assistance in the industrialisation of Ghana), 30.10.1960, p. 19.

The two presidents also agreed in New York to post the first Czechoslovak hydraulic experts to Ghana. During the stay of the official parliamentary delegation of the Republic of Ghana in the Czechoslovak Republic in September 1960, and of President Nkrumah in the summer of the following year, excursions to the almost completed Orlik Dam were not included in the programme of the visit by chance. The work, which was integrated into a cascade of other dams on the Vltava River, was to be used not only for power generation but also for irrigation and flow control. Its multi-purpose nature correlated with the Ghanaian administration's requirements for similar works. The head of the parliamentary delegation described the visit, with its demonstration of Czechoslovak engineering, as a "very useful tour" with a view to building Ghana's own hydropower works on the Volta.<sup>199</sup> We can consider this to be further evidence of Czechoslovakia's reputation for water expertise and its respectability in the eyes of Third World leaders. This is also confirmed by the itinerary of Nkrumah's famous trip to the Eastern Bloc countries in the summer of 1961. The Ghanaian president visited the Soviet Union, Yugoslavia, Hungary, Poland, and Czechoslovakia. Apart from political talks, speeches and ceremonies, the state visit also included excursions to top industrial and scientific establishments. As a rule, the host countries tried to present their scientific and technical achievements to the delegations. If we compare the programmes of Nkrumah's trip to the various other countries of Eastern Europe, we find that, for example, in Hungary, the president visited the Beloiannis Telecommunications Factory and the Inota aluminium foundry, and, in Poland, he visited the steel works in Nowa Huta.<sup>200</sup> However, a major water project appeared on Nkrumah's agenda only during his visits to the Soviet Union (Bratsk Hydropower plant near Irkutsk) and Czechoslovakia (Orlík Dam).<sup>201</sup>

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<sup>199</sup> NA, Archiv ÚV KSČ, f. Antonín Novotný, k. 99, Ghana, Pobyt oficiální parlamentní delegace Ghany v ČSSR ve dnech 15.–21. 9. 1960 (Visit of the Official Parliamentary Delegation of Ghana to the Czechoslovak Communist Party of the Soviet Union), 15-21 September 1960, p. 20.

<sup>200</sup> TNA, DO 195/192, Telegram No. 78 (1043/9/8), Nkrumah in Poland, August 8, 1961. Telegram No. 10323, Nkrumah's visit to Hungary, August 1, 1961.

<sup>201</sup> TNA, DO 195/192, Telegram No. 53 (10355/8/8), Programme of President Nkrumah Visit to the Soviet Union from July 10-25, August 8, 1961. Telegram No. 71(1054/61) Summary: State visit to Czechoslovakia of the President of Ghana, August 11, 1961.



**Fig. 6: René Sameš and Antonín Petlach are meeting Kwame Nkrumah in Accra (1960s).**

Source: Private Collection of Sameš Family.

Within the context of efforts to harness the hydro potential in order to accelerate the country's industrialisation, the Ghanaian government were thinking of projects other than the Volta River Project. An alternative, or rather a complementary option, was the construction of small and medium-sized dams and power plants, for which conditions were favourable in several places around the country. Czechoslovakia had a lot of experience in designing and building this type of dams and power plants, so it had a lot to offer. However, it was not the only Eastern Bloc country to be attracted to such contracts.

Already a year earlier, in 1960, experts from Hungary launched hydrological research of the energy potential of the Pra and Densu rivers. Later, when Czechoslovakia officially expressed its interest in participating in the exploration of these and other rivers in southwestern Ghana, the Ghanaian side started feverishly wondering whether the possible admission of Czechoslovakians would or would not alarm Budapest. However, as the Hungarians did not come up with anything further after the submission of the final report, the Ghanaian authorities considered this to be a loss of their interest. From

January 1961 onwards, they continued to negotiate only with Czechoslovakia, whose offer, moreover, seemed more advantageous to them.<sup>202</sup> As a result of the negotiations, a group of three Czechoslovak experts was quickly dispatched to undertake a comprehensive water survey of the south-western Ghana area in order to identify locations for new dams.<sup>203</sup>

It seems that the Ghanaian government was therefore well aware of the high level of Czechoslovak hydroexpertise. There were departments within the Ghanaian state apparatus that regularly evaluated bids from potential contractors and kept track of the level of goods, services or expertise on offer. From such evaluations, we know, for example, that in addition to the high reputation of the Czechoslovak glass or textile industries, the production of light electrical equipment, which could include equipment for small and medium-sized hydroelectric power plants, was also in good standing.<sup>204</sup>

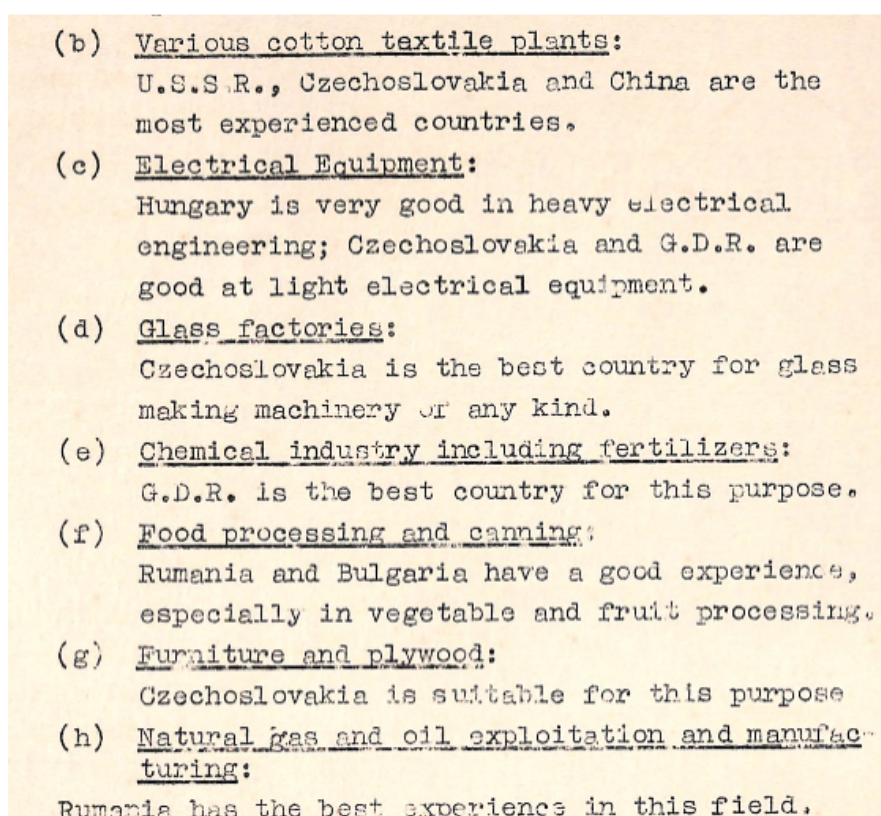
- 
- (b) Various cotton textile plants:  
U.S.S.R., Czechoslovakia and China are the most experienced countries.
  - (c) Electrical Equipment:  
Hungary is very good in heavy electrical engineering; Czechoslovakia and G.D.R. are good at light electrical equipment.
  - (d) Glass factories:  
Czechoslovakia is the best country for glass making machinery of any kind.
  - (e) Chemical industry including fertilizers:  
G.D.R. is the best country for this purpose.
  - (f) Food processing and canning:  
Rumania and Bulgaria have a good experience, especially in vegetable and fruit processing.
  - (g) Furniture and plywood:  
Czechoslovakia is suitable for this purpose
  - (h) Natural gas and oil exploitation and manufacturing:  
Rumania has the best experience in this field.

Fig. 7

<sup>202</sup> PRAAD, RG-7-1-2150, Hydro-Electric Power Development, p. 45, 47, 50.

<sup>203</sup> PRAAD, RG-7-1-2150, Hydro-Electric Power Development, p. 52, 53.

<sup>204</sup> PRAAD, RG-7-1-1690, Subcommif ee on Eastern Trade and Economics, Comments by Industrial Promo+on Division of Development Secretariat, 1962.



During the Prague talks with Novotny in the summer of 1961, Nkrumah again explicitly mentioned the problem of electricity generation in connection with the industrialisation of Ghana. Just as he had done during the talks with the Soviets in Moscow a few days earlier, he left aside the dam on the Volta, in the construction of which the American Kaiser Company and other Western concerns were already fully involved. However, he again mentioned the possibility of involving Czechoslovakia in the construction of small dams and power stations. In addition, before their completion, Ghana would purchase from Czechoslovakia generators for the production of electricity, which would be used in the more remote rural areas after the completion of the hydroelectric works. According to Nkrumah, the fifteen new small dams with power stations, together with the Akosombo Dam on the Volta and another planned dam, the Bui Dam on the Black Volta, were to generate about 2,000,000 kW of electricity, which provided a solid basis for the successful industrialization of the country.<sup>205</sup> As the next section will show, Czechoslovakia decided to pick up the gauntlet.

### **Hydrological Survey Mission of Hydroprojekt (1961)**

Based on the results of a tender launched by the Ghanaian government investor organization Volta River Authority in 1960, experts from the Czechoslovak Hydroprojekt were sent to Ghana the following year. The contract concluded between the Ghanaian government and the Czechoslovak foreign trade enterprise Technoexport on 22<sup>nd</sup> May 1961 was in the broader context covered by the bilateral Ghana-Czechoslovak Technical Agreement.<sup>206</sup> The group, which consisted of René Sameš - the group leader, an expert in dam construction, Antonín Petlach - an expert in hydropower machinery and Jaroslav Veverka - an expert in foundry engineering, departed from Prague-Ruzyně for Accra, Ghana, a week late, on the evening of 28 June 1961.<sup>207</sup> A month later, the prospector Jiří Havlík arrived. The mission was to last a total of six months.<sup>208</sup>

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<sup>205</sup> NA, Archiv ÚV KSČ, f. Antonín Novotný, k. 99, Ghana, Pobyt oficiální parlamentní delegace Ghany v ČSSR ve dnech 15.–21. 9. 1960 (Visit of the Official Parliamentary Delegation of Ghana to the Czechoslovak Communist Party of the Soviet Union), August 1960 (undated), p. 25.

<sup>206</sup> PRAAD, RG-7-1-2180, Czechoslovak Proposals, Hydro Electric Surveys, Western Region, p. 4, 85.

<sup>207</sup> Diary of Antonín Petlach, minutes of 28 June 1961, Private Collection of Antonín Petlach, Blansko.

<sup>208</sup> PRAAD, RG-7-1-2180, Czechoslovak Proposals, Hydro Electric Surveys, Western Region, p. 15.



**Fig. 8: Field workers and hydro expert Jaroslav Veverka during measurements in Ghana (1960s).**  
Source: Private Collection of Antonín Petlach.

The aim of the Czechoslovak mission was to carry out a comprehensive hydropower survey of the main rivers of the southwest region of Ghana (Western Region), namely the Pra, Tano, Ankonbra and their tributaries, with suggestions for the most economical uses. It also involved the preliminary approval, obtained in cooperation with the local administration, of the sites fit for the construction of hydroelectric power stations, the machinery for which was later to be supplied by Technoexport, a foreign trade company. The agreement explicitly included only a survey - the construction of the power plants was to be decided on later.

A team of Czechoslovak experts originally expressed interest in participating in the Volta River Project. Specifically, they wanted to help with the reassessment, or assessment respectively, of the viability of the Kpong Barrage Scheme, which was being considered about 25 km below the main Akosombo Dam. The expert bodies of the Ghanaian administration (Ministry of Works and Housing) deemed the potential Czechoslovak involvement in this part of the Volta River Project beneficial and recommended its approval.<sup>209</sup> However, the Standing Development Committee ultimately would not hear their pleas and did not allow for the Czechoslovak participation in the

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<sup>209</sup> PRAAD, RG-7-1-2150, Hydro-Electric Power Development, p. 52, 53.

Volta River Project.<sup>210</sup> The reasons may have been political, may have been an outright wish of the American Kaiser Company, which managed the project and may well have been concerned about the participation of experts from the socialist bloc. However, the Ghanaian side may also have feared that if the Czechoslovak experts took their time to review the Kpong Barrage Scheme, they might not be able to finalise the Western Region contract in time.

Three or four Czechoslovaks worked in southwestern Ghana, in provinces with significant mineral reserves and large cocoa plantations. These provinces produced about 80% of all Ghanaian exports, and the lack of electricity severely hampered their development. To illustrate the situation, only the two largest cities, Takoradi and Kumasi, which acted as regional centres, were electrified. Year-round electricity production was about 22.7 kWh per capita (45% consumed by households, 55% by industry). These figures best illustrate the low levels of consumption and production. Local consumption was often covered by diesel generators dependent on imported fuel from abroad.<sup>211</sup> Experts visited over sixty locations and recommended the construction of ten new hydropower plants. These were the Mehama and Nsuaem works on the Ankobra River, Hemang and Ewisem on the important Pra River, as well as the Dunkwa, Kotokuom and Adaboi plants on the Offin River, along with Tanoso, Jomuro and Sedukrom works that were to form a cascade on the Tano River. These projects were intended to provide a solution to the region's poor energy situation. Priority was given to densely populated areas or areas where industrial or mining development was foreseen; the electrification of the periphery was planned for later.

According to calculations by Czechoslovak engineers, for example, the commissioning of the first five power stations was expected to bring annual savings of almost £4 million just by reducing the cost of fuel for the units. The possibility of getting rid of dependence on imported fuel from abroad certainly also had a national and symbolic dimension, especially for a country whose declaration of independence had not yet had time for the ink on it to dry. Further calculations then showed that the commissioning of the Ewisem and Hemang power stations could increase the stability of

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<sup>210</sup> PRAAD, RG-7-1-2150, Hydro-Electric Power Development, p. 54.

<sup>211</sup> SAMEŠ, R.: *Vodohospodářský průzkum v Ghaně*, in: *Vodní hospodářství*, 1963, Vol. 13, No. 2, 1963, pp. 63-64.

the power grid, and thus save about £80,000 annually.<sup>212</sup> Although the main purpose of the planned hydropower works was to supply hydropower, it was also envisaged that the improvements to the Tano River as such would greatly improve its navigational conditions and allow for some 12,000 acres of good quality land suitable for agriculture to be irrigated. The Hemang Dam was also intended to serve as a source of drinking water for the towns of Sekondi-Takoradi and Cape Coast and to irrigate 26,000 acres of land.<sup>213</sup> In any case, and in view of the above, we can speak of a broader concept of water resources development that was intended to have an impact on several sectors.

The Ghanaian side provided the experts with accommodation in the town of Takoradi, including a cook and a butler, a Land Rover with a driver and a permanent guide who spoke the local languages. In addition, maps of the area, necessary equipment, and cooperation with local administration were all arranged for.<sup>214</sup>



**Fig. 9: Czechoslovak hydro expert René Sameš in discussion with Ghanaian Officials (1960s).**

Source: Private Collection of Sameš Family.

<sup>212</sup> Ibidem, PRAAD, RG-7-1-2180, Czechoslovak Proposals, Hydro Electric Surveys, Western Region, p. 85.

<sup>213</sup> SAMEŠ, R.: *Vodní díla Hemanga a Tanoso*, in: *Vodní hospodářství*, 1968, Vol. 18, No. 11, p. 487.

<sup>214</sup> PRAAD, RG-7-1-2180, Czechoslovak Proposals, Hydro Electric Surveys, Western Region, p. 21.

During their six-month stay, the Czechoslovak experts encountered several complications. The exploration of the often poorly accessible areas presented a challenge. From their base in the city of Takoradi, the experts regularly ventured into difficult terrain, where they encountered a culture and nature very different from what Europeans were used to. Interim reports sent by the group leader, Sameš, to the Ghanaian authorities on a monthly basis showed that the working hours often exceeded the Czechoslovakian norm (46 hours/week) guaranteed by the contract due to the difficult conditions.<sup>215</sup>

Antonín Petlach mentions in his memoirs how they had to adapt the survey to the local animist cult. The natives believed in the existence of spirits, whom they called "juju". These dwelt in various objects or places where they were not to be disturbed. Thus, on one measurement of the river profile, it was only possible to work on Tuesdays, because, on other days, the river was under the rule of the juju. At other times, again, the explorers had to take a longer route to avoid a spirit-dominated area, in consideration of the local population.<sup>216</sup> Sameš further states in one of his interim reports that the life and work of the group was greatly affected by the strike in Takoradi, which made it impossible to secure the services of a driver and other support staff, thus slowing down the survey.<sup>217</sup>

Other difficulties were of a less esoteric nature. It seems that in the 1960s, as part of the competitive struggle, US experts tried to hinder the work of Czechoslovak experts on planned water works. The Americans were believed to have used bribes to Ghanaian officials to ensure that the engineering equipment and units of Czechoslovak origin were rejected.<sup>218</sup> However, these were probably isolated incidents; rather, the US attention was drawn to a project on the Volta River in which American contractors were directly involved and which was by orders of magnitude larger. The Kaiser Company also later attempted to recruit the expedition leader, René Sameš, by offering him a highly paid position as a designer for other objects on the Volta River. Sameš, however, declined this offer, demonstrating the competitive rivalry between experts from East and West, as well as the high level of Czechoslovak expertise. In his private biography, he justifies his decision

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<sup>215</sup> PRAAD, RG-7-1-2180, Czechoslovak Proposals, Hydro Electric Surveys, Western Region, p. 36.

<sup>216</sup> PETLACH, A.: *Vzpomínky blanenského rodáka na půlroční působení v Ghaně v roce 1961 v rámci československé komplexní skupiny techniků pro hydroenergetický průzkum*. In: Sborník Muzea Blansko. Muzeum Blansko, Blansko 2006, pp. 101-108, specifically on p. 104.

<sup>217</sup> PRAAD, RG-7-1-2180, Czechoslovak Proposals, Hydro Electric Surveys, Western Region, p. 62.

<sup>218</sup> ABS, Volumes of secret collaborators (TS), volume archival no. 630407, René Sameš – code name "ZDENĚK VESELÝ".

mainly by the full professional engagement in his own projects and the consequences of the political situation in Czechoslovakia at the time, which culminated in the occupation by the Warsaw Pact armies. Accepting the offer would have meant emigration, which, in his own words, he could not afford as the father of a family.<sup>219</sup> If he had accepted, however, he would not have been the first Czechoslovak expert in Ghana to use his mission to escape to the West.<sup>220</sup>

In December 1961, the group compiled all the data into final reports that went to Krobo Edusei, Minister of Light and Heavy Industries, and to President Kwame Nkrumah, who invited the Czechoslovak experts to his residence for a banquet.<sup>221</sup> The reconnaissance mission was thus successfully completed.

The Ghanaian authorities - specifically the Offices of the Fuel and Power Secretariat - dealt with the report of the Czechoslovak experts in February of the following year. The expert committee selected the two most promising sites out of the ten identified for the construction of small hydropower plants. These were the Hemang site, which had the potential to contribute to broader industrialisation of the whole area, particularly by supplying the sugar industry in Komenda and the paper industry in Beposo. The second site chosen was Tanoso, whose use for the construction of a dam with hydroelectric power could, in addition to stimulating the local economy, boost river transport in the region and put back on the table, for example, the reopening of the old gold mines near Enchi, which seemed unviable otherwise. President Nkrumah was personally interested in this potential river scheme. It was decided that the Tanoso and Hemang sites would be detailed in a comprehensive study to be carried out by the Czechoslovaks.<sup>222</sup>

On 21 March 1962, the Government of Ghana signed a Contract for Preparation of Studies and Designs: Hemang and Tanoso hydro-electric development with Czechoslovak Technoexport.<sup>223</sup> The studies were subsequently drawn up on the basis of previously collected field data directly in Czechoslovakia between 1963 and 1967. The project leader was again René Sameš.<sup>224</sup> Sameš subsequently successfully defended these projects before a panel of foreign experts from the Volta River Authority, chaired by a leading

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<sup>219</sup> Biography of René Sameš, Sameš Family Archive, Prague.

<sup>220</sup> More about this in the chapter on experts.

<sup>221</sup> PRAAD, RG-7-1-2180, Czechoslovak Proposals, Hydro Electric Surveys, Western Region, p. 81.

<sup>222</sup> PRAAD, RG-7-1-2180, Czechoslovak Proposals, Hydro Electric Surveys, Western Region, p. 94c.

<sup>223</sup> PRAAD, RG-7-1-2180, Czechoslovak Proposals, Hydro Electric Surveys, Western Region, p. "140".

<sup>224</sup> Hemang and Tanoso, Company Archive of SWECO Hydroprojekt, a. s.

Dutch hydrologist - international participation with an independent foreign arbitrator was a common practice.

Hydroprojekt's contracts in Ghana were not completely disrupted by the 1966 coup that overthrew Kwame Nkrumah and reoriented the country more towards the west. As late as 1968, both parties were still fulfilling the agreed commitments on the design work for the Tanoso hydroelectric plant, probably for pragmatic reasons.<sup>225</sup> Although the Czechoslovak position in Ghana after the coup was significantly better than that of the Soviet Union, for example, whose experts had to leave the country, the level of cooperation gradually declined.



**Fig. 10: Visualization of Hemang Hydropower Plant (1967).**

Source: Archive of the Company SWECO, a.s.

## **Conclusion**

Ghana was on the list of countries of priority interest for the Czechoslovak foreign policy in Africa until the 1966 coup, which ended the era of Kwame Nkrumah's presidency. Prague's motivation for its Ghanaian engagement in the 1960s was the spread of socialism and the acquisition of foreign exchange and raw materials - especially cocoa beans. To

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<sup>225</sup> AMZV, f. TO – T 1965-69, Ghana, k. 2, Hospodářská zpráva (Economic Report) No. 7/1968, 29.12.1968.

pursue its motivations, socialist Czechoslovakia actively used technopolitical tools, especially the supply of machinery and the dispatch of expert groups. Technopolitics was therefore not an exclusive domain of the “industrial giants”. Exports of hydroexpertise were carried out on the basis of bilateral agreements on scientific and technical cooperation, under the mechanisms of the GCC or under the auspices of international organisations, such as the UN. Thanks to its advanced engineering industry, water management tradition and know-how capable of standing up to global competition, hydroexport appears to have been a significant element of Czechoslovak technopolitics towards the countries of the Global South. This narrow and highly specialised sector seems to have achieved a similar level of attention – if not the media attention - as the Czechoslovak arms industry.

On the part of Ghana, in the Nkrumah era, there was an obvious interest in cooperation with Czechoslovakia as a "small" developed state that was not as unequal and unpredictable a partner as the "industrial giants" were. Nkrumah's regime tried to cooperate with both blocs and to take advantage of the benefits that arose from being in this competitive environment (better offers, lower contract prices, etc.). The theoretical involvement of Czechoslovakia in the Volta River Project, which ultimately failed to materialise, should then be viewed in this light.

Between 1961 and 1968, several successful technical missions of Czechoslovak water engineers took place. The successful and high-quality study of the sites suitable for small hydroelectric power plants on the Pra, Tano, Ankobra rivers and their tributaries won the Czechoslovaks another contract for detailed studies of the Hemang and Tanoso sites, which they also successfully completed. Although no hydropower projects on the Offin, Pra or Tano rivers in the locations identified by the Hydroproject experts have been implemented yet, the current government is reviving some of these projects (e.g. the Hemang dam) as part of its water policy.

Unlike most of the industrial units delivered to Ghana during the 1960s, export of hydroexpertise was not a story of complete failure. The Czechoslovak Hydroprojekt was rarely able to carry out the entire water works - it usually participated in projects as one of the contractors. It was no different in Ghana and several contracts, such as the aforementioned water survey or the design documentation of some water works



(Hemang, Tanoso), were successfully completed. Compared to other Czechoslovak projects in Ghana, the water projects did not face so many problems.<sup>226</sup>

The Ghanaian example also reveals some competition between the individual Eastern bloc states; it seems that mutual competition for contracts between, for example, Hungary and Czechoslovakia was quite common despite the proclaimed "alliance". The defeat of an allied state in a contract competition does not seem to have had a major impact on bilateral relations. In the case of smaller contracts, the socialist states did not even inform each other of their participation; in the case of larger ones, some renegotiation efforts have been documented.



**Area of the Czechoslovak Hydropower Survey and two of the intended hydropower plants.**

<sup>226</sup> AMZV, f. TO – T 1965-69, Ghana, k. 2, Hospodářská zpráva (Economic Report) No. 4/1968, Současný stav výstavby investičních celků v Ghaně (Present Status of Construction of Investment Units in Ghana), 22.5.1968.

## Chapter 3

### When Czechoslovak-Soviet Friendship Had to Be Put Aside: High Aswan Dam as a Symbol of Building Socialism in Africa

*"Ten years ago, the water stopped flowing through the old riverbed in Aswan. Its path was blocked by the walls of the dam under construction - a great work of Soviet-Egyptian cooperation, the Egyptian construction of the century. A new riverbed was created, whose waters were finally tamed and subjected to man in January 1971. The work about which poets write verses and composers create songs was completed... The fulfilled Egyptian desire - the Aswan Dam - is bearing its fruits. So does the soil from which it was born, which is the cooperation between the Soviet Union and Egypt."<sup>227</sup>*

*Milan Mádr – The Desire Becomes Reality*

The uncritically celebratory article "The Desire Becomes Reality" published in the Czechoslovak press during May 1974 referred to the tenth anniversary of the completion of the first phase of the High Aswan Dam. Czechoslovakia, much like the author of the article himself, journalist Milan Mádr, was only an "observer" of the implementation of one of the largest water projects in Africa and even around the world. Although Czechoslovakia did not join the actual "implementation" of the project, multiple factors motivated by the desire to do so in Prague demonstrably existed, they represent an unwritten chapter in the history of the High Aswan Dam and, indeed, of the Czechoslovak involvement in the so-called Third World and especially in Africa.

A broader backdrop to this chapter is provided by the story of the great waterworks, which became the first major symbol of the potential success of socialism and Soviet influence in Africa, reflecting in the relations between the Soviet Union and its allies. The chapter also aims to explore the use of water technology and expertise in the

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<sup>227</sup> NA, f. Ministerstvo zahraničních věcí – Výstřižkový archiv III (MZV VA III), signature (811) 18, MÁDR, M., *Tužba skutečnos• (The Desire Becomes Reality) – Před 10 roky skončila první etapa stavby Asuánské přehrady*, in: Rudé právo, 17.5.1974.

foreign policy maintained towards the 'Nasserist Egypt' – i.e., the Czechoslovak Cold War technopolitics. After a brief introduction to the bilateral relations between Egypt and Czechoslovakia, it mainly seeks to map Czechoslovakia's interest and efforts to get involved in the construction of the Aswan High Dam, which can be chronologically placed in the years 1958-1961. Although Czechoslovakia was not directly involved in any stage of the project because Moscow thought otherwise, much can still be observed when it comes to its activities pursued in this area. The chapter also reveals the dynamics of communication between socialist countries within the context of major projects contemplated in the Global South area. In addition to Aswan, the chapter marginally discusses other, smaller in size Czechoslovak water projects that were intended or implemented in Egypt during the 1960s.

### **From Delta Barrage to High Aswan Dam: Brief History of Modern Egyptian Hydraulic Development**

The efficient use of water resources and their development have always been essential for Egypt. The focus has always been on the Nile River, which has provided more than 90% of the country's water supply. Given the desert nature of the region, the vast majority of the Egyptian population lives in the river's close proximity. The era of building the first modern water projects on the Nile in Egypt began in the 19<sup>th</sup> century. In the first five decades, France had a significant influence on the developments taking place in Egypt. This influence was also reflected in the implementation of strategic water structures, without which the development of a country, whose economy was largely reliant on agriculture, would not have been possible. Although the implementation of the first major modern projects did not begin until the reign of Muhammad Ali (1805-1848), their visions and concepts were rooted as early as in the time of Napoleon's occupation of Egypt (1798-1801). Leaving the well-known Suez Canal (1859-1969) aside, the two most important water structures of this period, which were executed with the participation of French experts, were the Mahmoudiya Canal (1817-1820) and the Delta Barrage (1834-1861/1890).<sup>228</sup>

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<sup>228</sup> For more see RIVLIN, H.: *The Agricultural Policy of Muhammad Ali in Egypt*, Cambridge 1961.

On the contrary, from the British occupation of Egypt in 1882 until Egypt's independence in 1922, or the so-called Suez Crisis (1956), London's influence dominated. Almost immediately after taking control of the country, the British sought to gain a dominant influence in the Nile water management, which they quickly succeeded in achieving. They were helped in this also by the transfer of knowledge and experts, William Willcocks, Colin Scott-Moncrief and William Garstin to name a few, who had gained their experience while building water works in India.<sup>229</sup> The systematic development of Egypt's irrigation system gradually led to the provision of more and more water resources, but at the same time the consumption of water was also increasing, especially as a result of the population boom and the development of cotton production. During the 1990s, when British engineers had completed major projects in Lower Egypt, most notably the Delta Barrage, it became clear that the country was at the limits of its water supply. This in turn led logically to considerations of the possible development of the upper Nile, which eventually resulted in a power expansion into Sudan to exploit the wetlands in the south of the country, as they held enormous water potential, and in the implementation of the Low Aswan Dam (1898-1902).

Although the Low Aswan Dam represented one of the largest water structures in the world when it was completed, its capacity slowly became insufficient despite two modifications in 1907-1912 and 1929-1933 that increased it some. Plans to build another dam on the Nile near Aswan can be traced back to the Second World War. At that time, British hydroexperts came up with several plans to control and exploit the waters of the Nile throughout its basin. These plans were naturally motivated by London's neo-imperial ambitions and its economic and geopolitical interests in Uganda, Sudan, and Egypt.<sup>230</sup>

After the so-called Free Officers Movement came to power in Egypt in a coup d'état in July 1952, whose leader was Gamal Nasser, the vision of a new dam in Aswan became the central theme of the country's future. Hydropower from Aswan was to support the country's industrialisation, electrify the countryside, protect the country from devastating

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<sup>229</sup> For more on British experts see ANDERSEN, C.: *British Engineers and Africa 1875-1914*, Cambridge 2011.

<sup>230</sup> For more on British concepts of controlling the Nile and the so-called "River Empire" see TVEDT, T.: *The Nile in the Age of the British, Political Ecology and the Quest for Economic Power*, London: Tauris 2004.

floods, bring improvements in living standards, and in Nasser's words, "*make Egypt the Japan of Africa*".<sup>231</sup>

In the post-colonial era of the late 1950s, Egypt, thanks to the colonial treaty instruments, its size, technical prowess, and the ability to exploit the river, besides other factors, became the dominant player on the Nile. The Egyptian authorities derived (and they still do) their "historical rights" to "hegemonic status" in the Nile basin from the *Nile Water Agreement* of 1929. This was essentially an exchange of notes between the British and Egyptian governments that was intended to guarantee Egypt the right to control and veto any Nile-related projects that might have the potential to restrict the river's flow. The formal justification for this agreement was that Egypt was more dependent on the river than any other country upstream of the Nile because, unlike them, it could not rely on a comparably generous rainfall, yet indeed it was more of an attempt by London to appease the anti-British sentiments prevailing in Egypt. The agreement also allocated Sudan 4 billion cubic meters of Nile water per year (compared to 48 billion cubic meters allowed for Egypt).<sup>232</sup>

When Sudan gained independence in 1956, the new regime in Khartoum began to claim a larger share of the Nile waters, threatening Egyptian plans to build the High Aswan Dam. The situation escalated in 1958, when Egypt even mobilised garrisons on the border with Sudan, only to be calmed by a military coup in Khartoum that opened the way for new negotiations.<sup>233</sup> In November 1959, the *Egyptian-Sudanese Agreement for the Full Utilisation of the Nile Waters* was signed in Cairo. The agreement helped to resolve the situation around the High Aswan Dam, defining the share of Nile waters for each country (of the total Aswan measured annual volume of 84 billion cubic meters, 55.5 billion was to go to Egypt and 18.5 billion to Sudan, about 10 billion was to be losses due to evaporation).<sup>234</sup> The agreement completely ignored the claims of the other Nile Basin countries and to some extent tied Cairo and Khartoum's interests in the Nile development

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<sup>231</sup> TVEDT, p. 261.

<sup>232</sup> TVEDT, T.: *The Nile Waters Issue*, Available from: <http://africanhistory.oxfordre.com/view/10.1093/acrefore/9780190277734.001.0001/acrefore-9780190277734-e-20>, [cited 2023-06-25]. For more see WATERBURY, J.: *HydropoliFcs of The Nile Valley*, Syracuse 1979 or COLLINS, R.: *The Nile*, London 2002.

<sup>233</sup> ARSANO, Y.: *Ethiopia and the Nile, Dilemmas of NaFonal and Regional HydropoliFcs*, Zurich: ETH, 2008, p. 88.

<sup>234</sup> SALMAN, S.: *The new state of South Sudan and the hydro-poliFcs of the Nile Basin*, in: *Journal Water Interna+onal*, Vol. 36, Issue 2, 2011, p. 159.

issues for the next four decades. During this period, Egypt allowed Sudan to implement numerous water projects (e.g., the Roseires Dam, 1961-1966) without much objection, and both countries acted in a united and strict manner in negotiating with other neighbours in the basin.

From the Egyptian perspective, the High Aswan Dam was also closely linked to national security - only thanks to it could Egypt, a state located on the strategically less advantageous lower reaches of the river, secure sufficient water supplies directly on its territory. It also became a major symbol of national identity. As Terje Oestigaard argues, the one hundred- and eleven-metre-high dam was not only seen as an engineering achievement, but its height was also a symbol of the nation-building process – owing to the achievements and sacrifices of the 30,000 workers involved in its construction.<sup>235</sup> Through its rhetoric, the Nasser regime made the High Aswan Dam a symbol of the new Egyptian state and the success of the revolution. Oestigaard quotes one of the workers: *'The Dam was a revolution within the Revolution. If the military Revolution liberated the country, the Dam liberated the people. It helped us to liberate ourselves from ourselves. It liberated us from fear.'*<sup>236</sup> However, as Terje Tvedt adds, despite the nationalist rhetoric of the Nasser regime, *"Although the Dam changed the Nile behaviour in Egypt, it did not liberate the country and the political actors from the power of the structure of the water system itself."* Egypt has never been more dependent on the Nile River than after the completion of the High Aswan Dam.<sup>237</sup>

The financing necessary for the giant water project was to be provided by the IBRD in cooperation with the governments of Great Britain and the United States, yet it was later abandoned for pressures arriving from Washington. Following the events known as the Suez Crisis (1956), the Soviet Union eventually stepped in to finance the dam.<sup>238</sup> On 27 December 1958, Moscow granted Egypt a loan of 34.8 million Egyptian pounds to cover

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<sup>235</sup> OESTIGAARD, T.: *Water, national identities and hydropolitics*, in: SANDSTRÖM, Emil, JÄGERSKOG Anders, OESTIGAARD, Terje, *Land and Hydropolitics in the Nile River Basin, Challenges and New Investments*, New York 2016, p. 222.

<sup>236</sup> *Ibidem*.

<sup>237</sup> TVEDT, T., COOPEY, R.: *A "water systems" perspective on history*, in: TVEDT, Terje and Coopey, R. (eds.), *A History of Water, Series 2, Volume 2: From Early Civilization to Modern Times*, London: I. B. Tauris, p. 16.

<sup>238</sup> For more on the financing of the High Aswan Dam, see KUNZ, D., *Economic Diplomacy of the Suez Crisis*, Chapel Hill: N.C, 1991.

the costs associated with the first stage of the construction of the giant hydroelectric dam.<sup>239</sup>

The Soviet Hidroproekt Institut, represented in Egypt by the foreign trade company Technopromeksport, entered the scene in 1958. During the following year, Soviet experts were arranging for specific forms of cooperation with the Egyptian administration. In January 1960, the actual construction of the High Aswan Dam began, with the construction being ceremoniously inaugurated on 15 January 1970. It took another six years to reach the dam's full capacity. The complete genesis of Soviet involvement in the construction of the Aswan High Dam has been extensively covered in the two-volume dissertation *Talking Shop: Egyptian Engineers and Soviet Specialists at the Aswan High Dam* by Elizabeth Bishop.<sup>240</sup> Benjamin Brendel looked at it through the lens of modernisation in his thesis.<sup>241</sup> What no work published so far has explored in detail though, is the involvement of other socialist countries - whether implemented indeed, or just in terms of considerations and plans.

### **Czechoslovakia and Egypt – Evolution of Bilateral Relations until 1960**

The relations between Egypt and Czechoslovakia have a relatively long history dating back to the interwar period.<sup>242</sup> It was in Egypt that Czechoslovakia opened its first diplomatic mission in Africa, and the consulate in Alexandria began operating in 1920, when Egypt was still under the protectorate of Great Britain. In 1923, an embassy in Cairo was opened. The main motivation at that time was economic interests - the Czechoslovak export economy was looking for new markets to trade its products. Economic contacts remained the flagship of mutual relations after the Second World War, only the subject of trade gradually changed. In 1947, the two countries signed protocols on trade and loaning for

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<sup>239</sup> BISHOP, E.: *Talking Shop: Egyptian Engineers and Soviet Specialists at the Aswan High Dam*, Vol. 1, Chicago, 1997, p. 256.

<sup>240</sup> BISHOP, E.: *Talking Shop: Egyptian Engineers and Soviet Specialists at the Aswan High Dam*, Vol. 1-2, Chicago, 1997.

<sup>241</sup> BRENDEL, B.: *Side Effects of Modernity, Dam Building, Health Care, and the Construction of Power in the Context of the Control of Schistosomiasis in Egypt in the 1960s-1970s*, in: *Naturwissenschaften, Technik und Medizin*, 2017, Vol.25, No.3, pp. 349-382.

<sup>242</sup> For a detailed overview of relations between Czechoslovakia and Egypt see ZÍDEK, P., SIEBER, K.: *Czechoslovakia and the Middle East in 1948-1989*, Prague: Institute of International Relations 2009.

the purchase of high-quality Egyptian long-fibre cotton, which quickly became a key raw material for the Czechoslovak textile industry.<sup>243</sup>

After the coup that overthrew the monarchy in November 1954 and brought Gamal Nasser to power, new opportunities for cooperation opened up. The new regime's efforts to industrialise the country resulted in several tenders in which Czechoslovakia began to participate and the level of cooperation between the two countries increased significantly. During the 1950s, a number of trade agreements were concluded (1955, 1959, 1962), an aviation agreement (1959) and, last but not least, an agreement on scientific and technical cooperation (1957), on the basis of which dozens of supplies of machinery, investment units and expert exchanges were subsequently carried out. Among the most important investment units supplied were bicycle and shoe manufacturing facilities, a cement plant, a non-ferrous metal rolling mill, a ceramics plant, a power station, radio equipment, a salt works, a waterworks and several bridges. Imports from Egypt were still dominated by cotton, rice, manganese ore and phosphates.<sup>244</sup>

Since the mid-1950s, the supply of weapons, military material and, of course, cooperation in the field of training military cadres, have become the key elements of mutual relations. Several publications have been released on this subject.<sup>245</sup>

Throughout the 1960s, a number of mutual political visits took place at various levels, often resulting in contractual arrangements of varying degrees. President Antonín Novotný even visited Egypt in 1966.<sup>246</sup>

Significant development of cultural relations began later than it was the case with economic relations – sometime after 1956, and it culminated a year later with the signing of the Cultural Agreement. It was thanks to the trip of the first Czechoslovak cultural delegation in 1956 that the Czechoslovak Institute of Egyptology could be established two

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<sup>243</sup> ZÍDEK, P: *Czechoslovakia and French Africa, 1948-1968*, Prague: Libri 2006, pp. 17-18. The office was upgraded to an embassy in 1956, one of the first in the country.

<sup>244</sup> AMZV, Porady kolegia, k. 89, Návrh ak+vizace poli+ckých styků se SAR (Proposal to ac+vate poli+cal rela+ons with the SAR), 22.11.1963.

<sup>245</sup> For more on Czechoslovak arms supplies to Egypt, see LARON, G.: "Logic dictates that they may arack when they feel they can win:" *The 1955 Czech-Egyptan Arms Deal, the Egyptan Army, and Israeli Intelligence*, in: *Middle East Journal*, Vol. 63, No. 1, 2009, pp. 69-84. For more on military training, see PEŠTA, M.: *Between Solidarity, Trade and PoliFcs. Military training of Africans in Czechoslovakia in the 1960s*, in *Memory and History* 14/3 (2020), pp. 24-32. VYHLÍDAL, M.: *AcFviFes of Czechoslovak instructors in the Egyptan armed forces, parFcipaFon in Egyptan military educaFon 1956-1977*. Prague: Carter Reproplus s.r.o, 2016.

<sup>246</sup> VAVREČKOVÁ, pp. 146-149.



years later (in Cairo in 1959), which quickly gained considerable fame within the international professional community. Experts from this institution were later involved in the rescue excavations accompanying the implementation of the High Aswan Dam and the relocation of some monuments under the auspices of UNESCO. Lectureship in Czech was also established at Cairo University and, after 1959, the first exchanges of scholarships, tours of artists, filmmakers and writers took place.<sup>247</sup>

### **Czechoslovak Footprints Around the High Aswan Dam?**

During the 1950s, Czechoslovak diplomacy ascertained that the High Aswan Dam project would be implemented in some form. Construction was to take place in three main stages. The first stage mainly involved the supply of the dam gates and their operating mechanisms. Then came the supply of construction machinery, mechanisation and transport equipment, maintenance workshops and auxiliary facilities. In the second phase, the construction of the main High Aswan Dam consisting of 8-10 Francis turbines and auxiliary hydropower stations at smaller dams along the Nile was to start. The second phase also included the construction of the grid and substations. The plan for the third stage consisted of the completion of the hydro-centre, the installation of 6-8 turbines and the interconnection of the grid with Cairo and Delta.<sup>248</sup> Throughout all this time, Czechoslovakia was closely following the developments around the dam through the eyes of its embassy in Cairo, and especially the Ministry of Foreign Affairs (MFA) and the Ministry of Foreign Trade (MFT) saw a great opportunity in the project. Thus, their staff did not miss, for example, the postponement of the decision to build the dam due to the lack of an agreement with Sudan on the future division of the Nile waters (1956).<sup>249</sup>

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<sup>247</sup> AMZV, Porady kolegia, k. 89, Návrh ak+vizace poli+ckých styků se SAR, 22.11.1963. For more on the activities of the Czechoslovak Institute of Egyptology and the teaching of Czech in Cairo, see: MACKOVÁ, Adéla, *Výuka českého jazyka v Káhiře*, in: *Pražské egyptologické studie*, No. V, 2006, pp. 1-3. MACKOVÁ, Adéla, *Vznik a počátky Českého egyptologického ústavu*, in: *Nový Orient*, Vol. 61, No.1, pp. 57-60. MACKOVÁ JÚNOVÁ, Adéla, „*Journey of Czechoslovak Cultural Delegation to Egypt in 1956., Cultural Agreement between Egypt and the Czechoslovak Republic*“, in: *Acta Fakulty filozofické Západočeské University v Plzni*, Vol. 3, pp. 101-110.

<sup>248</sup> NA, f. MZO, (1117) - unprocessed, box no. 8/268, SAR, Josef Urban – Vysoká přehrada (Josef Urban – High Dam), Cairo, 29.11.1958.

<sup>249</sup> AMZV, TO-O, SAR, 1945-1959, k. 5, Lef er Karpíšek – MZV, 2.3.1956. Elizabeth Bishop writes only about two main construction stages. Moreover, Czechoslovakia divides the second stage into two in its documents. BISHOP, pp. 299-300.

On 12 March 1956, the Czechoslovak Ambassador to Egypt, Arnošt Karpíšek, recommended to the Ministry of Foreign Trade they should "send three experts to Aswan", while mentioning that the \$200 million loan from the International Bank for Reconstruction and Development (IBRD) had not yet been approved by the Egyptian government and, according to the Soviets (specifically Nikitin, the man who later, on 27 December 1958, signed the Soviet-Egyptian agreement on the first stage of the Aswan Dam at the Kubbah Palace in Cairo), "our (Czechoslovak) initiative would be welcome".<sup>250</sup> In his analysis of the Aswan Dam addressed to the MFT in November 1958, Josef Urban, Commercial Counsellor of the Czechoslovak Embassy in Cairo, states that "*since the USSR loan covers only the first stage without the actual machinery needed for the dam, our participation is worth considering already today, either directly or in co-operation along the completion of the first stage and in the subsequent stages.*"<sup>251</sup> The possible involvement of Czechoslovakia in the implementation of the project was then repeatedly discussed in Prague by special committees consisting of the representatives of the Ministries of Foreign Affairs, Foreign Trade and Foreign Trade Companies - in particular Technoexport and Polytechna.

The MFA's notes on the concept of relations with Egypt in the field of scientific and technical cooperation and its practical implementation in 1958 suggest as follows: "*The task of technical assistance in the construction of the Aswan Dam is one of the most important ones. As soon as the question of the specific forms of Czechoslovak participation has been principally resolved, proposals in this direction will be made proactively.*" An overview of the tasks associated with the scientific and technical cooperation with Egypt for 1959 and beyond then describes Czechoslovak participation in the construction of the High Aswan Dam as being crucial, too, and mentions the importance of sending experts in as soon as it has been made clear how Czechoslovakia will be involved in the first stage of construction.<sup>252</sup> In the light of favourable circumstances, with the Soviet Union's blessing and in view of its own foreign policy interests in Egypt, it seems likely that Czechoslovakia

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<sup>250</sup> AMZV, TO-O, SAR, 1945-1959, k. 9, Lef er Karpíšek – MZO, 12.3.1956.

<sup>251</sup> NA, MZO, (1117) - unprocessed, box no. 8/268, SAR, Josef Urban – Vysoká přehrada (Josef Urban – High Dam, Cairo, 29.11.1958.

<sup>252</sup> NA, f. MZO (1117) – unprocessed, box no. 8/268, Poznámka ke koncepci na SAR – egyptská oblast v oblas+ technicko-vědecké spolupráce. (Note on the concept note on SAR-Egypt area in the field of technical and scien+fic coopera+on).

decided to try to get involved in the construction of the High Aswan Dam. The specific contours of this involvement were discussed later, especially in the spring of 1959.

Considering how sensitive an issue the construction of the High Aswan Dam had become, and given the care the Soviets took in the matter, it was impossible for Czechoslovakia to act "on its own" without coordinating with them. In view of the overall magnitude of the project and the prestige associated with its smooth implementation, it would have made all the more sense if Moscow had decided to put in use all the available capacities - including those that could have been provided by the friendly socialist countries. Hassan Zaki, High Dam Authority Director, believed it was Nikitin to have recommended the Czechoslovaks in the first place. Egyptian position on the Czechoslovak participation in the project was presented by Egyptian officials on the occasion of the Czechoslovak government delegation's visit to Egypt in January and February 1959, and it was subsequently clarified by a letter from Major Magdi Hassanein, a consultant hired by the Egyptian government, dated 23 February 1959. This position envisaged Czechoslovakia was to participate in the construction of the dam as a contractor during the implementation of the first stage. In practical terms this meant that, according to the English project (prepared by Alexander Gibb and Co.), using Soviet supplies, Czechoslovak experts, under the contracts concluded with local (Egyptian) construction companies, were to take responsibility for the timely and correct execution of the entire construction. The Czechoslovak government delegation expressed its preliminary disagreement with the Egyptian idea and pointed out that Czechoslovakia was not capacitated enough to provide such services on a scale this large.<sup>253</sup>

In his letter, which reached Prague a few days after the return of the delegation from Egypt, Major Magdi outlined a possible organizational scheme for the future company that was to be in charge of the project. In addition to a Czechoslovak director and Czechoslovak heads of the individual sections, the company was to have an Egyptian director. Magdi, however, did not address the question of who would be responsible for the execution of the construction, meeting the deadlines, and who would act as a

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<sup>253</sup> AMZV, TO-O, SAR, 1945-1959, k. 9, Záznam o poradě o rozsahu a formách čs. technické účas+ při stavbě Asuánské přehrady (Record of a mee+ng on the scope and forms of Czechoslovak technical par+cipa+on in the construc+on of the Aswan Dam), 7.3.1959.

contractor towards the Egyptian construction companies.<sup>254</sup> This was viewed as a major problem by Prague. Moreover, the negotiations in Egypt showed that the Soviets themselves refused to take responsibility for the implementation of the (English) project and also that the Egyptian construction firms were currently unable to carry out the performance tasks associated with the various stages of the dam's construction.

Given the circumstances, Czechoslovakia rejected Magdi's Egyptian proposal to participate in the first stage of the construction as a contractor. The internal justification for this decision was as follows: *'Czechoslovakia cannot assume responsibility for carrying out the construction according to the English design, and the findings so far show that the deadlines set for the individual stages will not be met. Meeting the deadlines and the correct execution of the construction is also a highly important political issue. Assuming any defects, Czechoslovakia would become a lightning rod and would be held responsible for a number of facts associated with any failure.'* There were also concerns about working so extensively under different social conditions and about the project's excessive international political exposure: *"Czechoslovakia would also be forced to deal with possible strikes under capitalist conditions and any social problems that might arise during the construction. It is also possible that the construction could be sabotaged, or terrorist actions might occur."*<sup>255</sup> In this case, the opinion of the expert community on the feasibility of the project seems to have been strongly mirrored in the adopted political conclusions.

After consultations with experts, Czechoslovak foreign trade and diplomacy staffs envisaged Czechoslovak participation mainly in the second and third stages of construction, however they did not completely rule out participation in the first stage either, if under significantly different conditions than the Egyptians originally came up with. The Czech side was willing "to the maximum extent possible" to provide extensive technical assistance through its experts, who could eventually act as advisers to the Egyptian engineers to solve technical problems related to the construction. Under this concept, Czechoslovak experts would not act as contractors to the Egyptian firms, meaning they would not bear any responsibility for deadlines, complications, etc.

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<sup>254</sup> NA, MZO, SAR, Dopis Magdi Hassaneina – Mr. Urbanovi, obchodnímu atašé čs. velvyslanectví v Káhiře (Letter from Magdi Hassanein to Mr. Urban, Commercial Attaché of the Czechoslovak Embassy in Cairo), 23.2.1959.

<sup>255</sup> AMZV, TO-O, SAR, 1945-1959, k. 9, Záznam o poradě o rozsahu a formách čs. technické účasti při stavbě Asuánské přehrady (Record of a meeting on the scope and forms of Czechoslovak technical participation in the construction of the High Aswan Dam), 7.3.1959.

Czechoslovakia had a sufficient number of such experts and, moreover, they were going to get "untied" soon as the domestic projects were nearing completion, and the internal justification read: *"Czechoslovakia has suitable personnel available to be sent to Egypt in this capacity. The major hydroelectric projects in Czechoslovakia will essentially be completed in the next few years. In the first stage of the construction of the Aswan Dam, experts would be required in the fields of construction of large dams, foundations for these dams, the excavation of tunnels, the construction of access roads and the solution of other technical problems associated with the initial works."*<sup>256</sup> FTC Polytechna was tasked with drawing up their lists, and the Ministry of Foreign Trade was - like the MFA - "extremely interested" in participating.<sup>257</sup> Prague was therefore anxiously awaiting the outcome of the ongoing negotiations between the Soviet expert delegation led by Professor Komzin and the Egyptians, and what the outcome would be in view of the Czechoslovak participation.<sup>258</sup>

The crucial piece of information arrived from Cairo to Prague on the morning of 24 March 1959. Ambassador Karpíšek informed the Ministry of Foreign Trade that, after the meeting of Komzin and Gromov with Marshal Amer, the situation concerning the construction of the dam had changed. The Egyptian government, in agreement with the Soviets, promised to create its own state organization to carry out and coordinate the contracting work, which would also bear the entire responsibility for the construction.<sup>259</sup> The Soviet Union was subsequently expected to supply all the machinery and experts. *"In view of this turn of events, Gromov does not consider it appropriate for us (Czechoslovakia) to participate as a contractor through Magdi, and this is because the creation of a state organization will position the USSR as a direct partner to the (note: Egyptian) state."* Nevertheless, Karpíšek recommends that the situation continue to be monitored until Amer fulfils his promise and the organization is created. Alternatively, he recommends offering Czechoslovak experts and machinery to Egypt through the Soviet Union.<sup>260</sup>

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<sup>256</sup> AMZV, TO-O, SAR, 1945-1959, k. 9, Záznam o poradě o rozsahu a formách čs. technické účas+ při stavbě Asuánské přehrady (Record of a mee+ng on the scope and forms of Czechoslovak technical par+cipa+on in the construc+on of the Aswan Dam), 7.3.1959.

<sup>257</sup> AMZV, Telegramy odeslané 1959, (B-5-1795 to 2253), Obzamini - Cairo, no. 1977.

<sup>258</sup> AMZV, Telegramy odeslané 1959, (B-6-2254 to 2787), Obzamini - Cairo, no. 2399.

<sup>259</sup> Karpíšek men+ons "Kuzmin and Gromov", probably a typo in the name of hydroexpert Ivan Vasilevich Komzin.

<sup>260</sup> AMZV, Telegramy došlé, Karpíšek 147 - headquarters (Hloch), 24.3.1959.

After consultations between the Ministry of Foreign Trade, Polytechna and the Czechoslovak Ministry of Construction, the national company Vodní stavby Sezimovo Ústí (the successor company to the pre-war company LANNA a.s., which was mentioned in the first chapter) was selected at the end of March 1959 and entrusted with the tender. Its status of a national enterprise was supposed to be a sufficient guarantee of its financial capacity. The guarantee of professional competence then came in the form of an extensive list of large water works in Czechoslovakia in which the company was involved, such as the Slapy, Lipno, Orlický, Jesenice, Hracholusky and Jirkov dams. This undertaking was to be entered into the tender for the implementation of the first stage by 31 March 1959, when the deadline expired. However, in order to accommodate the wishes of the Soviets, this actually never happened. The Prague headquarters sent the application form and supporting materials to the embassy in Cairo with a simple proviso: *"To be used at your own discretion, however solely in full agreement with the Soviet side."*<sup>261</sup>

Czechoslovakia also tried to coordinate across socialist countries in the matter of possible participation in the Aswan tender. B. Hortek, a representative of FTC Polytechna, made contact with the representatives of GDR, Poland, Bulgaria and Hungary, but as the whole matter was being dealt with under considerable time pressure, he did not have the time to obtain and incorporate the positions of all those he had approached. Poland, which had already sent an expert to Aswan at the beginning of March to carry out a survey, voiced its full support to Czechoslovakia in the matter.<sup>262</sup> Bulgaria, which had itself decided to participate in the tender in some form, promised to coordinate with Prague.<sup>263</sup> The Ministry of Foreign Affairs also planned to use the conference of the Working Group for Economically Underdeveloped Countries held in Prague at the end of March 1959 to coordinate the synergistic participation of the "countries of the socialist camp".<sup>264</sup> Sadly enough, no records of this meeting have been preserved.

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<sup>261</sup> AMZV Telegramy odeslané 1959, (B-6-2254 to 2787), Obzamini-Cairo, no. 2399.

<sup>262</sup> AMZV, Telegramy došlé, Karpíšek 108 - headquarters (Hloch), 5.3.1959.

<sup>263</sup> NA, MZO (1117) - unprocessed, box no. 8/268, Dopis B. Horteka náměstkovi MZO Aloisi Hlochovi, Československá účast na stavbě I. etapy přehrady Asuán, Horní Egypt (Lef er B. Hortek to MZO Deputy Alois Hloch, Czechoslovak par+cipa+on in the construc+on of the first stage of the Aswan Dam, Upper Egypt), 26.3.1959.

<sup>264</sup> NA, MZO (1117) - unprocessed, box no. 8/268, Dopis B. Horteka E. Pšeničkovi, Příprava účas+ na výstavbě Asuánské přehrady (Lef er B. Hortek to E. Pšenička, Prepara+on of par+cipa+on in the construc+on of the Aswan Dam), 31.3.1959.

A summary report on the dispatch of the Czechoslovak experts, which was deliberated on by the Collegium of the Minister of Foreign Affairs in May 1960, observed that 10 experts were working in Egypt at that time, and that *"it must be taken into account that the assistance in the construction of the Aswan Dam will require the placement of additional experts."*<sup>265</sup> Czechoslovakia therefore seemed eager to be prepared at any cost to enter the first or second phase of the Aswan Dam when the right time came.

Although, still in January 1960, the Collegium of the Foreign Minister agreed as one of its points on economic cooperation with Egypt *"to prepare and ensure our potential involvement in the construction of the first stage of the Aswan Dam in agreement with the Soviet Union"*, the company Vodní stavby Sezimovo Ústí did not participate in any way, if indirectly, in the contracting for the first stage of the construction of the High Aswan Dam in the end.<sup>266</sup> It can be assumed that, "in agreement with the Soviet Union", the preliminary application was withdrawn in favour of Moscow. This is evidenced by the profound absence of any mention in the otherwise fairly well-preserved and organised company archives. In other words, the efforts to participate in the contract remained on the political level, and the resolution of technical issues, which would have required more detailed consultation directly with the management of Vodní stavby Sezimovo Ústí, never took place. It seems that individual Czechoslovak experts, even if they were to work under the auspices of the Soviet Union, actually never travelled to Aswan. Moreover, as the Ministry of Foreign Trade stated in a report to the embassy in March 1959 - the final forms and extents of Czechoslovak participation would (in addition to Soviet approval) still be subject to the approval of the "higher-ups".<sup>267</sup> No record is available, though, of that the Political Bureau or the Foreign Department of the Communist Party's Central Committee would ever have dealt with Aswan.

After the ceremonial opening of the first stage in January 1960, negotiations on the preparation of the second stage slowly began. According to the information communicated by František Zachystal, the new Czechoslovak titular in Cairo, which

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<sup>265</sup> AMZV, Porady kolegia, k. 41, Přehled o vyslání čs. expertů v rámci technické pomoci hospodářsky méně vyvinutým zemím (Overview of the dispatch of Czechoslovak experts in the framework of technical assistance to economically less developed countries), 7.5.1959.

<sup>266</sup> AMZV, Porady kolegia, k. 47, Zpráva o vztazích mezi ČSR a SAR a základní směrnice pro další postup v jednotlivých stykových oblastech (Report on relations between the Czechoslovak Republic and the SAR and basic guidelines for further action in individual liaison areas), 5 January 1960.

<sup>267</sup> AMZV, Telegramy odeslané 1959, (B-6-2254 to 2787), Obzamini-Cairo, no. 2399.

originated from the Soviet ambassador, the Soviets, in preparation for their negotiations with the Egyptians, admitted to consider the official participation of additional socialist states. Czechoslovakia was interested.<sup>268</sup> Leaving aside the delivery of 144 dump trucks in 1963, which stumbled on logistical problems, Czechoslovakia did not participate directly in the construction of the second or third stage of the Aswan Dam, in spite of its keen initial interest.<sup>269</sup> This claim is not corroborated as much by documents and Czechoslovak archives, rather by what is missing from them.

Czechoslovak state officials made a few official visits to Egypt in the early 1960s. The report from the government delegation of March 1961 does not mention High Aswan Dam at all, contrary to many other projects in which Czechoslovakia was active.<sup>270</sup> The trip report of the parliamentary delegation led by Zdeněk Fierlinger from April 1961 states: *"The most important item on the agenda in Aswan was to see the new Aswan Dam. The day before, I had asked Dr. Kalif if we could meet at the dam for a friendly talk with Egyptian and Soviet senior engineers and workers. He readily promised to do so, but as usual he made no arrangements, so it was only by chance that we met at the dam with a leading Soviet engineer, a 33-year-old enthusiastic dam builder, who welcomed us in a comradely manner, yet had no prior knowledge of our visit."*<sup>271</sup> If Czechoslovak experts had been working on the dam, even as part of a group of Soviets, members of the delegation would certainly have met them, or at least mentioned them in the report. But Fierlinger writes only about Soviet and Egyptian engineers and workers. In addition, the extensive report on Commercial Attaché Tajovský's excursion to the High Aswan Dam site in September 1964 reads as follows: *"As is generally known, the construction of the Great Dam (Saad El Ali) is being carried out by the SAR with the economic and technical assistance from the USSR."* Tajovský goes on to discuss the current state of work and offers analysis of the workforce, claiming that, *"at present, 1,600 Soviet technicians and workers*

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<sup>268</sup> AMZV, Telegramy došlé, Zachystal 26 – ústředí, 21.1.1960.

<sup>269</sup> AMZV, TO-T, SAR, 1960-1964, k. 3, SAR-Dodávky duamperů pro SAR (SAR-Deliveries of duampers for SAR), 22.6.1963.

<sup>270</sup> NA, Poli+cké byro ÚV KSČ, k. 298, aj. 382, Výsledky jednání čs. vládní delegace v Kambodži, Indonésii a Egyptě (Results of the mee+ng of the Czechoslovak government delega+on in Cambodia, Indonesia and Egypt), 3.3.1961.

<sup>271</sup> NA, Poli+cké byro ÚV KSČ, k. 305, aj. 388, K informaci členům a kandidátů poli+ckého byra ÚV KSČ, Zpráva z cesty čs. parlamentní delegace po Sjednocené arabské republice (s. Z. Fierlinger) (For informa+on to members and candidates of the Poli+cal Bureau of the Central Commif ee of the Communist Party of the Czechoslovak Communist Party, Report on the trip of the Czechoslovak parliamentary delega+on to the United Arab Republic (s. Z. Fierlinger)), 21.4.1961.



are working on the dam, many of whom are already employed on the hydroelectric project itself and the distribution network. The first two turbines are to be delivered from the USSR by the end of this year." Tajovský further informs that, apart from Soviet experts, some 25,000 Egyptian employees are working on the project, and about 1,000 skilled staff are to be sent to the USSR for training, especially on how to operate the hydroelectric plant. Tajovský confirms that a number of Egyptian contractors are also involved in the construction.<sup>272</sup> Again, there is no mention of any involvement of Czechoslovak experts, technologies or firms, not even in the hydroelectric power section, which was perhaps the largest domain of Czechoslovak hydroexpertise at the time.

It is also highly unlikely that the involvement of Czechoslovak experts, or any larger supply of technology for a project of such importance as the High Aswan Dam certainly was, would have gone unpublicised. The international and Czechoslovak press, however, always mentions exclusively the participation of the Soviets and their successes.<sup>273</sup>

### **Other Czechoslovak Water Projects in Egypt**

The efforts to participate in the individual stages of the construction of the High Aswan Dam were certainly not the only manifestations of Czechoslovak hydroexpertise in Egypt. At the end of the 1950s, Hydroprojekt succeeded in a tender for the supply of equipment for two sewage treatment plants in Alexandria (1958-1959) and equipment for the Cairo-North, Cairo-South and El-Minio waterworks. The Cairo-South project may well have been the first successfully tendered export project of the Czechoslovak water industry. Experts believed that one of the reasons for the success (this and also the future ones) was to be attributed to the original (patented) solution, which distinguished Czechs from the Western companies that used rather standard, mass-produced series of machinery.<sup>274</sup> In 1962, a total of 8 experts sent in from Czechoslovakia via FTC Strojexport worked on the

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<sup>272</sup> NA, MZO (1117) - unprocessed, box no. 290/30, Zpráva z exkurze na stavenišť Velké přehrady a do některých závodů u Asuánu, podniknuté s. Tajovským ve dnech 3-7.3.1964 (Report from an excursion to the construction site of the Great Dam and to some factories near Aswan, undertaken by Mr. Tajovský on 3-7 March 1964).

<sup>273</sup> NA, f. MZV VA III, signature (811) 18, e.g., *Tužba skutečnosť – před 10 roky skončila první etapa stavby Asuánské přehrady*, in: Rudé Právo, 17.5.1974, *Sovětská pomoc arabským zemím – Asuán zachránil miliony akrů půdy*, in: Rudé Právo, 12.10.1972.

<sup>274</sup> HULÍK, K.: *Projekt a výstavba úpravny Cairo-Jih*, in: Sborník k 20. výročí založení Hydroprojektu, 1972, p. 91.

Cairo-North project and supervised the assembly.<sup>275</sup> Then, in 1965, there were 4 experts.<sup>276</sup> However, not even this original solution sufficed to avert some (unspecified) design and construction issues that troubled the waterworks and other investment units being supplied by Czechoslovakia in this period and had to be eliminated at a financial loss.<sup>277</sup>



**Fig. 11: Visualization of El-Minio waterworks (Cairo).**

Source: HOLOUBEK, J., *Účast československých vodohospodářů v zahraničí*, in: *Vodní hospodářství*, No. 5, 1960, pp.221-223.

Water management projects abroad were carried out under contracts concluded by Czechoslovak companies and research institutions, or by persons working as individual consultants. Nevertheless, there would be a few exceptions in the form of enthusiastic water management "lone wolves".

One of them was Karel Řezníček, who in July 1960 submitted to the Czechoslovak MFA his own proposal for the improvement of the Qattara Depression - a waterless

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<sup>275</sup> AMZV, TO-O, k. 4, SAR, 1960-1964, *Péče o dlouhodobé pracovníky vyslané jednotlivými PZO do SAR* (Care of long-term workers sent by individual FTCs to SAR), 14.11.1962.

<sup>276</sup> AMZV, TO-T, k. 2, SAR, 1965-1969, *Zpráva výboru pro hospodářskou, vědeckou a technickou spolupráci* (Report of the Committee on Economic, Scientific and Technical Cooperation), 20.5.1965.

<sup>277</sup> AMZV, *Porady kolegia*, k. 89, *Návrh aktivizace politických styků se SAR* (Proposal to activate political relations with the SAR), 22.11.1963.

depression with an arid climate in northwestern Egypt near the oasis of Siwa.<sup>278</sup> The proposal was all the more bizarre as Řezníček was not a properly schooled water engineer at all, rather a retired commercial engineer who had studied diplomacy in France after World War I and was later even punished for his anti-state activities. Řezníček asked the MFA to consider his proposal and possibly forward it officially to the Egyptian administration.

This was not an entirely unique idea internationally for the development of a barren and infertile Egyptian region - in the autumn of 1960, a report on the arrival and discussions between West German experts and the country's economic leaders on the energy exploitation of the Qattara Depression was covered in the local press. Considerable importance was attached to this West German project, especially by the Western countries. It was in the propaganda territory in the first place that it had the potential to become a counterweight to the Soviet presence at the High Aswan Dam. West German experts were also involved in the design of the dam during the 1950s.<sup>279</sup> The ambassador in Cairo, Zachystal, even had reports available showing that Nasser had asked West German Chancellor Konrad Adenauer in a personal letter to participate in the second stage of the dam's construction, but later reached an agreement with Moscow.<sup>280</sup> Thus, West Germany was considered by Czechoslovakia as a dangerous ally, whose strengthening through winning any major contract in the Qattara Depression would have caused complications not only for Czechoslovakia, but quite possibly for all the socialist states active in Egypt. Zachystal therefore indeed considered the political use of Řezníček's project as a potential West German counterproposal: *"The Embassy is aware that, in the summer months of this year, the MFA was approached by Eng. Řezníček suggesting an idea of a comprehensive use of the Qattara Depression for agricultural and industrial purposes. In view of the political seriousness of the matter, and of the necessity of counteracting the expansionist policy of West Germans in the Arab countries, the Embassy hereby asks (Headquarters) for information on whether Eng. Řezníček's scheme could be used..."*<sup>281</sup>

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<sup>278</sup> AMZV, TO-O, 1960-1964, SAR, k. 4, Projekt na využití egyptské prolákliny Al-Kafa ra pro zemědělské účel (Project for the use of the Egp+an Al-Kafa ra depression for agricultural purposes), July-December 1960. <sup>279</sup> These were mainly the companies Hoch+ef and Union Bruckenbau. TVEDT, pp. 262-263.

<sup>280</sup> AMZV, Telegramy došlé, Zachystal-headquartres, no. 287.

<sup>281</sup> AMZV, TO-O, 1960-1964, SAR, k. 4, Dopis Zachystal – ústředí (Lef er Zachystal – headquarters), Cairo 25.11.1960.

The Ministry of Foreign Affairs sent the project to the Institute of Hydromechanics of the Czechoslovak Academy of Sciences for consideration, on the grounds that it was "an initiative that might be of considerable political significance and could possibly contribute to the further development of economic relations with Egypt". In his assessment, the director of the institute, Jan Smetana, described Řezníček's proposal as ingenious, but technically and economically unfeasible from "today's state of the art" point of view, even after redesigning some parts, which Řezníček promptly furnished.<sup>282</sup> The Ministry of Foreign Affairs did not accept the project proposal and briefed the Egyptian ambassador in Prague on the whole matter, as it considered it undesirable to *"initiate any sort of activity between Eng. Řezníček and Egypt, in which Czechoslovakia might later be adversely involved."*<sup>283</sup>

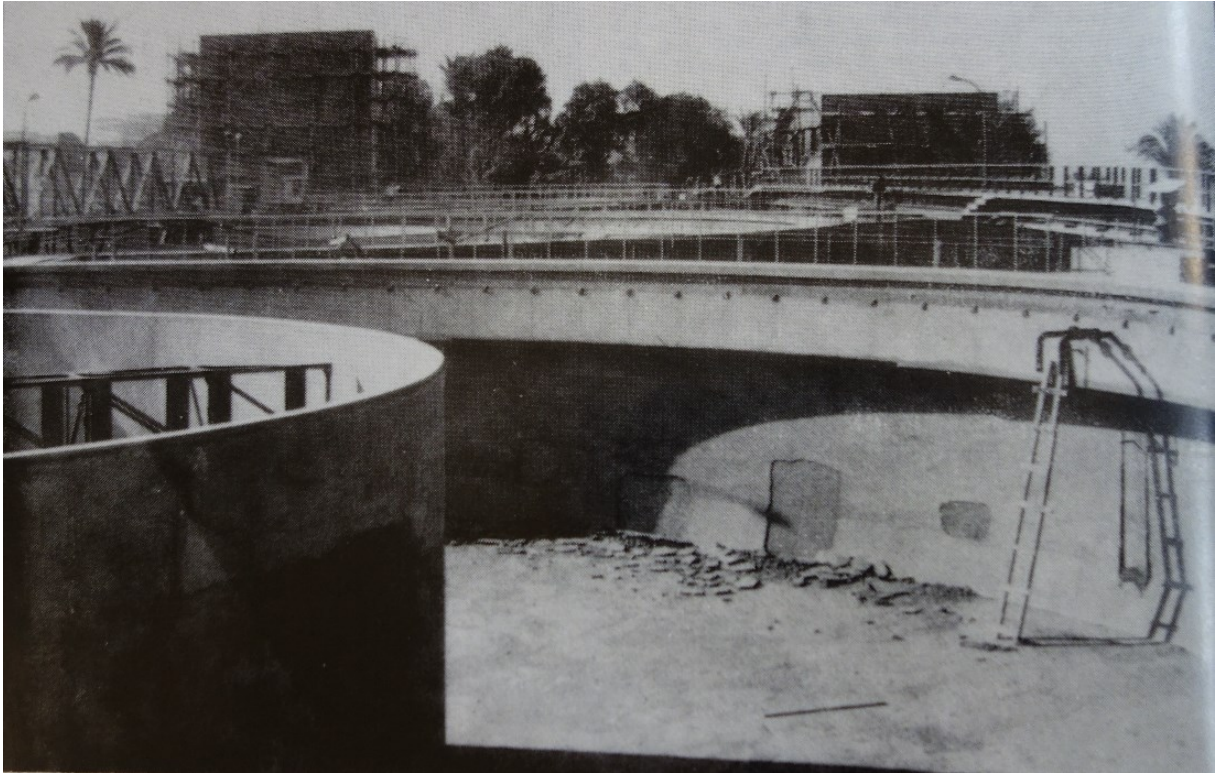
The project to exploit the Qattara Depression resurfaced in the late 1970s. At that time, the Egyptian administration was considering connecting it to the Mediterranean. Seawater was to flow through a canal into the Qattara Depression, generate electricity in an installed hydroelectric plant and then evaporate. The canal was to be "excavated" using small, localised nuclear explosions. The necessary geological surveys along the route of the envisaged canal were to be carried out by the Turks, who hired experts from the Czechoslovak company Stavební geologie for hydrogeological and engineering geological tests, which was not an unusual move. From time to time the company would indeed work for Western companies, e.g., from the Federal Republic of Germany. The data collected in Egypt was later processed in a computerised centre in Prague, and part of the remuneration due for participation in the contract came in the form of a supply of Western computer equipment. However, the very project to exploit the Qattara Depression, which involved the ambitious atomic blasts, ended up in complete failure and was never implemented.<sup>284</sup>

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<sup>282</sup> AMZV, TO-O, 1960-1964, SAR, k. 4, ČSAV, Ústav pro Hydrodynamiku, Posudek akademika Jana Smetany (Czechoslovak Academy of Sciences, Institute for Hydrodynamics, Opinion of academician Jan Smetana), 28.11.1960.

<sup>283</sup> AMZV, TO-O, 1960-1964, SAR, k. 4, Záznam k č.j. 132356/60 – Řezníček – Qattara v SAR (Record of No. 132356/60 - Řezníček – Qattara in SAR), December 1960.

<sup>284</sup> Interview with Jiří Šíma, Prague 11.7.2023.



**Fig. 12: Filter plant in Cairo, planned by Hydroprojekt (1960s)**

Source: Czechoslovak Foreign Trade, Vol. 16, No. 1, January 1976, p. 22.

## **Conclusion**

At the beginning of the 1960s, Egypt was one of the priority countries in terms of attention paid by the Czechoslovak foreign policy. It de facto became "Prague's gateway to Africa". Although the spectrum of mutual cooperation was largely dominated by military cooperation, one of the other areas that Czechoslovakia tried to exploit was the development of water resources. When it was made clear that the key High Aswan Dam project would be implemented, Czechoslovakia became highly interested in it. The country may not have been the only socialist state to have the project on the radar though - Poland and Bulgaria also displayed some interest. Especially in the period of 1958-1960, there was an idea in Prague that involvement in one of the stages could significantly strengthen the Czechoslovak position in Egypt and on the international scene as such, so Czechoslovakia repeatedly took steps to confirm that its interest was indeed serious. In the spring of 1959, Moscow, through its embassy in Cairo, made it clear to Czechoslovakia that its participation in the first stage was not desirable. It turned out in the end that there would be no involvement at all in the other stages either, no matter how ready to step in Prague really was.

The Czechoslovak footprints thus do lead to the Aswan Dam, but they have never reached its imaginary crown. It might thus seem that, except for the partial successes with the implementation of some smaller contracts (waterworks, sewage treatment plants), the Egyptian involvement of Czechoslovak hydroexperts has not much to show off, yet quite the opposite is true.

The story of the unimplemented Czechoslovak participation in the construction of the High Aswan Dam is clearly illustrative of several things. Firstly, it is the ambition - belief in the excellence of the Czechoslovak water sector and its competitiveness in face of other (Western and Eastern) countries, even in conditions of such a large and internationally monitored project.

It also shows the dynamics of the Soviet-Czechoslovak cooperation in providing scientific and technical assistance to the countries of the so-called Third World. It is obvious from the course of events that Czechoslovakia, and probably also other "smaller actors" from the Eastern Bloc, were in this case strongly directed by the Soviet Union, which was deciding not only on the particular country to be allowed to participate, but also on the timing of any such involvement. The situation can be best described as an instance of "restricted internationalism", as Doubravka Olšáková so aptly defined it.<sup>285</sup> The Soviets invited Prague to participate in the contest for the first stage, later adjusted the parameters of this participation, and finally de facto inhibited it. The reason was Moscow's priority interest in Aswan as an economic opportunity, a stepping stone to Africa, an international success, a symbol. The High Aswan Dam thus became an exclusively Soviet project without much participation from other socialist countries, a project that was heavily promoted as being the Soviet Union's first major development project in Africa. The international image of the Soviet involvement in Aswan contributed to the emergence in the West of the "fear of a second Aswan" in regard to similar projects. This concerned, for example, the construction of the Akosombo Dam in Ghana. The Soviets also used the High Aswan Dam project to improve the Soviet Union's position in Egypt and the relations with the Nasser administration - for example, by reducing material costs, shortening deadlines, etc. This is thus a typical example of Cold War technopolitics, not Czechoslovak,

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<sup>285</sup> OLŠÁKOVÁ, D.: *Expert Cultures and Infrastructural Globalism. Socialist Experts under Restricted Internafonalism*. In: BOUNEAU, Ch., BURIGANA, D., eds. *Experts and Exper+se in Science and Technology in Europe since the 1960s. Organized Civil Society, Democracy and Poli+cal Decision-making*. Brussels: Peter Lang, 2018, pp. 53-68.

but Soviet for a change. It is also quite uncommon that the principal discussions about Czechoslovakia's possible involvement in the project took place not in Prague or Moscow, but in Cairo, through the mediation of the Czechoslovak embassy, the Soviet embassy and the Soviet advisors present on site.

The story also shows the efforts to coordinate the activities of socialist states in the so-called Third World, while it was not uncommon for socialist countries to compete with each other to win contracts elsewhere.

Moreover, the story of the also unimplemented water management project presented by the "lone wolf" Řezníček shows a certain openness (or rather not an absolute non-openness) of the Czechoslovak expert environment to a smart idea coming from a non-member of the professional water management community. Furthermore, it clearly points at the intention to use a technical irrigation project for foreign policy purposes - to weaken West Germany's influence in Egypt and strengthen its own position.

The last-mentioned episode from the 1970s proves that Czechoslovak companies and their experts commonly participated in contracts of Western companies as business partners. Examples of such cooperation contribute to deconstructing the notion of an impenetrable border running between the Cold War blocs. In the water sector, this was far from being just an isolated case.



**Map 3: Map of High Aswan Dam, Qattara Depression and two waterworks stations supplied by Czechoslovakia.**



## Chapter 4

### **Soviet Project, Ethiopian Concrete, Czechoslovak Turbines - New Normative Example of International Socialist Cooperation?**

*"The power plant on the Wabe Shebele River will accelerate the development of central Ethiopia. I actually heard of Malka Wakana in Addis Ababa for the first time. Together with the assemblers from ČKD Blansko, we watched through our hostel's window as the rain streams were pouring down. A lake formed on the roadway and the water flooded the ground floors of the opposite houses. Our people came to Ethiopia to harness the water, this natural element, using their skill. Addis Ababa is just a kind of transfer station for them. In a few days, they will be travelling about 300 km southeast to the Wabe Shebele River to build a power station at the Malka Wakana dam. It is a grandiose project that will double the electricity capacity of the central Ethiopia region. Soviet experts are providing the civil works, we are supplying the hydroelectric plant equipment and Ethiopians are executing the ground works... [...]."<sup>286</sup>*

*Pavel Krýl – Our People at Malka Wakana*

The third case study on the export of Czechoslovak hydroexport and technology focuses on Ethiopia. The history of relations between Czechoslovakia and Ethiopia is long, but the level of cooperation in the techno-economic field was greatly accelerated by the 1974 coup d'état that brought the Marxist military regime led by Mengistu Haile Mariam to power in Addis Ababa. Ethiopia, which had already been in the crosshairs of Czechoslovak foreign policy towards Africa before the coup, thus officially became a priority country and the target of many economic and humanitarian projects. Ethiopia's development, humanitarian projects and openness to foreign actors made the country a significant region in the context of the ongoing Cold War. One of the most significant chapters of the 1980s intergovernmental cooperation with Prague was, in the words of Rudé Právo

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<sup>286</sup> KRÝL, P.: *Naši na Malka Wakana*, in: Rudé právo, 5.6.1986.

journalist Pavel Krýl, the "*grandiose*" Malka Wakana / Melka Wakana hydroelectric project, originally initiated and coordinated by the Soviet Union, in which Czechoslovakia, through its hydroexperts and hydrotechnology, became involved. The project was a breakthrough in many respects. In addition to its considerable importance for the Ethiopian government, it was the first official successful hydraulic cooperation between the Comecon countries in Africa. We can only speculate as to why similar achievement had not been allowed to happen until the early 1980s. Perhaps due to the Soviet Union's worse economic situation, which may have motivated its leadership to involve smaller socialist states. Or due to the new politics of Comecon which pushed member states and their companies more towards cooperation and joint contracts. The development project was also a highly politicized issue on the international scene.

Unlike the two previous case studies from the 1960s, this chapter focuses on Czechoslovak technopolitics in the field of water expertise and technology towards socialist Ethiopia during the 1980s. After a brief introduction to bilateral relations between Czechoslovakia and Ethiopia, it uses the construction of the Malka Wakana hydroelectric power plant, a project of the highest importance to the Ethiopian government, as an example of technopolitics in practice. It shows the dynamics of relations between Czechoslovakia, Ethiopia and the Soviet Union, which also participated in the construction. The waterworks itself is no longer seen as a symbol here - its construction becomes a systemic matter of cooperation between socialist countries with the potential for future repetition.

It also touches on the position of the experts themselves in the project and their working and living conditions on site. Apart from this large hydroelectric project, the chapter maps the activities of Czechoslovak hydrogeologists working in Ghana *de facto* in the same period, as well as the continuation of cooperation after 1989. It is thus another example of the continuity of technocratic cooperation built largely on personal ties, regardless of political regime.

## Water Usage Against Darkness and Drought: Hydraulic Development of Ethiopia

Ethiopia is often referred to as the "water tower of the Horn of Africa" but not as a "water grabber".<sup>287</sup> Despite the fact that the country has potentially significant water reserves, no Ethiopian government has been able to use them effectively. The focus of Ethiopian society has always been on land and its ownership rather than water. Land tenure even became one of the torches that ignited the 1974 revolution and toppled the emperor. Water and its use, on the other hand, have always been rather neglected - as Seide writes "land is priceless while water is free".<sup>288</sup> However, the future of Ethiopia was, is and probably will be tied to the development of water resources.

The Mengistu regime faced several problems immediately after seizing power in the country, which complicated the socio-economic situation of the country, hindered the development of industry, agriculture, society and potentially threatened the stability of the new government. One of the most serious problems was the drought and its devastating effects, especially famine. Between 1973 and 1974 alone, drought-related death toll in the Wollo and Tigray regions of northern Ethiopia amounted to between 250,000 and 1,000,000 inhabitants.<sup>289</sup> Another devastating drought hit the southern regions in 1975 and the north again in 1977-1978. Mengistu even appealed to the international community for humanitarian aid in connection with the drought, which subsequently began to flow into Ethiopia in large numbers. Across the world, businesses, associations, and individuals, in addition to governments and international organisations, have stepped in to help Ethiopia. In Czechoslovakia, for example, a public collection called "Action Ethiopia" in early 1985 succeeded in putting together a shipment of medicines, food, clothing, tents, and other equipment worth ten million Czechoslovak crowns. The situation in Ethiopia was quite strongly followed by the Czechoslovak and world media.<sup>290</sup>

A 1984 analysis by the Czechoslovak Embassy in Addis Ababa concluded that drought was no longer just a more or less frequent random phenomenon, but it was

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<sup>287</sup> SEIDE, W. M.: *"Lease the land, but use the water"*, in: SANDSTRÖM, E., JÄGERSKOG, A., OESTIGAARD, T.: *Land and Hydropolitics in the Nile River Basin, Challenges and New Investments*, New York 2016, p. 179.

<sup>288</sup> Ibidem.

<sup>289</sup> This is the data from the Czechoslovak Embassy. The lower figure was officially published by the Ethiopian government, the higher figure represents an unofficial estimate by international observers.

<sup>290</sup> NA, MFA f. VA III, sign. 822, (1985), *Czechoslovak citizens to help Ethiopia*, in: *Rudé Právo*, 10.1.1985.

becoming more of a permanent feature of the Ethiopian climate, especially in the northern regions of the country. The situation was further aggravated, according to the analysis, by extremely backward to primitive agrotechnology and a wasteful approach to forest and water management.<sup>291</sup> The country's rapid population growth also posed a challenge. It is clear, therefore, that the new regime had a strong incentive to implement projects to develop the country's water resources for irrigation purposes.

Another strong obstacle hindering the country's modernisation was insufficient electricity production. Although, according to open sources, Ethiopia has a hydropower potential of 45,000 MW, the second highest in Africa (only the Democratic Republic of Congo has a higher figure), in the early 1980s it had only three hydropower plants in operation with a capacity of less than 100 MW - Aba Samuel on the Akaki River, Chomen Lake on a Nile tributary, the Fincha River (Fincha Hydroelectric Power Station), and Koka Lake on the Awash River.<sup>292</sup> Among the reasons for Ethiopia's hesitation to implement more hydropower projects earlier, during the reign of Emperor Haile Salassie, was, apart from the high cost and inadequate capacity, the rather complex international political situation in the Nile Basin, where most of the country's water resources are allocated. The thing is that no matter what government ruled over Ethiopia, it simply always had its hands tied by several old treaties stipulating the rights of different countries in the Nile Basin, an extremely strategic water source for all countries in the region. These treaties strongly sided with Egypt, which had long inferred from them the right to its "hegemonic position" in access to the Nile's water resources.<sup>293</sup>

The most important document was the agreement between the British Crown and the Ethiopian Emperor Menelik II. *"His Majesty the Emperor Menelik II, King of the Ethiopian Kings, undertakes to His Britannic Majesty's Government not to construct or permit the construction of any works on the Blue Nile, Lake Tana or Sobat, which would stop the flow of the Nile waters, without the agreement of His Britannic Majesty's*

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<sup>291</sup> AMZV, TO-T, Ethiopia, 1980-1989, k. 3., Sucho v E+opii, jeho následky a ich riešenie (Drought in Ethiopia, its consequences and their solution), 3.12.1984.

<sup>292</sup> Energypedia, Ethiopia Energy Situation, Available from: [https://energypedia.info/wiki/Ethiopia\\_Energy\\_Situation#cite\\_ref-B.C3.96LLI\\_7-1](https://energypedia.info/wiki/Ethiopia_Energy_Situation#cite_ref-B.C3.96LLI_7-1), [cited 2023-06-25].

<sup>293</sup> OESTIGAARD, T.: *Water, national identities and hydropolitics*, in: SANDSTRÖM, E., JÄGERSKOG, A., OESTIGAARD, T., Land and Hydropolitics in the Nile River Basin, Challenges and New Investments, New York 2016, p. 221.

*Government and the Government of Sudan.*"<sup>294</sup> The Ethiopian government has repeatedly described this agreement as unfair and non-binding, and also pointed out the senselessness of the huge works built downstream (High Aswan Dam, Merowe Dam, etc.), which typically face huge evaporation due to the climate itself, adding that a similar work built in the Ethiopian highlands would not be facing this issue to such an extent. In the 1970s, Cairo threatened Ethiopia with the use of force if it built the Chomen Lake dam on the Fincha River. When Addis Ababa applied to the World Bank for the finance needed for the project, Egypt and Sudan, in an effort to compromise the project and prevent foreign investors from supporting it, unsuccessfully referred to this obsolete agreement.<sup>295</sup>

In November 1959, the *Egyptian-Sudanese Agreement for the Full Utilisation of the Nile Waters* was signed in Cairo. The agreement helped resolve the situation surrounding the High Aswan Dam and de facto divided the volume of Nile waters between Egypt and Sudan, without regard to other states in the river basin - including Ethiopia. Of the total Aswan measured annual volume of 84 billion cubic meters, 55.5 billion was to go to Egypt and 18.5 billion to Sudan, with about 10 billion being losses due to evaporation).<sup>296</sup> To some extent, this agreement aligned Cairo and Khartoum's interests in the Nile development issues for the next four decades. During this period, Egypt allowed Sudan to implement numerous water projects (e.g., the Roseires Dam) without much objection, and both countries acted in a united and strict manner in the negotiations with other neighbours in the basin, unwilling to allow for the construction of any new dams or the conclusion of new agreements on the distribution of the Nile's water resources.<sup>297</sup> The representations of the other countries did not, of course, agree with their demands. One example is the case of Julius K. Nyerere, the first president of Tanzania, who in the early 1960s sought to build a dam on a Nile tributary, the Kagera River, and thus got into a dispute with Cairo. Nyerere came up with a doctrine that former colonial powers (through the treaties concluded during the colonial period) should not be playing any role in the

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<sup>294</sup> The full text of the agreement is available here: <https://hornaffairs.com/2011/06/08/read-the-1902-ethiopia-uk-treaty-share-your-view/>, [cited 2023-06-25].

<sup>295</sup> TVEDT, T.: *The Nile Waters Issue*, available from: <https://africanhistory.oxfordre.com/view/10.1093/acrefore/9780190277734.001.0001/acrefore-9780190277734-e-20>, [cited 2023-06-25].

<sup>296</sup> Full text of the agreement available here: [https://www.internationalwaterlaw.org/documents/regionaldocs/uar\\_sudan.html#sudan2](https://www.internationalwaterlaw.org/documents/regionaldocs/uar_sudan.html#sudan2) [cited 2023-07-06].

<sup>297</sup> Ibid.

formulation of agreements and treaties of the newly independent countries. The dispute eventually landed before the International Tribunal at The Hague with Nyerere losing his case, but his doctrine was later invoked by other Nile Basin countries dissatisfied with the Egyptian river hegemony.<sup>298</sup>

Water resources development had a logical place in Ethiopia's Ten-Year Development Plan, which was approved by the Mengistu regime in 1984 as the first long-term development concept. In paragraph 18, the plan named as one of its strategic objectives the intention to "*actively exploit hydrological and geothermal potential for energy development*". Of the total investment volume of BIRR 32 billion, 7.5% was to go to water and 7.2% to energy development. The plan was to implement 6 major energy development projects. A major hydropower project was to be the Malka Wakana dam and power plant on the Shebelle River.<sup>299</sup> The river basin had already been studied in detail in 1967-1971 by French experts from the hydrological division of the *Office of Scientific and Technical Research Overseas (ORSTOM)*. Their conclusions, summarised in a report of 1973, confirmed the Malka Wakana site as suitable for the construction of a dam from both hydrological and hydropower points of view.<sup>300</sup> The Shabelle River flows into the Jubba River and then into the Indian Ocean in Somalia. Its catchment area is not connected to the Nile River basin, so planning hydropower works on this river had not caused much irritation to neighbouring countries, particularly Egypt. The construction of Malka Wakana was to almost double Ethiopia's electricity production from 207 MW to 360 MW.<sup>301</sup> In May 1987, the Water Technology Institute in Arba Minch was also inaugurated to train up to 2,000 new Ethiopian hydroexperts a year, who were necessary for the domestic development of water resources. As the Ethiopian Herald reported, "*it will make efforts to satisfy the water demand from the growing population by exploring water springs and conserving rainwater as well as by building medium and large-sized water dams at convenient places.*"<sup>302</sup> Because of their size and cost, projects like Malka Wakana were

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<sup>298</sup> UN, UNEP: *Hydrological Vulnerability and Resilience Along International Waters: Africa*, 2005, p. 52.

<sup>299</sup> AMZV, TO-T, Ethiopia, 1980-1989, k. 3., Zpráva – Plán rozvoje Etiópie (Report – Ethiopia Development Plan), 28.4.1984.

<sup>300</sup> Imperial Ethiopian Government, National Water Resources Commission, Ethiopia-France Cooperative Program, Wabi Shebelle Survey, Vol. 3, Hydrological Survey of the Wabi Shebelle Basin, 1973.

<sup>301</sup> HAILE, M.: *Melka-Wakana Power Station Boosts National Electricity Supply*, in: Ethiopian Herald, 1.5.1988.

<sup>302</sup> *For Development of Water Resources*, in: Ethiopian Herald, 26.5.1987.

beyond the capabilities of the Ethiopian government and could not be implemented without the support of foreign governments and international organizations.

## **Czechoslovakia and Ethiopia - Evolution of Bilateral Relations**

As in the case of Egypt and Ghana, a brief excursion into the mutual relations between Ethiopia and Czechoslovakia is necessary to understand the context. These have a long history that trails back to the inter-war period.<sup>303</sup>

Apart from the visits of several travellers from the Czech lands during the medieval and modern periods, official relations between the newly established Czechoslovak Republic and the Abyssinian Empire were established in October 1918. In 1920-25, the Moravian-born Rudolf Klíma worked at the court of Empress Zewdita, filling important positions (head of construction works in the capital, later manager of the imperial coffee plantations in Siddam).<sup>304</sup> In the 1920s, Czechoslovakia also supplied the first ammunition to Abyssinia. Czechoslovak interests in Abyssinia were represented by the French Embassy in 1926-39. But already in 1930, in connection with the first deliveries of Czechoslovak arms and military supplies, as well as with the investment plans of Czechoslovak industry in Abyssinia, the first serious considerations about the establishment of a consulate appeared.<sup>305</sup>

Shortly after the war, in 1945, the Czechoslovak Republic began to build its first industrial enterprises in Ethiopia. At the invitation of the Ethiopian Emperor for foreign experts, Josef Tustira came to Ethiopia and spent the rest of his life there as a very successful businessman. Shortly after the February 1948 coup d'état, a Czechoslovak aviator, Colonel Bohuslav Tobyška, emigrated to Ethiopia, and, together with his friend

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<sup>303</sup> For an overview of the history of mutual relations see e.g.: ZÍDEK, P., SIEBER, K.: *Československo a subsaharská Afrika v letech 1948-1968*, Praha: Ústav mezinárodních vztahů 2007, nebo práce afrikanisty Jana Záhoříka např.: ZÁHOŘÍK, J.: *Itálie a Efiopie (1914-1941)*, in: *Historický obzor*, No. 9-10, 2006, pp. 203-208, či Jana Dvořáčka: DVOŘÁČEK, J.: *Československo-efiopské vztahy 1945-1974*, (disertační práce), Univerzita Pardubice, Fakulta filozofická, 2018.

<sup>304</sup> For more on Czechoslovak citizens in Ethiopia see e.g.: ZÁHOŘÍK, J., DVOŘÁČEK, J.: *Czech Travelers, Entrepreneurs and Advisors in Ethiopia, 1918-1937: a Preliminary Study*, in: *Journal of Ethiopian Studies*, vol. 47, December 2014, pp. 53-68.

<sup>305</sup> For more on Czechoslovak supplies of arms and ammunition see e.g., CHMIEL, J.: *Československý zbrojářský priemysel a taliansko-efiopský konflikt*, in: *Historie a vojenství*, No. 2, 1991, pp. 40-64; WOLDEKIRO, A.: *Tendenční neutralita: československý zbrojní průmysl a italsko-habešský konflikt*, in: *Soudobé dějiny*, No. 1-2, 2006, pp. 9-28; ZÁHOŘÍK, J.: *Itálie a Efiopie (1914-1941)*. In *Historický obzor*, No. 9-10, 2006, pp. 203-208.

Colonel Vítězslav J. Rosík, he helped Emperor Haile Selassie I with the development and organisation of the fledgling Ethiopian Air Force.<sup>306</sup>

After February 1948, because of the emperor's unfavourable view of the internal political development in the Czechoslovakia, the relations between the two countries cooled down considerably. As early as 1953, however, Ethiopia was again included among the priorities of Czechoslovak non-European foreign policy. On 26 January 1955, a mission was established in Addis Ababa and it was upgraded to an embassy on 17 July 1959. As a result of the continuing normalisation of relations, the first official state visit by Emperor Haile Selassie I to Czechoslovakia took place in 1958. In the late 1950s, mutual relations began to develop at a rapid pace, especially in the field of economic cooperation. In 1958, the Czechoslovak Republic supplied Harer with hospital equipment, including medical staff. In the course of the very next year, an oil press was delivered to Chaffa, and a shoe factory was built in Addis Ababa in the following two years. A Treaty of Friendship and Cooperation and an Agreement on Cultural, Scientific and Technical Cooperation were signed on 5 December 1959. Based on these agreements, the Czechoslovak Republic started dispatching dozens of its experts to Ethiopia and accepting hundreds of Ethiopian students to study at Czechoslovak schools on government scholarships.<sup>307</sup>

In 1960, a reciprocal state visit by President Antonín Novotný to Ethiopia took place. On this occasion, other treaty documents were signed, including the Treaty of Friendship again. Since 1970, cooperation with Ethiopia has continued in the military sphere - the Addis Ababa ammunition depot was developed (expanded), plus deliveries of light infantry weapons and the first supply of 10 L-39 Albatros jet trainer aircraft took place.<sup>308</sup>

A coup d'état in 1974 removed the government of Emperor Haile Selassie and brought to power a military Marxist regime (DERG) headed by Mengistu Haile Mariam. As a result of the new political situation, Ethiopia began to align itself with the Eastern Bloc and deepen its economic cooperation with the socialist states. Czechoslovakia reacted to

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<sup>306</sup> For more on Tobyssek see e.g.: SLÁDEK, Čestmír. *Colonel Toby: Na dvoře krále králů*, Prague 1999, pp. 161-162.

<sup>307</sup> Website of the Embassy of the Czech Republic in Addis Ababa - Historical contacts, [https://www.mzv.cz/addisababa/cz/zeme\\_a\\_organizace\\_akreditace/e+opie/historicke\\_kontakty.html](https://www.mzv.cz/addisababa/cz/zeme_a_organizace_akreditace/e+opie/historicke_kontakty.html) [cited 2023-06-25].

<sup>308</sup> Taken from the website of the Embassy of the Czech Republic in Addis Ababa - Historical Contacts, [https://www.mzv.cz/addisababa/cz/zeme\\_a\\_organizace\\_akreditace/e+opie/historicke\\_kontakty.html](https://www.mzv.cz/addisababa/cz/zeme_a_organizace_akreditace/e+opie/historicke_kontakty.html) [cited 2023-06-25].



this turn quite swiftly and proceeded with providing aid to Ethiopia in the form of government loans, increase in places for scholarship holders at Czechoslovak universities, increase in the number of experts sent abroad from various sectors, etc. On the occasion of Mengistu Haile Mariam's state visit to Prague in 1978, an Agreement on Economic Cooperation and a Credit Agreement were signed. The charters became the basis for even more intensive economic support to Ethiopia. Czechoslovakia supplied a number of investment units to the country, e.g., the Ethiopian Tannery, the Addis Metal Pressing Enterprise, the Ethiopian Rubber and Canvas Shoe Factory - both in Addis Ababa, the breweries in Harar and Bedele, with Czechoslovakia also participating in the construction of the Kombolcha and Arba Minch textile factories and the grain mills in Awassa and Kokeb. Ethiopia was also granted a government investment loan of USD 50 million with a maturity of 15 years and interest of 2.5% p.a.<sup>309</sup> The Malka Wakana hydroelectric power project on the Wabe Shabele River, implemented in the 1980s, can be considered one of the highlights of the Czechoslovak-Ethiopian (and Soviet) cooperation.

### **Malka Wakana: The First Joint Work of Soviet and Czechoslovak Hydroexpertise in Africa?**

Given the long-standing struggle with the devastating effects of recurrent drought and the lack of electrification, which in the eyes of the Ethiopian government represented a brake on industrialization and social and economic development, the development of water resources was considered one of the priorities of the Mengistu regime. This view, quite logically, mirrored in the cooperation with foreign actors. For example, the ECU 37 million Amarti hydropower project was implemented in cooperation with the European Economic Community (EEC), Italy signed a memorandum of cooperation with Ethiopia in July 1984 to supply seven small hydropower plants, experts from Sweden and Japan participated in hydrological surveys of drinking water sources, to name a few.<sup>310</sup> The Malka Wakana hydroelectric project became an important point of cooperation with the EECCA countries in the early 1980s.

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<sup>309</sup> Website of the Embassy of the Czech Republic in Addis Ababa - Historical contacts, [https://www.mzv.cz/addisababa/cz/zeme\\_a\\_organizace\\_akreditace/e+opie/historicke\\_kontakty.html](https://www.mzv.cz/addisababa/cz/zeme_a_organizace_akreditace/e+opie/historicke_kontakty.html) [cited 2023-06-25].

<sup>310</sup> AMZV, TO-T, Ethiopia, 1980-1989, k. 4., Zpráva o hospodářských a obchodních vztazích E+opie se zahraničím (Report on Ethiopia's economic and trade relations with foreign countries), 9.12.1986.

The Malka Wakana was designed as a spillway with a height of approximately 40 m, a length of 1.4 km and a width of 160 m at the base. Due to the relatively open landscape profile, a lake with a capacity of 600 million cubic metres was envisaged when the river was dammed. This hydroelectric dam on the Wabe Shabelle River was intended to contribute to the overall development of central Ethiopia, irrigate the surrounding area and, with its planned capacity of 153 MW, help electrify more than 100,000 households. *“It is believed that the Malka Wakana Hydroelectric project in Bale region will play a big role in Ethiopia's electrification programme”*, reads a special issue of the *Felege Berhan* publication of the Ethiopian Electric Light and Power Authority (EELPA).<sup>311</sup>

The main driver in the negotiations with the Ethiopian government was the Soviet Union, which, however, did not foresee a comprehensive construction and recommended the Ethiopian government should approach other socialist countries to participate in the implementation of this project. The Soviets explicitly recommended Czechoslovakia, Hungary, and the GDR.<sup>312</sup> The Ethiopian government subsequently decided to approach Czechoslovakia, probably because its experience in designing, supplying, and installing hydroelectric machinery was a suitable complement to the Soviet intention to implement the design part and the actual construction of the dam.

Negotiations on Czechoslovak participation in the Malka Wakana project took place mainly on the basis of the so-called Intergovernmental Czechoslovak-Ethiopian Commission for Economic, Scientific and Technical Cooperation and Trade. This new commission was established by both governments during 1981 (preparatory meetings lasted from June to December). The Commission's tasks were to include the identification of possibilities for expanding cooperation in the fields of agriculture, industry, infrastructure, geological studies and mining. It met alternately in Prague and Addis Ababa. Malka Wakana was an important part of its agenda from the outset.

Already during the first meeting of the Commission, which brought together officials and experts alike and was held in Prague on 8-12 June 1981, it was stated that Czechoslovakia could *“design, manufacture and install turbines, generators, gate valves, gates and accessories, as well as coordinate the design, manufacture, delivery and*

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<sup>311</sup> *Significance of Melka Wakena Hydroelectric Project Stressed*, in: Ethiopian Herald, 6.10.1987.

<sup>312</sup> AMZV, TO-T, Ethiopia, 1980-1989, k. 2., Zpráva z Addis Abeba – Spolupráce zemí RVHP v ekonomické oblasti s E+opíí, Report from Addis Ababa – Cooperation of Comecon countries in the economic field with Ethiopia (22.6.1981)

*installation of substations, converters, high voltage lines and other electromechanical equipment." The estimated duration of implementation was five years and was to be covered by a government loan - \$100 million of the \$150 million requested by the Ethiopian side was to go to Malka Wakan. As far as financing was concerned, the Czechoslovak side preferred that payment be made "in part by supplying goods from Ethiopia at world market prices, with a focus on raw materials needed for the Czechoslovak national economy..." with the additional provision that, if the Ethiopian side was unable to secure suitable goods in sufficient quantity, then payment in free currency secured by an exchange rate clause was also an option. The meeting in Prague was attended, among others, by Miroslav Mikeš, Director General of FTC Škodaexport, and Bedřich Bašta, Deputy Director of the company Hydroprojekt in charge of Hydropower and Hydraulic Engineering.<sup>313</sup>*

Leaving aside the trilateral negotiations with the Ethiopians and Soviets in Moscow and Addis Ababa during 1981 to clarify the terms of the contract, particularly its financial part, the construction of Malka Wakan quickly became a regular topic of conversation at the highest levels of state. For example, during the state visit of President Gustav Husák to Ethiopia in September 1981, the Ethiopian side "stressed its particular interest in the construction of the hydroelectric project" during the negotiations.<sup>314</sup> Another series of negotiations took place between the Czechoslovak FTC Škodaexport, which carried out the calculations and execution of the entire contract, and the Soviet side in Moscow. The project management was entrusted to Škodaexport's officer Otto Hofmann, who also attended all the negotiations in person. As he recollects, the negotiations were efficient and constructive, except for one moment. Just before signing the protocol, which was preceded by a series of working meetings, the Soviets replaced their entire delegation without explanation and the negotiations started all over again from the scratch.<sup>315</sup>

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<sup>313</sup> AMZV, DTO - 1945-1989, Ethiopia - Ethiopia 1981 - Bilaterální styky, pracovní agenda ZÚ, Opera+vní zpráva z jednání s e+opskou delegací pro přípravu I. zasedání Mezivládní československo-e+opské komise pro hospodářskou, vědeckotechnickou spolupráci a obchod. (Bilateral rela+ons, ZÚ working agenda, Opera+onal report from the mee+ng with the Ethiopian delega+on for the prepara+on of the 1<sup>st</sup> session of the Intergovernmental Czechoslovak-Ethiopian Commission for Economic, Scien+fic and Technical Coopera+on and Trade).

<sup>314</sup> AMZV, DTO - 1945-1989, Ethiopia 1981 - Návštěva s. Gustáva Husáka v E+opii 1981 (Visit of Sr. Gustáv Husák to Ethiopia 1981).

<sup>315</sup> Interview with Ofo Hofmann , Říčany, 25.7.2023.

The protocol on deliveries between FTC Škodaexport and the Ethiopian government represented by Tekezshoa Ajitenfisu, Minister of Mines, Energy and Water, was signed on 1 April 1983 during the Minister's visit to Czechoslovakia. The four Francis turbines were to be supplied by ČKD Blansko and the generators by Škoda Plzeň. In an interview with the Czechoslovak Press Office (ČTK), Minister Ajitenfisu said: *"The agreement on Czechoslovak assistance in the construction of the Malka Wakana power plant, which we signed yesterday in Prague, is of great importance for Ethiopia. We are glad that Czechoslovakia, which has good experience and a long tradition in this field, will participate in the construction of this large hydroelectric power plant. I had the opportunity to talk with Czechoslovak experts during my visit, and I am glad that they will contribute with their wealth of expertise to additional development of the energy sector in Ethiopia..."*. ČTK further solemnly announced that Malka Wakana was to be the first work implemented in terms of the international synergy of Comecon member states in the field of water management in which Czechoslovakia was participating.<sup>316</sup> The contract for the supply of the equipment amounted to 27.5 million roubles, while another piece of equipment worth 5.5 million roubles was donated by Czechoslovakia to Ethiopia as a gift.<sup>317</sup> The Intergovernmental Czechoslovak-Ethiopian Commission for Economic, Scientific and Technological Cooperation and Trade, which met approximately once a year, continued to be the platform used for fine-tuning the contractual details and performing ongoing contract assessments. The framework conditions set for the assembly and signed during the third meeting of the Commission in April 1984 became the basis for the conclusion of the actual contract, which took place in July of that year. The first experts (fitters) from ČKD Blansko were to arrive at the dam site in early 1985.<sup>318</sup>

In early April 1984, the Czechoslovak Embassy in Addis Ababa made a business trip to Malka Wakana in order not just to establish personal contacts with the leading economic and political officials at the construction site, but also to find out about the living and working conditions in which the Czechoslovak experts, whose arrival was expected

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<sup>316</sup> AMZV, DTO - 1945-1989, Ethiopia, Návštěva ministra vodního hospodářství E+opie v ČSSR (Visit of the Minister of Water Management of Ethiopia to the Czechoslovakia).

<sup>317</sup> AMZV, TO-T, Ethiopia 1980-1989, k. 2, (Hodnocení závěrů z II. zasedání čs. e+opské smíšené komise) Evaluation of the conclusions of the 2nd meeting of the Czechoslovak Ethiopian Joint Commission, 24.2.1984.

<sup>318</sup> AMZV, TO-T, Ethiopia 1980-1989, k. 2, Plnenie záverov III. zasedania medzivládnej ekonomickej komisie ČSSR – E+opia (Implementation of the Conclusions of the 3<sup>rd</sup> Session of the Intergovernmental Economic Commission Czechoslovakia-Ethiopia), 6.10.1984.

about six months later, would live at the assembly site. According to the Soviet construction manager Alexander Pavlovich Stepanov and his deputy Viktor Zotov, the entire construction was under the scrutiny of the Ethiopians, who were pressing for its rapid completion because they needed to increase electricity production capacity as quickly as possible, as their country feared they would face a production deficit the following year. However, according to Stepanov, the builders also had to withstand pressure from the Soviet state officials, who saw the dam as a highly political issue on which the reputation and future strength of the Soviet Union's position, or the socialist countries' respectively, in Ethiopia depended. Moreover, nowhere else in the world had a hydroelectric plant of a similar size been built in just two and a half years, so achieving this status in Malka Wakana was more than tempting for the Soviets, mainly for propaganda purposes. For these reasons, Soviet experts worked two or three shifts, and the same was expected from the Czechoslovak experts.<sup>319</sup>



**Fig 13: Malka Wakana Power House equipped by Czechoslovakia (1988).**

Source: Ethiopian Herald, 1.5.1988.

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<sup>319</sup> AMZV, TO-T, Ethiopia 1980-1989, k. 4, Ethiopia – Addis Ababa, Zpráva o služebnej ceste na výstavbu hydroelektrárne Malka Wakana (Report on a business trip to the construction of the Malka Wakana hydroelectric plant), 10.4.1984.

In terms of working conditions, employment at Malka Wakana was quite harsh. It must have been physically demanding, shift-based work. The conditions were made even worse by the complete isolation of the site - there was no major settlement providing any services or entertainment within a 100 km radius. Everything, including accommodation, health centre, factory canteen or the shop, had to be built on site or shared with the Soviets who were already working there. The contract broker, FTC Škodaexport, thus e.g., had to provide its experts with their own doctor, or their own chef to cook only for the Czechoslovaks in the Soviet kitchen, so that no conflicts arose between the two camps due to their varying gustatory preferences. Furthermore, to maintain high morale, it was envisaged that "on the side" foodstuffs would be supplied, for example beer, ham, sausages, mustard, or confectionery, as a benefit. The experts were to be provided with cars, camping equipment and basic sports equipment. Films, music, literature, and daily newspapers were also provided.<sup>320</sup> The aforementioned editor of Rudé Právo, Pavel Krýl, who visited the site in July 1986, described the conditions as follows: *It was assumed that at the peak of the construction, one hundred Czech experts and about four hundred Soviet experts and their families would live and work here. Electricity, sewerage, hot water is commonplace. There is an abundance of absolutely safe drinking water drawn from a borehole in the rock. A modern, architecturally designed dining room has also been completed.* In his text, Kriel did not leave out the downsides of life at Malka Wakana: *"Of course, not everything is rosy. Apart from the building colony, there is nothing far and wide, it is a 50 km drive to the town of Dodola to get letters, and our newspaper is a fortnight late. On days off, there are only nature walks and a video programme at the club in the evening. Sometimes there's not even time for that, because, for example, the pipe welding must go on non-stop. Twelve hours of work, twelve hours of rest..."*<sup>321</sup>

Despite Škodaexport's efforts to make life in the remote location more pleasant for the assemblers, life at Malka Wakana was dull. Many of the assemblers therefore used their days off to take trips in borrowed cars with diplomatic plates to remote Addis Ababa, where Škodaexport had set up a temporary hostel for "recreation". The vacationers attended wild parties in the city and visited the local brothels in large numbers. Otto

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<sup>320</sup> AMZV, TO-T, Ethiopia 1980-1989, k. 4, Ethiopia – Addis Ababa, Zpráva o služebnej ceste na výstavbu hydroelektrárne Malka Wakana (Report on a business trip to the construction of the Malka Wakana hydroelectric plant), 10.4.1984.

<sup>321</sup> NA, MZV VA III, sign. 822, (1986-1987), KRÝL, P.: *Naši na Malka Wakana*, in: Rudé právo, 5.6.1986.

Hofmann, who was "in charge" of the assemblers, described several consular cases beyond the law committed by the "off the chain" assemblers. For example, two drunk Czechoslovaks tried to break into a closed pub by force, whereupon the owner ran at them with an axe. He killed one on the spot and seriously injured the other. There was also an incident in which a prostitute was thrown out of the window of a brothel. The uncontrolled sex life in turn led to several experts later dying of AIDS, the treatment for which was very limited in the 1980s.<sup>322</sup>

In addition to the core work team installing machinery directly at Malka Wakana, a smaller group worked on the installation of the Kaliti substation near Addis Ababa, to which high voltage was to be fed through a grid built by the Soviets.<sup>323</sup>



Fig. 14: ID Card of Otto Hofmann for entrance to Malka Wakana construction works. Source: Private Collection of Otto Hofmann.

Exerted by the Soviet side, the pressure to meet deadlines, or to perform tasks ahead of deadlines respectively, was also evident at the level of diplomatic session, where almost "panic fear" could be observed that the project would not be completed on time. For example, in May 1984, Fyodorov, the Economic Counsellor of the Soviet Embassy in

<sup>322</sup> Interview with Ofo Hofmann , Říčany, 25.7.2023.

<sup>323</sup> Interview with Ofo Hofmann , Říčany, 25.7.2023.

Ethiopia, initiated a meeting with the Czechoslovaks to obtain information on the Third Session of the Intergovernmental Czechoslovak-Ethiopian Commission held a few weeks earlier in Prague. Fyodorov was most interested in issues related to the Malka Wakana project, stressing that it was the largest project in Ethiopia with great importance for the position of Czechoslovakia and the Soviet Union in Ethiopia and their further cooperation. He stated that *"the Soviet Union will not allow deadlines to be jeopardized, will fulfil its commitments in a timely and quality manner and expects the same from the Czechoslovak side."* The Czechoslovak Embassy informed Prague after the meeting with Fyodorov that *"it is obvious that the Soviet Union will make every effort to ensure that the construction of the plant proceeds according to plan... Moreover, pressure from the Soviet side can be expected to even start the whole construction ahead of schedule."*<sup>324</sup> The new Soviet ambassador in Addis Ababa, Gennady Nikolayevich Andreev, also explicitly called for consistency in meeting deadlines during his first personal meeting with his Czechoslovak counterpart Eduard Kukan in June 1985.<sup>325</sup>

The Czechoslovak party was well aware of the great political dimension of the Malka Wakana contract throughout its implementation. The opinion among foreign policy makers was that it was *"a politically important and closely watched by the Ethiopian side construction, which will be one of the few priority objects in the industrialisation of Ethiopia in the near future, and must therefore be at the forefront of Czechoslovak interest and care."*<sup>326</sup> In their eyes, the importance lay largely in the fact that Czechoslovakians, Soviets and Ethiopians participated in the project: *"It is the first project of its kind, and therefore its success or failure necessarily has political implications."*<sup>327</sup> The Embassy in Addis Ababa paid close attention and care to the project throughout its implementation, with diplomats visiting the construction sites and being in close contact with the foreign trade companies involved.<sup>328</sup> The situation surrounding the dam was also discussed at

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<sup>324</sup> AMZV, TO-T, Ethiopia 1980-1989, k. 2, Záznam o návštěvě, Fjodorov, Ryžkov, Ivaško (Record of visit, Fyodorov, Ryzhkov, Ivashko) 4.5.1984.

<sup>325</sup> AMZV, TO-T, Ethiopia 1980-1989, k. 2, Záznam o rozhovoru, Andrejev (Interview record, Andreyev), 21.6.1985.

<sup>326</sup> AMZV, TO-T, Ethiopia 1980-1989, k. 1, Plnění koncepce (Implementation of the Concept), 7.2.1983.

<sup>327</sup> Ibidem.

<sup>328</sup> AMZV, TO-T, Ethiopia 1980-1989, k. 3, Hodnotenie konkrétnych stykových akcií a plnenia koncepcie čs. zahraničnej politiky voči Eópii (Evaluation of specific liaison actions and implementation of the concept of Czechoslovak foreign policy towards Ethiopia), 30.11.1987.



regular meetings of the ambassadors of the socialist countries in Addis Ababa, which served to coordinate political and economic activities.

A number of high Czechoslovak officials also visited the construction site. For example, in December 1986, a delegation of the Communist Party of Czechoslovakia arrived, led by Miloš Jakeš, a member of the Presidium and Secretary of the Communist Party of Czechoslovakia. In terms of delivery and completion dates, the Czechoslovak side was scrupulously punctual in view of the international pressure, and the Ethiopians were satisfied. Malka Wakana Asrat Gashew, the project's general director, told Red Law that *"the Ethiopian management is fully satisfied with the relations with the Czechoslovak business partners,"* describing the construction as *"a specific symbol of the practical application of proletarian internationalism between socialist Ethiopia, Czechoslovakia and the Soviet Union."*<sup>329</sup>

A paradox about the Soviet fear of construction delays and the resulting pressure exerted on the Czechoslovaks was that, when in late 1985 the Malka Wakana indeed began to experience delays of up to a year in the preparatory works, these were actually delays on the part of the Soviets and the Ethiopians. This delay, which had been caused by the more difficult than expected geological conditions of the site, further affected the involvement of Czechoslovak experts who could not make a timely start of the assembly of the turbines and generators, although all the machines had been delivered on time to the Ethiopian side and were already present on site.<sup>330</sup> The slippage of work could not be made up even after almost two years. Although Czechoslovakia fulfilled its obligations under the contract, and assembly work continued "successfully with a number of problems being resolved expeditiously", the 1 March 1988 deadline for commissioning the first machine set by the tripartite agreements signed in Moscow in June 1987 was in jeopardy. The actual construction of the dam, which was carried out by the Soviets and Ethiopians, was delayed by about two months.<sup>331</sup> According to the testimony of Škodaexport's commercial and technical representative Otto Hofmann, the Soviets also

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<sup>329</sup> NA, MFA fund VA III, sign. 822, (1986-1987), NÝVLT, J.: *Communist Party Delegation to Ethiopia*, in: *Rudé právo*, 8.12.1986.

<sup>330</sup> AMZV, TO-T, Ethiopia 1980-1989, k. 2, Plnění závěrů 4. zasedání čs.-e+opské smíšené komise (Implementation of the conclusions of the 4<sup>th</sup> meeting of the Czechoslovak-Ethiopian Joint Commission), 5.12.1985.

<sup>331</sup> AMZV, TO-T, Ethiopia 1980-1989, k. 2, Kontrola plnění závěrů 5. smíšené komise mezi ČSSR a E+opií dle Protokolu ze dne 20.8.1986 (Control of the implementation of the conclusions of the 5<sup>th</sup> Mixed Commission between the Czechoslovak Socialist Republic and Ethiopia according to the Protocol of 20.8.1986).

had problems with the logistics on site. FTC Škodaexport therefore had to purchase several trucks by itself, so that Czechoslovak assemblers could transport materials around the site.<sup>332</sup>

The ceremony of handing the structure over to the Ethiopians in April 1988 was attended by a Czechoslovak delegation headed by the Deputy Prime Minister, which, at the request of the Ethiopians, included the former Minister of Foreign Trade Bohumil Urban, which as such only underlines the importance of personal ties in the contracts between Czechoslovakia and the African countries.<sup>333</sup> Malka Wakana thus became the first and only Ethiopian hydroelectric power plant successfully commissioned during the 1980s. In terms of fulfilling its obligations to Czechoslovakia, Ethiopia was one of the few developing countries to have paid off their debt. After the completion of the Malka Wakana installation, Czechoslovakia believed there would be good prospects of building additional small and medium-sized hydroelectric plants there in cooperation with foreign companies.<sup>334</sup> However, both the initiative from the Czechoslovak side and the intensity of mutual relations with Ethiopia declined considerably because of the political and socio-economic changes after the so-called Velvet Revolution in November 1989.

### **Czechoslovakia and Hydrogeological Surveys of Ethiopia**

At first glance, hydrology and hydrogeology may appear to be less distinct branches of water management expertise compared to hydropower. This is probably because they are more theoretical disciplines whose direct outputs do not take the form of massive steel turbines or concrete dams, rather mere maps and data sets. However, hydrology and hydrogeology played an important role in the water management expertise that socialist Czechoslovakia exported to Africa. Detailed exploration of mineral wealth, as well as water reserves, often represented the first opportunity for African states to chart their resources, which is a prerequisite for any future exploitation.

On the other hand, the countries that supplied experts had a potential advantage in accessing the measured data and could more quickly and accurately conceive their bids

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<sup>332</sup> Interview with Ofo Hofmann, Říčany, 25.7.2023.

<sup>333</sup> AMZV, TO-T, Ethiopia 1980-1989, k. 4, Ethiopia – Inštrukčný list č. 3/88 (Instruction sheet No. 3/88), 4.5.1988. *Growing Relations Between Ethiopia, Czechoslovakia* Noted, in: Ethiopian Herald, 20.4.1988.

<sup>334</sup> AMZV, TO-T, Ethiopia 1980-1989, k. 2, Současný stav výstavby investičních celků v Etiopii (Current status of construction of investment units in Ethiopia), 2.10.1989.

for industrial units for future extraction or processing of the identified resources. They could also seek to acquire some of these resources for themselves. This was also the case in Ethiopia. For example, in the preparation of the 1981 meeting of the Czechoslovak-Ethiopian Intergovernmental Commission for Economic, Scientific and Technological Cooperation and Trade, the topics for further development of cooperation also included an item on geology and mining. The Czechoslovak side *"expressed its willingness to cooperate in geological exploration and prospecting of non-ferrous metals, including rare and precious metals and asbestos deposits"*. Regarding the financing of this prospecting, *'the Czechoslovak party expressed its willingness to bear the costs, on the understanding that it would be reimbursed for the actual expenses in the event of positive results leading to exploitation and that it would have the right to participate in the exploitation of any proven deposits, including a share in the production.'*<sup>335</sup>

Czechoslovak geology had a tradition in Ethiopia even before the fall of the imperial regime. One of the first geologists working there was Zdeněk Misař, who made a study trip to Ethiopia during the reign of Haile Selassie. In 1959, expert Jan Bernard described his business trip to the gold and other deposits around the town of Adola in the Sidama region in a short study. The trip was made in preparation for a geological expedition to Ethiopia. The prepared geological expedition was also accompanied by the admission of several Ethiopian geology students to study in Prague. A real boom in sending geologists over came in the late 1970s, when FTC Polytechna started to implement an international cooperation agreement between socialist Czechoslovakia and socialist Ethiopia, which included postings of various experts. In addition to health workers, teachers, economic advisors and other professions, a contingent of Czechoslovak geologists working for the Geological Survey of Ethiopia (GSE) under the Ministry of Water, Energy and Mining was created. Among the first experts sent over in terms of a 1978 government donation were hydrogeologist Zdeněk Herrmann, whose task was to survey for drinking water, and Ferdinand Herčík, both from the Stavební geologie company. The other members of the geological group were the hydrogeophysicist Bohumír Škuthan

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<sup>335</sup> AMZV, DTO - 1945-1989, Ethiopia - Ethiopia 1981 - Bilaterální styky, pracovní agenda ZÚ, Pamětní zápis z rozhovorů čs.-e+opské přípravné delegace pro nadcházející Mezivládní čs. – e+opskou komisi pro hospodářskou a vědeckotechnickou spolupráci a obchod (Bilateral relations, ZÚ working agenda, Memorandum of talks of the Czechoslovak-Ethiopian preparatory delegation for the forthcoming Czechoslovak-Ethiopian Intergovernmental Commission for Economic and Scientific and Technical Cooperation and Trade), 12.6.1981.

from the Central Institute of Geology, who was involved in the drinking water survey and the geothermal project, Jan Zoubek and the geologist Eduard Mališ, who dealt with concretions and marbles.<sup>336</sup> In addition to Czechoslovaks, there were also experts from other countries, e.g., GDR, Italy, Great Britain, etc.

In 1984, Jiří Šíma, then also an employee of Stavební geologie, went to Ethiopia as a replacement for Ferdinand Herčík, whose one-year contract was terminating.<sup>337</sup>

The main objective of the hydrogeological division, of which Šíma became a part after his arrival in Addis Ababa, was to gradually map Ethiopia's water resources – i.e., the creation of so-called hydrogeological maps of the country. The only data available at the time were a printed geological and hydrogeological map of Ethiopia at a scale of 1:2 000 000 and a printed sheet of the hydrogeological map of Mekele at a scale of 1:250 000. Czechoslovak experts therefore set about producing further maps at a scale of 1:250 000. They travelled to the field and, on their return, processed the data in the GSE offices. As Jiří Šíma recalls, the hydrogeological mapping that he and his colleagues carried out had its own specifics: *"they worked only in accessible areas where there were no civil war operations. Almost half of Ethiopia was under martial law with a curfew from midnight to 5 a.m., there were six terribly broken asphalt roads built during the Italian occupation, and the GSE fleet was very limited. Often with armed escorts and sometimes on horseback, we set out to describe springs, boreholes and dug wells and take water samples for chemical analysis. Data processing and map compilation was also an interesting process. The data collected from the field was plotted on topographic maps and the whole image was redrawn on tracing paper. A blueprint smelling of ammonia was made from the tracing paper and colouring with crayons could begin. The quality of the maps was terrible, and about 5 copies of each sheet were made for the GSE library. The report was written on East German "ormig" and the copies were hand-turned on a cyclostyle."* During his 4 years of work, the experts mapped 7 sheets of 1:250,000 scale maps in the accessible eastern and southern parts of Ethiopia.<sup>338</sup>

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<sup>336</sup> AMZV, DTO - 1945-1989, Ethiopia – Ethiopia 1981 - Bilaterální styky, pracovní agenda ZÚ, Informace o technické pomoci za II. pololež 1981 poskytované E+opii. Exper+ vyslaní PZO Polytechna (Bilateral relations, ZÚ work agenda, Information on technical assistance for the second half of 1981 provided to Ethiopia. Experts seconded by FTC Polytechna), 21.11.1981.

<sup>337</sup> AMZV, DTO - 1945-1989, Ethiopia – Ethiopia 1981 - Bilaterální styky, pracovní agenda ZÚ, Informácia o čs. technickej pomoci E+opii za II. polrok 1981 (Bilateral relations, working agenda of the Foreign Office, Information on Czechoslovak technical assistance to Ethiopia for the second half of 1981).

<sup>338</sup> Correspondence with Jiří Šíma: Anniversary / more than 40 years of geological work in Ethiopia, 3.7.2023.

In the 1980s, exploration (platinum, gold, copper, iron) was also carried out in western Ethiopia in the former Wolega province, near the town of Yubdo, led by Jiří Soldán and funded by Intergeo. In addition to Czech funding, there was also a large training project for deposit exploration in southern Ethiopia, funded by UNDP and led by Czech geologist Bohuš Zítek. The work of this project contributed to the detailed mapping of the deposits in the Lega Dembi area.

The end of the 1980s and the collapse of the socialist regimes in Czechoslovakia (1989) and Ethiopia (1991) completely interrupted cooperation in the field of hydrogeological exploration. After 1989, the Stavební geologie enterprise was transformed into several successor companies replicating the three main areas of activity of the original enterprise. In addition to the hydrogeology company AQUATEST a.s., there was GEOTECHNIKA, a.s. (engineering geology), the drilling activities remained in the regions and became several smaller limited liability companies. About a decade later, in 2001, following an agreement between the Embassy of the Czech Republic in Addis Ababa, GSE and AQUATEST Inc., the cooperation was renewed. This was possible thanks to the personal contacts of experts and diplomats from the 1980s. The main focus of the new work was on the compilation of hydrogeological and hydrochemical maps at a scale of 1:250 000. Funding for this work was provided by the Geological Department of the Ministry of the Environment of the Czech Republic. Mapping was resumed, but no longer with crayons, instead with the help of GIS and with the publication of the final maps via the Internet.

In 2009, the first comprehensive study in the Jemma River basin was completed, which included a hydrogeological, engineering geological and geological risk assessment section for the area. This was also the time when the funding for the geological work projects of the MoEW was terminated and transferred under the newly established Czech Development Agency. An agreement was also signed between directors Zdeněk Venera and Mesresha Gebreselassie on the MoU on cooperation between the Geological Survey of Ethiopia and the Czech Geological Survey. In addition to the still ongoing, traditional project to compile hydrogeological and hydrochemical maps at a scale of 1:250 000, new projects started in 2013, first for detailed and then for comprehensive mapping in the southern Ethiopia region. The first 1:50 000 scale detailed geological and hydrogeological

mapping project led by Vladislav Raprich was later replaced by a mapping project at the same scale and a project at a scale of 1:100 000.

The result was a set of maps containing geological, hydrogeological, soil and geological risk maps compiled under the lead of Kryštof Verner. The set of maps covering the Sidama region was recognised as the best cartographic map atlas in the country in 2023.<sup>339</sup> Four years earlier, in 2019, after the completion of 60 sheets of a hydrogeological and hydrochemical map of the whole of Ethiopia, including explanatory notes at a scale of 1 : 250 000, Jiří Šíma was awarded the *Gratias Agit* Award of the Czech Minister of Foreign Affairs for promoting the good name of the Czech Republic abroad.<sup>340</sup> In the summer of 2023, Šíma started a new project to compile a geological and hydrogeological map of southwestern Ethiopia, now under the company GEOTECHNIKA, a.s., because the company AQUATEST, a.s. went bankrupt.<sup>341</sup> An innovative element of the new project is the siting of three exploration and monitoring wells using artificial intelligence.

Continuity can also be found in the training of Ethiopian experts in the field of geology in the Czech Republic. In Prague in the summer of 2023, three students were studying this field and the arrival of 2 others was being prepared.<sup>342</sup>

## Conclusion

Devastating waves of drought ravaging the agricultural sector, which was employing around 90% of the population, and a lack of electricity hampering any further industrial development, including the implementation of foreign investment units, forced the Mengistu regime in the early 1980s to turn its attention to developing the country's water resources. Possessing the second largest water potential in Africa, Ethiopia was ideally positioned to do so. Lack of its own resources, technology and expertise forced the Ethiopian government to seek assistance from abroad. The socialist states were very active in various forms of assistance to Ethiopia, especially after the overthrow of the

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<sup>339</sup> Correspondence with Jiří Šíma: Anniversary / more than 40 years of geological work in Ethiopia, 3.7.2023, Interview with Jiří Šíma, Prague, 11.7.2023.

<sup>340</sup> Website of the Ministry of Foreign Affairs of the Czech Republic, *Gratias Agit* Award Ceremony 2018, available from: [https://www.mzv.cz/jnp/cz/udalos+a\\_media/archiv\\_zprav/rok\\_2018/+skove\\_zpravy/x2018\\_06\\_08\\_gratias\\_agit\\_2018.html](https://www.mzv.cz/jnp/cz/udalos+a_media/archiv_zprav/rok_2018/+skove_zpravy/x2018_06_08_gratias_agit_2018.html) [cited 2023-07-04].

<sup>341</sup> Correspondence with Jiří Šíma: Anniversary / more than 40 years of geological work in Ethiopia, 3.7.2023. Interview with Jiří Šíma, Prague, 11.7.2023.

<sup>342</sup> Interview with Jiří Šíma, Prague, 11.7.2023.

imperial regime of Haile Selassie in a military coup in 1974 and the establishment of the Mengistu regime with strong inclination towards socialism. The socialist states tried to coordinate their activities in Ethiopia during this period, both at the level of the Comecon and at the intergovernmental level - through embassies and various expert commissions.

One of the most important projects that the socialist countries were involved in during the 1980s was the Malka Wakana hydroelectric project on the Wabe Shebele River. From the Czechoslovak point of view, this was a unique project for several reasons.

From Czechoslovakia's perspective, this was the first successful official cooperation with the Soviet Union on a single project in the water management area in Africa (de facto, however, in the entire so-called Third World). In the 1980s, cooperation between the member countries of the Comecon on projects in Africa was quite common otherwise, with Czechoslovakia cooperating directly with the GDR in Ethiopia e.g., in the construction of a textile factory. Each sector even had its own coordinator, and Czechoslovakia was the coordinator for textile projects. The water sector (or hydropower) was most likely under the Soviets. The manner in which the project was handled suggested an attempt to set a certain standard, a system by which similar projects could be successfully handled in the future through the cooperation of the Eastern Bloc countries. The Malka Wakana project, unlike the building of the High Aswan Dam, was not seen as strongly symbolic by the Soviets, and therefore they allowed other socialist states to enter in it.

It was the only hydroelectric power plant in Ethiopia completed during the 1980s, and with a capacity of 153 MW it was to become the largest hydroelectric power project for a long time. It was therefore a project with a huge impact on the development of the central regions of the country, and thus also a project that was closely monitored by the Ethiopian government, as evidenced by the intensity of the diplomatic session and the involvement of the highest state officials. Another undeniable advantage of this particular work was that, unlike the works planned for the Blue Nile, it did not irritate Egypt or Sudan.

Malka Wakana was a project with a strong political background for the reasons given above. Both Moscow and Prague believed that a lot was at stake. Both the Soviet Union and Czechoslovakia depended on the success or failure of the project for the future of their position in the country and the potential to win further contracts. Negotiations and pressure to speed up the construction - for example, the desire to be the first to

complete a hydroelectric project of this scale in a record time - also testified to the desire to demonstrate the level of socialist water management to the world. Right in Ethiopia, hydroelectric technology and expertise were to open doors for the future - especially for further economic cooperation. The project was therefore logically accompanied by strong pressures, especially in terms of meeting the deadlines, either from the Ethiopians upon the Soviets or the Czechoslovaks, or from the Soviets upon the Czechoslovaks. Pressure was also exerted by political officials upon the experts responsible for the construction of the dam and the installation of the equipment (both Soviet and Czechoslovak).

Despite partial problems, the project was successfully completed with only relatively few delays, promoting the “brand” and increasing the chances of winning similar contracts in the future, and not only in Ethiopia. Although foreign trade companies promoted commodities or technologies at various trade fairs at home in Czechoslovakia (e.g., Brno) and around the world (e.g., Leipzig), and they released foreign language catalogues and publications (e.g., Czechoslovak Foreign Trade), examples of good practice were always important and made for the best advertising.<sup>343</sup>

In terms of the dynamics between the parties involved, Moscow was the main coordinator of the project. Czechoslovakia's motivation for involvement in Ethiopia was not only to gain unavailable goods and raw materials, but also to gain hard currency.

Besides hydroenergy, hydrogeological exploration in Ethiopia, i.e., de facto participation in the global mapping of water resources, represented another important target area of Czechoslovak hydroexpertise. In addition to the profit generated on contracts (in hard currency or goods), it potentially provided the Czechoslovak side with information improving its position in competing for being commissioned to supply industrial units needed for the future extraction or processing of the resources identified by the survey.

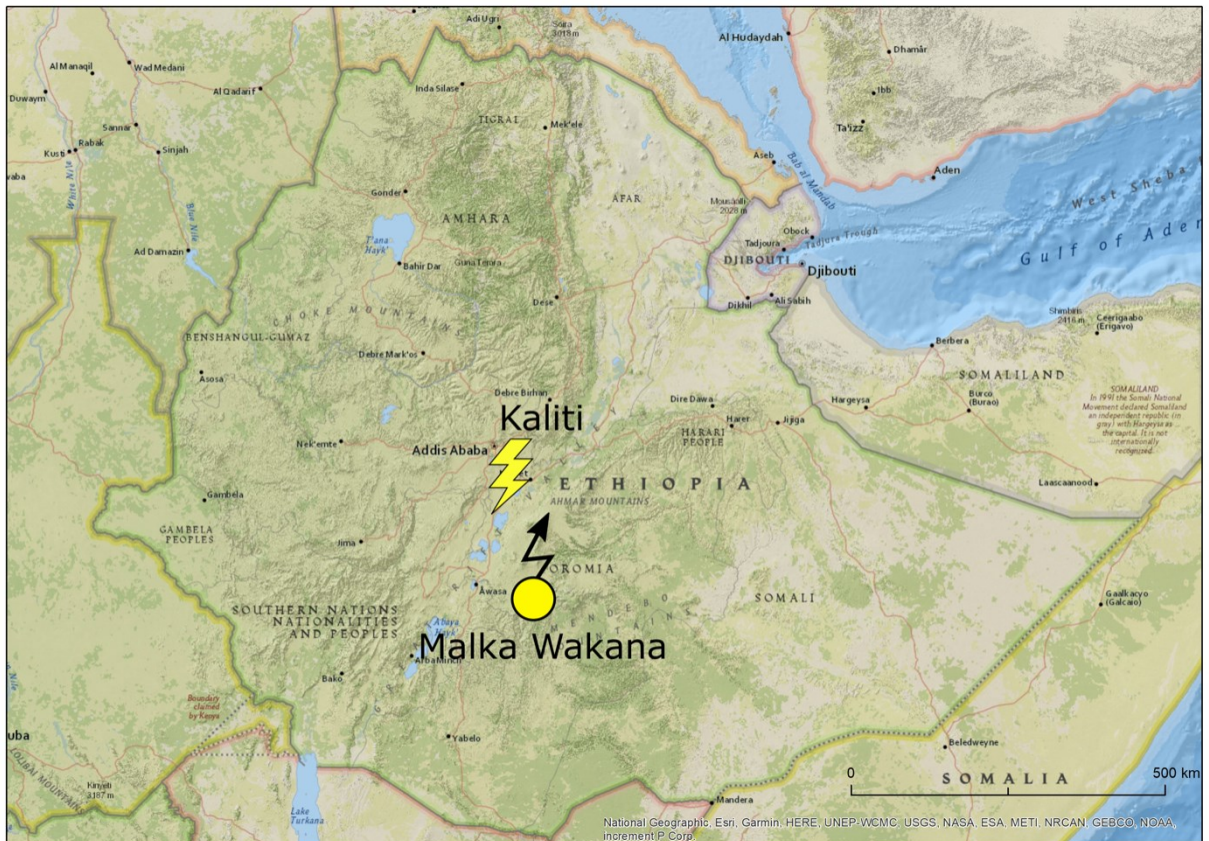
Apart from just a few turbulent years immediately after the change of political regimes in both countries during the 1990s, there has been a great deal of continuity in providing this kind of expertise. It has been favourably conditioned by the high quality of works performed in the 1980s, the possibility of easy follow-up on the work already in

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<sup>343</sup> The Czechoslovak Foreign Trade magazine, published monthly by the Chamber of Commerce of Czechoslovakia, informed about the promotion of Czechoslovak water management technologies and know-how, offering products of companies such as Sigma Olomouc, Škoda or Hydroprojekt, see e.g., KLOUB, J.: *Hydroprojekt exports know-how*, in: Czechoslovak Foreign Trade, No. 1, 1976, pp. 22-24.



progress and, above all, the personal relations between the Czechoslovak and Ethiopian technocracy (both in water management and in administrative). These relationships have survived not only the massive political changes in both countries, but also the organisational changes affecting the institutions and companies involved.



**Map 4: Map of hydropower plant Malka Wakana and sub-station Kaliti - both equipped with Czechoslovak machinery.**

## Chapter 5

### Bearers of the "Socialist" Hydroexpertise

*"We do not get to choose what kind of world we are born into. Sooner or later, you realise that the world, which you have graced with your birth, is ruled by Hussites, Papists, fascists, communists, capitalists or other vermin [...]. When I understood what kind of people I would inevitably be coming into contact with on my travels and what kind of pressures I would have to be facing, I decided to voluntarily take on the role of an agent working in my own service [...]. Such a side-work relationship with myself is not in itself very lucrative, but it is relatively safe, since only a wimp and a jerk will throw themselves off. Apart from a certain degree of caution, such a role also requires some wit, so that one can constantly observe and counteract with sufficient insight, especially the actions of those who are constantly trying to sneak in your life [...]."<sup>344</sup>*

*Jaroslav Balek – An Agent in His Own Service*

This chapter is dedicated to experts. That is to those, who were putting Czechoslovak water management expertise into practice at home and in the world, those who were the bearers of it. It attempts to unveil the motivations of such Czechoslovak experts, including whether they served the regime, the state and their profession during their trips, or whether they were "agents in their own service", to use Jaroslav Balek's metaphor.

Furthermore, the chapter introduces Czechoslovak experts as members of an international community of experts in which transfers of (not only) water management knowledge took place. The paper basically follows Sandrine Kott's work, according to which the Cold War was not only a kind of "dead period" of political and cultural internationalism, but, on the contrary, also a living period stimulated by the rivalry of the universalist models of the East and the West. Kott considers cooperation, whether intergovernmental or inter-agency, to be the most visible manifestation of

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<sup>344</sup> BALEK, J.: *Agentem ve vlastních službách*, Lulu: Tábor 2008, pp. 5-10.

internationalism.<sup>345</sup> I will be focusing more on scientific and technological internationalism. The smallest particle which any institutional cooperation in this area can be broken down into is the person who puts it all into practice – i.e., the expert.

There are many possible approaches to defining a Czechoslovak hydroexpert during the Cold War era. In my reflections on the notion of "experts" - in this case "hydroexperts" - I have drawn on several observations collected and formulated by Vítězslav Sommer and his team. With reference to sociologists who have studied expert communities, such as Gil Eyal and Thomas Medvetz, expertise can be seen as an intervention into public affairs. These authors perceive expert activity as being a particular social field that lies at the intersection of academia, politics and the media. In their view, an expert is defined primarily by his or her actions as an actor intervening in the public sphere by means of certain know-how originating from scientific knowledge.<sup>346</sup> For example, a hydrologist becomes an expert when he or she actually starts to use 'his or her knowledge' while sharing in the exploration of potable water resources within a region on the basis of an intergovernmental agreement or, for example, fills an executive position within an international organisation. A designer of dams or hydroelectric turbines reaches the "expert status" as he sets out on a journey to develop or "modernize" a developing country in Africa or similar.

Hydroexperts are not, and actually never have been, impartial bearers of knowledge, they do not translate the ethos of objective science into the form of objective expertise. Like anyone else, hydroexperts are a mixed bag of idiosyncratic value systems, political ideas, and power ambitions, which they also project into their activities. Their activity is thus never untainted by power or politics - even if it is often only implicitly.<sup>347</sup> Hydroexperts are 'flesh and blood' human beings with agendas, interests, and families that they are taking into consideration when 'exercising expertise'. They do not necessarily have to fulfil the role of mere human technical instruments of state policy, mindlessly working wherever they are being sent to. If they want to, they can compromise

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<sup>345</sup> KOTT, S.: *Cold War Internationalism*, in: SLUGA, G., CLAVIN, P.: *Internationalisms and Twentieth-Century History*, Cambridge University Press 2017, pp. 340-341.

<sup>346</sup> EYAL, G., BUCHHOLZ, L.: *From the Sociology of Intellectuals to the Sociology of Interventions*, in: *Annual Review of Sociology*, Vol. 36, 2010, pp. 117-137. MEDVETZ, T., *Field Theory and Organizational Power. Four Modes of Influence Among Public Policy "Think Tanks"*, in: HILGERS, M., MANGEZ, E. (eds.): *Bourdieu's Theory of Social Fields, Concept and Applications*, London – New York, 2015, pp. 221-237.

<sup>347</sup> SOMMER, V. et. al.: *Managing Socialism as a Firm. Technocratic Governance in Czechoslovakia 1956-1989*, Prague: Lidové Noviny 2019, pp. 14-15.

that policy by their actions. Moreover, experts share a kind of "ideology" of their own, based on "universal modernization."<sup>348</sup>

Any expert was also inevitably a member of the expert community - Czechoslovak and international alike. Such a community functioned around both formal and informal ties established across its members, which were crucial for sharing experience and thus the circulation of knowledge. The expert community shared an ideology and the notion that it was the very one to be endowed with authoritative knowledge in the particular field - we can speak of a so-called epistemic community.<sup>349</sup>

My aim here is to look at water experts as being not just actors in the process of Cold War internationalisation and in the circulation of knowledge, but also as being flesh-and-blood beings. The following part of this chapter is therefore conceived as a probe into the selection process, pre-departure training and especially into the daily lives of experts in a foreign, often quite different environment and under challenging geographical conditions.

I have decided to trace these aspects on the background of the stories of 5 prominent Czechoslovak water experts, namely: Alois Kraus, Jaroslav Balek, René Sameš, Antonín Petlach and Jiří Šíma. The sixth expert under investigation is Otto Hofmann, who was not a hydroexpert by training, but as a commercial and technical representative of FTC Škodaexport had implemented the Malka Wakana hydroelectric project in Ethiopia. His perspective therefore broadens the angle from which we can view the projects, the experts themselves and their lives abroad.

I have targeted these particular hydroexperts because they were all leading professionals in their field. In addition to major projects in Czechoslovakia, they were successfully involved abroad and thus contributed to the export of Czechoslovak hydroexpertise to the so-called third world countries, whether on the territory of international organisations (Kraus, Balek, Sameš), or in the framework of the foreign contracts of Czechoslovak companies (Petalach, Šíma). In all these cases they were men - women rarely worked in the field of hydroexpertise, and even more rarely went abroad. Furthermore, these are experts "from the field", who have had at least a few months of

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<sup>348</sup> For more see VAN DER VLEUTEN, E., OLDENZIEL, R., DAVIDS, M.: *Engineering the Future, Understanding the Past - A Social History of Technology*, Amsterdam: Amsterdam University Press 2017, pp. 93-95.

<sup>349</sup> HAAS, P.: *IntroducFon: epistemic communiFes and internaFonal policy coordinaFon*, Interna+onal Organiza+on, in: Cambridge Journals, Vol. 46, No. 1., Winter 1992, pp. 1-35.

hands-on experience abroad. Another reason for this selection is that their active years cover the period from the 1930s up to the present days. Kraus went out in the 30s and 40s, Petlach in the early 60s, Sameš in the 60s-70s, Balek in the 60s-80s and Šíma has been travelling abroad since the early 80s till these days. This temporal coverage allows for a good comparison with each other.

In addition to "field experts", a second group of top experts to be involved in water exports could be described as "office experts". These would include academics (such as Theodor Ježdík, Ladislav Votruba or Jan Smetana) who have from time to time produced a report or an assessment, and administrators in management positions in ministries or companies. The latter are not in the focus of this chapter though, because their connection to the Global South, the export of hydroexpertise and the practices of Czechoslovak technopolitics was minimal.

In the sections focusing on everyday life and expert communities abroad, I have supplemented the perceptions of water managers, along with the perspectives of some other Czechoslovak experts. These include the physician Jan Foustka and the pharmacists Zdeňka and Otomar Věříš. There is a logic to this - hydroexperts abroad usually did not sojourn in segregated groups, they were in contact with other Czechoslovak (and other) expatriates.<sup>350</sup> Using their views allows for a broader examination range and intersects with reality all the better.

## **The Mission of the Czechoslovak Experts and Their Involvement in the Transfers of Global Water Management Expertise**

The actual bearers of the expertise, those who put it into practice in the countries of destination, were the individual experts. Apart from the expert knowledge itself, they represented the Czechoslovak Socialist Republic, its establishment, culture, industry and, of course, themselves as individuals abroad. The how strongly each expert perceived each of these components, and what weight he or she gave to them, was, of course, entirely individual and variable over time. We will now look at some of the aspects and the involvement of the Czechoslovak experts in the international expert community using the

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<sup>350</sup> According to the entry in Antonín Petlach's diary, Jan Foustka and his wife Eugenia even met Sameš's group on 27 November 1961 in Sekondi Takoradi.

examples of 6 Czechoslovak hydro professionals. But first, here are brief medallions introducing the selected specialists:

### **1. Alois Kraus (1912-2003)**

He graduated from the Faculty of Civil Engineering at the Czech Technical University. During his studies, he visited the reconstruction of Low Aswan Dam in Egypt as an intern. After graduation in 1935, he started working as a structural engineer at Českomoravská stavební a. s. Before World War II, he worked as a designer for the Lanna company on the construction of grain silos in Iran, one of the largest concrete construction projects abroad where Czechoslovak companies were involved. During the war, he partook in the reconstruction of the Helm barrage in Prague, for example. Kraus was a scout, a falconer and an active participant in the Resistance and the Prague Uprising. After the war, he worked in England and then in 1948 he went to India to study local water projects and identify opportunities for trading Czechoslovak hydroexport and technology. He successfully initiated negotiations for the construction of the Dochi Dam, which was later abandoned due to the chaos following the nationalisation of Lanna in 1948. Instead of returning to India, Kraus was assigned to the construction of the Orava Dam as part of the newly established Hydrostav company, where many problems arose that Kraus, as a seasoned expert, had to deal with. He was later in charge of the construction of the Slapy and Orlík dams and completed the Kamýk and Nechanice hydroelectric works. From 1962, he worked in the newly established State Commission for the Development and Coordination of Science and Technology, and later on the design of the Prague metro. During his lifetime, he led the construction of 8 large structures, including 4 of the largest Czechoslovak dams.

He was never a member of the Communist Party. Thanks to a certain relaxation of the conditions in Czechoslovakia during the 1960s, he was able to travel as a leading expert to a number of foreign conferences (e.g., the Congress on Dams in Paris combined with a trip to waterworks in Morocco and Tunisia, later the Soviet Union and the Dam Congress in England). Thanks to the success of his paper on innovative approaches to building the Czechoslovak Orlík Dam at the congress in England a year earlier, Kraus was invited overseas. In 1965, he undertook a study tour of the large dams in Canada and the USA. In 1966, he was offered the post of senior expert for Africa at the UN headquarters

in New York and, although he had passed the interview, he finally did not get the job for political reasons. A year later, he turned down a post as an expert in Guinea. After 1968, he was dismissed from his senior position and never went abroad again as an expert.

He has published several professional studies and texts, a monograph on the Orlik Dam, and in 1992 he wrote a manuscript of his professional biography under the title *Inženýrský životaběh (Engineering Life)*. Kraus was also the subject of several short newspaper articles in the past.<sup>351</sup>

He spoke German, French and English. Kraus was married, he and his wife had one child. Although he was one of the top professionals and was held in high esteem and respect within the professional circles, he was never, in his own words, burdened with careerism or material motivation for his work - he would not buy a house or even a cottage, and at the end of his life received only a small pension.<sup>352</sup>

## **2. René Sameš (1929-2019)**

A lifelong employee of Hydroprojekt, whose domain was designing hydroelectric power plants, he graduated from the Faculty of Civil Engineering of Brno University of Technology, majoring in water engineering. Sameš came from Třebíč, where he was born into the family of a medical school director, his mother was a housewife. Having finished school, he started his professional career in Bratislava by working on the initial design studies of the Gabčíkovo waterworks. During his career, he participated in several important projects in Czechoslovakia (Orlik, Křivoklát, Kratušín, Temelín nuclear power plant, etc.) and abroad. These included working in Guinea, Mali (exploitation of the Konkouré River above the Souapiti Falls) and Ghana (hydropower exploration in the south-western part of the country, commissioning of the Tanoso and Hemang hydroelectric projects). Sameš later also worked in Pakistan and Guyana. In the late 1960s and early 1970s, he also held the position of Project Manager at UNDP in Burma (the so-

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<sup>351</sup> Časopis stavebnictví, Alois Kraus – stavitel přehrad, available from:

[hf ps://www.casopisstavebnictvi.cz/clanky-alois-kraus-stavitel-prehrad.html](https://www.casopisstavebnictvi.cz/clanky-alois-kraus-stavitel-prehrad.html) [cited 2023-02-25].

Lidové noviny, Kalendář hrdinů, Nenápadná organizátor. Alois Kraus uplatnil své schopnos+ během povstání v Praze – Vršovicích, available from:

[hf ps://www.lidovky.cz/orientace/nenapadny-organizator-alois-kraus-uplatnil-sve-schopnos+-behem-povstani-v-praze-vrsovicich.A210903\\_094632\\_In-historie\\_ape](https://www.lidovky.cz/orientace/nenapadny-organizator-alois-kraus-uplatnil-sve-schopnos+-behem-povstani-v-praze-vrsovicich.A210903_094632_In-historie_ape) [cited 2023-02-25].

Slovenské dotyky, Alois Kraus – stavbyvedúci Oravskej priehrady, available from:

[hf ps://www.czsk.net/dotyky/7\\_2002/kraus.html](https://www.czsk.net/dotyky/7_2002/kraus.html) [cited 2023-02-25].

<sup>352</sup> KRAUS, p. 3.

called Three Reservoir Project) for five years.<sup>353</sup> Later he worked in Guyana and was involved in the design of the extension of the underground hydroelectric power plant for Cuzco, known as Machu Picchu, in Aguas Calientes (Peru). In the 1990s, already as the Hydroprojekt's Senior Specialist in Hydraulic Engineering and Hydropower, he carried out a study of the energy exploitation and necessary modifications on the Mira River in northern Ecuador, near the Colombian border. He also carried out studies for the reconstruction and modernisation of the Sennar and Roseires hydroelectric dams on the Blue Nile in Sudan, commissioned by the Sudanese Government. He worked at the Czechoslovak (later Czech) Academy of Sciences and at the Czech Technical University.

Sameš had been a rank-and-file member of the Communist Party since 1960. However, it is clear that he perceived his party membership as an inevitable part of his professional life and career growth, as a circumstance in which it was necessary to function. His personal records and the testimony of his family clearly indicate to a certain scepticism towards the regime and to disillusionment, especially after the invasion of Czechoslovakia by Warsaw Pact troops in August 1968.

René Sameš was fluent in English, Russian, Spanish, and German. He was married, his wife worked as a graphic artist in film. The Sameš family had two daughters. The whole family often accompanied Sameš on his business trips, especially during his stay in Burma for several years in the late 1960s and early 1970s.

### **3. Antonín Petlach (1930)**

Originally from Blansko, he considered a teaching career, but because of his despotic father, who worked at the Královopolské strojířny in Brno, he finally enrolled at the secondary industrial school. He started his career in ČKD Blansko as a designer of mill machinery. After a year of performing this work and at the urging of one of his former teachers, he enrolled at the Brno University of Technology (later in Bratislava, because the faculty in Brno was transformed into a military engineering school and the civilian branch was abolished). After graduating from university, Antonín Petlach joined the Research Institute of Water Turbines at ČKD. Later he moved to the Brno branch of Hydroprojekt.

An avid sportsman and violinist, he gradually became the leading Czechoslovak expert on hydroelectric turbines. He is responsible for the Dlouhé stráně, Mikšová,

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<sup>353</sup> SAMEŠ, Biography, p. 3-4.



Znojmo and Lipno hydroelectric power plants. He had always been "drawn" to water; in his eyes, hydroelectricity, or turbine design, had the advantage for him of allowing to spend a part of the working time by the river, in the fresh air and in a healthy environment.

After a long reluctance, he joined the Communist Party in 1958, doing it for his family as he puts it, for it enabled him to take part in a hydrological survey in Ghana. He surrendered his party membership in 1969 in protest against the occupation of Czechoslovakia. Despite this "stain", he continued to participate in foreign contracts, for example, he designed a pumped storage power plant in Los Reyunos in Argentina, even if on a remote basis - the Czechoslovak authorities would not let him travel there, not even on business. In 1981, he was even awarded a German state decoration for his original waterworks in Markersbach, Saxony, which the Czech government of the time did not allow him to take over for political reasons. After 1989, as a retired and independent expert, he continued to work with ČKD on foreign projects.

Before he left for Ghana, he spoke almost no English. Antonín Petlach was married, he and his wife had one son. His family did not take part in his foreign travels. Several articles about Petlach were published in the past in the media and journals.<sup>354</sup>

#### **4. Jaroslav "Jerry" Balek (1933)**

An expert specialising in flow measurements and river profiles. He started his career at the Institute of Hydraulic Engineering of the Czechoslovak Academy of Sciences, later he worked for the Hydrometeorological Institute and the Stavební geologie company. He came from Prague, where he was born in a family of a retailer.

During his career, Balek has worked mainly on the UNESCO projects in Albania, Zambia, Zimbabwe, Algeria, India, Indonesia, Uganda, South Africa, Southern Rhodesia, etc. In the late 1980s, he held a senior post at the UNEP headquarters in Nairobi. He studied hydrology, water management and ecology in Prague (Czech Technical University

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<sup>354</sup> [IDNES.cz, Antonín Petlach postavil vodní elektrárnu Dlouhé stráně, available from: https://www.idnes.cz/brno/zpravy/antonin-petlach-postavil-vodni-elektrarnu-dlouhe-strane.A160620\\_2254582\\_brno-zpravy\\_vh/foto](https://www.idnes.cz/brno/zpravy/antonin-petlach-postavil-vodni-elektrarnu-dlouhe-strane.A160620_2254582_brno-zpravy_vh/foto) [cited 2023-02-25].

Český Rozhlas, Antonín Petlach, available from:

<https://brno.rozhlas.cz/moravske-pribehy-aneb-osudy-neobycejnych-lidi-8799046/4> [cited 2023-02-25].  
PETLACH, A.: *Vzpomínky blanenského rodáka na půlroční působení v Ghaně v roce 1961 v rámci československé komplexní skupiny techniků pro hydroenergetický průzkum*. In: Sborník Muzea Blanenska, Muzeum Blansko, Blansko 2006, pp. 101-108.

- Faculty of Civil Engineering, major in Water Management), Moscow and Canada, and has visited the United States and many other Western countries several times.

Balek, a lifelong Boy Scout, the son of a delicatessen owner whose business was nationalized by the Communists after 1948, was never a member of the Communist Party. His attitude towards socialism and the party was not positive, but he was reserved in public and did not openly oppose the regime. Nevertheless, he regarded himself as "an agent in his own service", about which he later wrote a playful autobiography of an eponymous name. He published five scientific books in Holland, France and the USA, as well as more than 200 original papers and studies on hydrology and environmental protection.

He spoke German, English, Russian and some French and Spanish. He was married and had a daughter, and his family often accompanied him on foreign trips and long-term stays. Balek's wife was employed as a designer, among others at Hydroprojekt.

## **5. Jiří Šíma (1953)**

He was born in Prague. Initially he wanted to study history, but for political reasons he could not even enrol in a social science course - his father was a prominent First Republic lawyer in the state service and a family friend of Edvard and Hanna Beneš. After a year of manual labour in a uranium mine in the Příbram region, Šíma studied hydrogeology and hydrochemistry at the Faculty of Science of Charles University. After his studies, he joined the company Stavební geologie where he also met Jaroslav Balek. In 1984-1988, he worked as an expert in Ethiopia, where he participated in hydrogeological mapping.

Before leaving for Ethiopia, he was given a choice - either to join the Communist Party of Czechoslovakia or to become a State Security agent. He chose the Communist Party, where he perceived there would be less negative impact on other people.

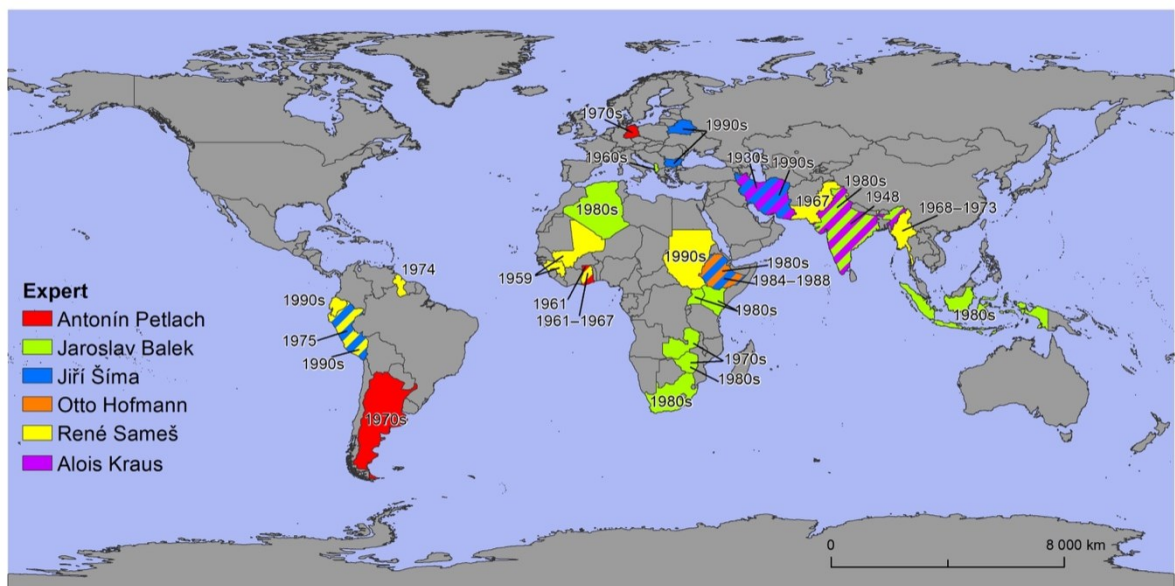
After 1989, he led several international projects in Europe (Belarus, Bulgaria, Slovakia) and beyond, already under the badge of AQUATEST, a. s., which became the successor to Stavební geologie. These included the supply of drinking water to Shiraz in Iran and the development of mineral and thermal water exploitation in Peru. Since 2001, he has been continuously mapping the water resources of Ethiopia as part of other development projects. He received the 2018 Gratias Agit Award from the Ministry of Foreign Affairs for his efforts.

He learned English during his stay in Ethiopia. Šíma is married and has a daughter. His family participated in his on-the-job stay in Ethiopia.

## 6. Otto Hofmann (1954)

Son of the well-known Czech screenwriter and writer Otto Hofmann, who became famous mainly for his works for children (*Pan Tau*, *Návštěvníci*, *Setkání v červenci*, etc.). Besides Russian, he taught himself English by reading Ian Fleming's spy novels. He joined FTC Škodaexport, a foreign trade company, as a clerk after completing his compulsory military service, namely thanks to his technical education and language skills. His first major assignment was the execution of the Malka Wakana project in Ethiopia, where he and his wife spent about two years in the mid-1980s. Later he also worked in Burma and Iran. He was never in the Communist Party. At the beginning of the 1990s, he left Škodaexport and started his own business specialising in spectator seating systems.

Activities of the Six Selected Czechoslovak Hydroexperts



Among the priorities of the Czechoslovak foreign policy towards the countries of the so-called Third World, at least in the 1960s, was export and promotion of socialism. The Czechoslovak state achieved this, among other things, by applying its technopolitical instruments, which included the export of hydroexpertise embodied in the experts themselves. We can see from the above cases that among the prominent Czechoslovak

hydroexperts who managed to successfully establish themselves abroad, a lukewarm or even more or less openly negative attitude towards the socialist state system prevailed. They were certainly very critical of it, which was a view that was probably supported by their experience abroad. Analysing the "socialist identity" of the experts is complicated; we must distinguish, among other things, between their personal relationship to socialism and the fact that, while abroad, they were representing the socialist regime constituted in the state they came from. Inwards, none of them really embraced socialism - as is best demonstrated by their autobiographies or by the recollections of their most immediate fellows. In the public, however, these experts behaved with restraint and would not ventilate their criticism of the regime. Reporting on Kraus, an officer of the Communist-dominated General Staff Intelligence Administration remarked after a meeting in 1947: *"He is not politically biased, since he criticized the mistakes committed by both the left and the right in the same way."*<sup>355</sup> To give another example, the records on Jaroslav Balek kept by the State Security Service state that *"in political discussions among foreign workers, he always showed a good knowledge of economics and was able to defend our socialist establishment."*<sup>356</sup> According to the State Security analysis, Sameš showed no interest in political life, at least outwardly, and his positive attitude towards the socialist establishment was inferred on the basis of his industriousness. His subsequent entry into the Communist Party was perceived by others as a necessity to secure further advancement in the service. There was no political fervour at all.<sup>357</sup>

In most cases, the experts did not view their foreign activities as promoting socialism, if anything, then promoting just Czechoslovakia as a country and its expertise, or its industry. The state's motivation to use these experts, even if they were often politically not quite reliable, was to satisfy foreign demand for the expertise they possessed. Thus, so to say, water management expertise proved to be such a powerful playing card as to beat the political affiliation or reliability requirements. Thanks to the supreme level of his expertise, not having the communist party member card was not an obstacle strong enough to prevent Jaroslav Balek's tenure in senior positions in the UN agencies at a high diplomatic rank (councillor-ambassador), as an example.

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<sup>355</sup> ABS, ZS/GŠ, sign. OS-4877 ZSGŠ, Alois Kraus "PIONÝR".

<sup>356</sup> ABS, TS-637605 MV, Jaroslav Balek "KALÁB".

<sup>357</sup> ABS, TS-630407 MV, René Sameš "ZDENĚK VESELÝ".

The motivations of the state are obvious. But what were the personal motivations of the individual experts for their repeated trips to so-called Third World countries, which often entailed discomfort, a certain degree of security risk and separation from family and friends back home in Czechoslovakia?

One of the main motivations for the foreign trips among successful Czechoslovak water experts was their enthusiasm for the expertise itself. The desire to broaden their knowledge in the field, to try out new findings in practice, to learn from colleagues abroad. It should be remembered that the climatic, geographic, and hydrological conditions of the so-called Third World countries differed significantly from those that experts could normally encounter in Czechoslovakia. Experts rarely worked as solitaires - they were usually part of larger, often international, teams, which provided many opportunities for mutual sharing of knowledge. Alois Kraus even visited the reconstruction of Low Aswan Dam in Egypt as a student in the 1930s, which had a significant impact on the direction of his career. As he puts it, there he was "*struck by the damming virus*."<sup>358</sup> Sameš spent some considerable time in Mali and Guinea in the late 1950s with Armenian experts from Gidroproject Yerevan.<sup>359</sup> Jaroslav Balek, for example, worked in a small team with three Britons on a project addressing the wetlands around the headwaters of the Zambezi River.<sup>360</sup> Working in terms of UN agency projects naturally implied experiencing international teams and colleagues.

A number of capable Czechoslovak hydroexperts tried to get into Western universities, and many of them succeeded. Jaroslav Balek won a postgraduate internship at a university in Canada, others got a job e.g., at the IHE Delft Institute for Water Education, etc.<sup>361</sup>

As a whole, Czechoslovak water management was virtually in constant touch with world expert circles. In addition to membership in international professional organisations, such as the International Commission on Large Dams (ICOLD), the International Commission on Irrigation and Drainage (ICID), the International Association on Water Pollution Research (IAWPR), etc., experts from Czechoslovakia regularly and actively participated in major professional conferences, world congresses and symposia

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<sup>358</sup> Národní technické muzeum (NTM), KRAUS, A.: *Inženýrský životaběh*, Praha 1992, p. 4.

<sup>359</sup> SAMEŠ, Biography. Interview with Věra Samešová and Renée Trnková (née Samešová), Prague, 4.8.2021.

<sup>360</sup> BALEK, p. 89.

<sup>361</sup> BALEK, p. 34.

(e.g., the Fifth World Energy Conference in Vienna - 1956, the Seventh Dam Congress in Rome 1961, etc.).<sup>362</sup>

Foreign excursions to waterworks and projects, including those in the West, were also frequent. Such excursions were taking place either in an official form sponsored by a Czechoslovak water management institution, or followed up on an invitation sent to a specific Czechoslovak expert by a foreign institution.<sup>363</sup> A good example is the trip of Alois Kraus, when in 1965, thanks to the "political thaw", Kraus was able to travel on a twenty-five-day visit to the United States and Canada, which he later described as "*the culmination of his dam career*". One of the reasons Kraus was invited to the United States was his publication *Construction of the Orlik Hydroelectric Scheme*, published for the 8<sup>th</sup> ICOLD Congress in England (1964). This publication was received with great acclaim in professional circles thanks to its original technological procedures. During his trip, Kraus visited 9 large dams in Canada, including the largest concrete arch dam under construction, the Manicougan Dam. He held talks with the executives of investor companies such as Hydro Quebec and Hydro-Ontario. In the US, he then met with the Bureau of Reclamation and the US Army Corps of Engineer to share experience and findings with the local experts. He also visited 10 dams in 7 states, including the famous TVA or the monumental Glen Canyon in Arizona and Boulder Dam in Utah. Two deputy ministers also took part in the excursion - in the atmosphere of the 1960s, this was viewed as a sort of revival of sound relations, so we can see a good example of technopolitics in practice here, where technology - de facto a purely professional excursion - opened the door to foreign policy. A few months later, a reciprocal American delegation arrived in Czechoslovakia and visited Orlik, Slapy, Nechanice and the Váh waterworks. The delegation was led by the head of the Corps of Engineer of the US Army, Floyd Elgin Dominy, a prominent expert whose signature can be found on the dotted lines of the aforementioned Glen Canyon Dam and the projects in the Mekong basin.<sup>364</sup> The visits were naturally accompanied by the mutual transfer of a large volume of documentation and expertise, which was subsequently circulated to research institutes and companies.

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<sup>362</sup> VÁŠA, J.: *Československá hydrologie v období závažných národních i mezinárodních akcí*, in: *Vodní hospodářství*, No. 8, Series A, 1973, pp. 133-134.

<sup>363</sup> See e.g., KOUBA, J.: *Zkušenosti z výstavby vodních děl v Rakousku*, in: *Vodní hospodářství*, No. 8, 1957, pp. 143-145. ZIMA, K.: *Vodárenské poznatky z Belgie*, in: *Vodní hospodářství*, No. 1, 1965.

<sup>364</sup> KRAUS, pp. 69-73.

Sometimes the "excursions" were also unofficial, motivated by the individual curiosity of the expert - e.g., connected with other tasks in a neighbouring country, etc. Balek did not miss the monumental Kariba Dam on the Zambezi River during his exploration of adjacent sites.<sup>365</sup> In Ghana, Sameš inspected the construction of the Akosombo hydroelectric dam executed by an international consortium led by the Italian company Impreglio.<sup>366</sup>

Another motivational prompt for carrying out the trips was finance. It was possible to earn significantly more abroad than at home, especially the salaries of university-educated people were more in line with their level of education. But it was also much easier to spend money there and, paradoxically, there was better availability of goods. Unlike Czechoslovakia, there was usually no need to wait in a queue for a decent car or fridge. I will discuss the issue of expert salaries further in the subsection on Polytechna.

Another reason for the trips was also a desire to see foreign countries, which was otherwise virtually impossible given the border regime and Czechoslovakia's migration policy imposed since 1939, especially concerning the countries outside the "socialist camp". For some of the experts, thoughts of escaping the drab socialism, or a life without a more interesting future (career, family, social), played a significant role in their departure. In the minds of some, this was just a temporary escape, while in the minds of others, thoughts of a permanent escape, i.e., emigration, were already being spun as they were trying to get nominated for such a departure.

Expert missions to Africa became an opportunity for some experts, and not only water experts, to emigrate to the West. Thoughts of emigration - whether translated into action or left at the level of a mere reflection - must logically have appeared in the mind of almost every expert. Escape through a so-called third world country was considerably easier than straight from Czechoslovakia itself, with its sealed border regime and fenced border. Some experts already considered emigration when trying to get nominated or during the pre-departure preparations, others spot-decided to emigrate only when the country of posting had been reached. Newly acquired contacts in the West, but also the abrupt change in the internal political situation in Czechoslovakia, especially after the occupation of the country by Warsaw Pact troops in August 1968, may have played a role.

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<sup>365</sup> BALEK, p. 151.

<sup>366</sup> SAMEŠ, Biography.

In more than half of the cases, the experts only fled as the end of their contract approached, usually in the last quarter of the year. The reason for this doing was probably the desire to secure more funds for a fresh start. The State Department's report on the situation in Tunisia, for example, states, however, that these were more or less isolated cases. Between the second half of 1968 and 1971, the number of emigrants increased to several dozen a year.<sup>367</sup> The total figures for expert emigration speak in similar terms, with 147 experts (104 of them doctors) posted under bilateral treaties and 8 experts working for international organizations fleeing between 1968 and 1970.<sup>368</sup> One of these was the Czechoslovak water expert Ing. Henrik Ramič, working at the UN headquarters in New York as an expert on Africa. Although he was considered politically reliable, after the August occupation he requested political asylum in the United States.<sup>369</sup> Barbora Buzássyová estimates the percentage of the total emigration of Czechoslovak civilian experts after 1968 to be at around 20%.<sup>370</sup>

As a result of the events of 1968, it was not only anti-communist or ideologically lukewarm experts who resorted to emigration; party members and officials were also leaving, even collaborators of the State Security, who were supposed to "guard" the other experts.<sup>371</sup> After 1968, cases of emigration occurred even among the generally better-qualified military experts. In July 1969, Colonel Jaroslav Plíhal and his family fled by train via Belgrade to West Germany. Plíhal worked as an advisor at the military academy in Cairo and returned home to Prague. The Antonín Zápotocký Military Academy, which had posted Plíhal to Cairo, subsequently, in an effort to limit opportunities for defection,

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<sup>367</sup> AMZV, TO-T, 1970-74, Tunisia, k. 2, Rozbor politické situace mezi čs. experty pracujícími v Tunisku a návrhy na opatření (Analysis of the political situation among Czechoslovak experts working in Tunisia and proposals for measures), 4.6.1971.

<sup>368</sup> AMZV, f. Porady kolegia, 1953-1989, Book 142, Vědecko-technická spolupráce ČSSR s rozvojovými zeměmi (Scientific and Technical Cooperation of the Czechoslovak Republic with Developing Countries), Prague, 31.3.1971. In the 1973 MFO report, the number is even higher. Under the multilateral system, 12 experts working in UN agencies refused to return to the CSSR (NACR, f. KSČ UV 1945-1989, Praha předsednictví 1971-1976 (02/1), sv. 73, ar.j. 69/8, ČS. personální politika vůči sekretariátům mezinárodních organizací (Czechoslovak Personnel Policy towards the Secretariats of International Organizations), 1973.

<sup>369</sup> KRAUS, p. 73. The wave of escapes from Burma after 1968 is mentioned by many witnesses, e.g., the wife and daughter of René Sameš. Interview with Věra Samešová and Renée Trnková (née Samešová), Prague, 4.8.2021.

<sup>370</sup> BUZÁSSYOVÁ, B.: *Socialist Internationalism in Practice: Shiyang Parents of the Czechoslovak Educational Aid Programmes to Sub-Saharan Africa, 1961-1989*, dissertation, Department of the History of Science and Technologies, Institute of History of Slovak Academy of Sciences, p. 191.

<sup>371</sup> This is how František Buben and František Majer, StB confidants who were supposed to guard experts in Tunis, let. Interview with Zdeňka Věříšová, Jesenice, 20.9.2021.



forbade its experts to travel except by air, ideally without transfers.<sup>372</sup> In its reports, the Foreign Ministry downplayed the political reasons for the experts' emigration in the spirit of common party rhetoric, and explained the escapes by the misconception of an easy life of comfort and prosperity in the West.<sup>373</sup> Nevertheless, the increase in emigration rates in the context of the deteriorating political situation at the beginning of the normalisation process in Czechoslovakia is evident - and interviews with survivors confirm that the 1968 factor played a significant role in the decision to flee.

A 1971 MFA analysis focusing on experts identified the risk of sending divorced or young and unmarried experts abroad, as they were more likely to establish deeper relationships with locals and more likely to opt for emigration because of this. The analysis also saw it as inappropriate for the children of experts to leave if it was not possible to provide them with a Czechoslovak education, without which the children were moving away from the ideals of a socialist society.<sup>374</sup> Other possible factors encouraging emigration were considered by the MFA to be excessive length of stay abroad, resulting in weakening the ties to Czechoslovakia, inconsistent adherence to the criterion of political reliability in the selection of experts, and the absence of subsequent political evaluation during the time of the assignment at the destination.<sup>375</sup>

Of the water experts under survey here, all indeed had considered emigration (probably repeatedly), often in the context of lucrative offers coming from large Western companies. For example, Sameš in Ghana was lured around 1967 by the American design company Kaiser Engineers, Balek in South Africa by the Anglo-American Hydrogeological Company, etc.<sup>376</sup> None of them, however, eventually emigrated. Sameš commented on the bid from the Americans: *"After defending the Hemang and Tanoso hydroelectric projects, I was offered the position of project engineer for the Volta River facilities on very favourable terms by Kaiser Engineers. My main reason for not accepting this offer was my full professional workload associated with my own projects. The consequences of the political situation in Czechoslovakia at that time, which culminated in the subsequent*

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<sup>372</sup> Vojenský historický archiv (VHA), f. Ministerstva národní obrany (MNO) 1969, ka 211, Jaroslav Dočkal, 'Ing. Jaroslav Plíhal, VAAZ – 3F– Hlášení' (Jaroslav Dočkal, 'Ing. Jaroslav Plíhal, VAAZ - 3F- Report'), 1.8.1969.

<sup>373</sup> AMZV, TO-T 1970-74, Tunisia, k. 2, Rozbor poli+cké situace mezi čs. experty pracujícími v Tunisku a návrhy na opatření (Analysis of the poli+cal situa+on among Czechoslovak experts working in Tunisia and proposals for measures), 4.6.1971.

<sup>374</sup> Ibidem.

<sup>375</sup> Ibidem.

<sup>376</sup> SAMEŠ, Biography, BALEK, p. 90.

*Soviet occupation of the country, were also important for my decision. I would have decided for emigration, but as the father of a family I could not afford it.*"<sup>377</sup> For Balek and Petlach, the decision to refuse emigration was based on family ties too, which they said they did not want to see breaking, for various reasons.<sup>378</sup> Right after the communist coup in 1948, Alois Kraus, who was working in India at the time and could de facto have been the first Czechoslovak water expert to emigrate, assessed the situation similarly as the two of his fellows above did. *"When asked about why I was returning to the communist republic, I replied that I had a family there and that I would return, but with them."*<sup>379</sup> He did not return though. Jiří Šíma, whose stay in Ethiopia took place in the mid-1980s, also had offers from abroad – more specifically from South Africa. He decided not to emigrate because he already felt that the end of socialism was approaching, both in Czechoslovakia and in Ethiopia.<sup>380</sup>

## **Under the Baton of Polytechna: Selection, Pre-Departure (Non)Preparation, Money**

Petr Zídek, one of the first to address the topic of civilian experts, divides Czechoslovak experts sent to Africa during the Cold War into four basic groups. We can only estimate the absolute numbers of experts deployed, as the key archival holdings (especially those of the Ministry of Foreign Trade) have unfortunately not yet been sorted, made available or preserved. However, the numbers are undoubtedly in the order of thousands.

The first, largest group consisted of experts sent through the Ministry of Foreign Trade, or one of the foreign trade companies (FTCs) that fell under its administration. The most important company arranging for the foreign placements of teachers, doctors, pharmacists, and other experts was FTC Polytechna, which was established in 1959. The trips of technical experts, typically engineers, builders, including most hydroexperts, were arranged by FTC Technoexport from 1953, an enterprise concentrating on the export of the so-called industrial units.<sup>381</sup> We are speaking in terms of the order of thousands of

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<sup>377</sup> SAMEŠ, Biography, p. 2-3.

<sup>378</sup> BALEK (book), SAMEŠ (biography), PETLACH (interview).

<sup>379</sup> KRAUS, p. 21.

<sup>380</sup> Interview with Jiří Šíma, Prague, 11.7.2023.

<sup>381</sup> An industrial unit, such as a factory, usually consisted of a project, machinery, technology and specialist personnel who could train local forces in the workings of the unit and help get production up and running.

experts here. The second, much smaller group included experts sent directly by a specific ministry, such as the Ministry of Health. The third group consisted of experts posted to developing countries under the umbrella of a UN agency and may have reached tens to lower hundreds in number. Expert recruitment and cadre pooling for UN agencies was also usually handled by FTC Polytechna. The last group was made up of military advisers and specialists from the Ministry of the Interior sent out by the Intelligence Service.<sup>382</sup>

The nomination for a foreign trip could take various forms. Ever since the conclusion of the first cooperation agreements with African countries, in which Czechoslovakia usually promised to supply a certain number of experts, the Ministry of Foreign Affairs, in cooperation with other ministries, tried to create a kind of "cadre reserve" of suitable experts.<sup>383</sup> "Suitability" rested primarily with three criteria: 1) sufficient professional qualifications, 2) language skills, and 3) political reliability. However, it soon became apparent that there was a serious shortage of such professionals, who were proficient in speaking Western languages and did not have any political blemish. Thus, the criterion of political reliability was often given less importance in order to ensure that Czechoslovakia was able to at least partially fulfil its treaty obligations to developing countries and not lose its face. The language criterion was also not absolutely necessary, for example, if an expert, as it was the case with Antonín Petlach in 1962, went on a short-term mission as part of a group led by an experienced, linguistically apt colleague.<sup>384</sup> This practice does not seem to have changed much. Leaving for Ethiopia some twenty years later, Jiří Šíma only learned English during his stay abroad.<sup>385</sup>

Sometimes the receiving country set its own specific parameters - for example, Ghana in the early 1960s preferred English-speaking surgeons and obstetricians among the doctors on offer, of which the country had the most grievous shortage. Furthermore, the Ghanaian government insisted that these doctors be accompanied by their wives. This was because of the bad experience of doctors who came alone and then, due to the

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<sup>382</sup> ZÍDEK, Petr, *Československo a francouzská Afrika 1948-1968*, Praha 2006, p. 34.

<sup>383</sup> This cadre reserve was led and supplemented by FTC Polytechna from 1964. ZÍDEK, p. 36.

<sup>384</sup> Interview with Antonín Petlach, Blansko, 9.5.2019.

<sup>385</sup> Interview with Jiří Šíma, Prague, 11.7.2023.

difficult working conditions and the foreign environment, broke their contracts in local hospitals in order to return back to their families in Czechoslovakia.<sup>386</sup>

However, experts were not only recruited from the often-inadequate cadre reserve lists. Many were - like Antonín Petlach or Jaroslav Balek - approached ad hoc by one of their superiors.<sup>387</sup> Some even learned about the opportunity to go to Africa from a newspaper advertisement or applied for various in-company bids. Such candidates then faced a procedure lasting many months, with an uncertain outcome, in which their nomination had to be discussed by the management of the enterprise or institution, the company communist party organisation, the trade unions, the district and regional party committees, the relevant ministerial department and only then, in the event of a positive assessment, was the nomination forwarded to FTC Polytechna, which arranged the trip.<sup>388</sup>

The selection practices did not change much from the late 1950s to the late 1980s. If a candidate successfully passed through the bureaucratic labyrinth of selection, he/she was usually faced with the actual pre-departure preparations. In addition to administrative tasks, such as obtaining a passport, an exit permit or a foreign currency account at Živnobanka, experts also had to undergo a variety of training sessions, the ideal aim of which was to prepare the seconded person for living abroad. It should be remembered that for the vast majority of experts, especially those who left during the 1960s, this was their first trip not only outside Europe, but outside Czechoslovakia altogether. The system would not envisage this happening at all in the first place, and, before 1961, experts went to Africa with virtually no training whatsoever; the situation improved slightly in the later years, not in all departments though.

Water experts did not obtain any professional pre-departure training, unlike doctors, for example. For the latter, since 1961, a 14-day course in tropical medicine was staged at the Institute for the Retraining of Doctors of the Královské Vinohrady University Hospital. At a later point, the course was prolonged to 11 weeks, including 3 weeks of language training sponsored by the University of 17 November.<sup>389</sup> This professional

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<sup>386</sup> NA, f. Monitor, Rozhovor Fran+ška Tomáše s lékařem MUDr. Friskem (pozn. falešné jméno Jana Foustky (Interview of Fran+šek Tomáš with MUDr. Frisk (false name of Jan Foustka)), 19 April 1964.

<sup>387</sup> Interview with Antonín Petlach, Blansko, 9.5.2019.

<sup>388</sup> NA, f. Monitor – Foustka, 19.4.1964.

<sup>389</sup> More about the University of 17<sup>th</sup> November: HOLEČKOVÁ, M. E.: *The Story of a Forgoren University, University of 17 November (1961-1974) and its place in the Czechoslovak educaFonal system and society*. FF UK, Prague 2019.

course, led by the leading epidemiologist Professor Karel Raška, was intended to convey theoretical topics in microbiology and epidemiology relevant to African regions, and it was organised for several dozen participants at a time.<sup>390</sup> For example, Czechoslovak doctors working in Congo at that time shared their practical experience with their colleagues attending these courses. In 1965, pre-departure training of paramedical staff began.<sup>391</sup> On the other hand, around the same time Jaroslav Balek left for his first foreign posting to Albania just three days after he had learned of the bid - the company was looking for someone who could leave almost immediately. Even his travel vaccinations had not been completed yet; he had taken some of the vaccines with him in a thermos and these were not administered until he reached Albania.<sup>392</sup> Jiří Šíma also did not undergo any pre-departure training in the mid-1980s; some information about the situation in Ethiopia was unofficially passed on to him by his colleague Ferdinand Herčík, whom he was replacing in Addis Ababa, otherwise Polytechna arranged only for tropical vaccination and a passport to be obtained by him.<sup>393</sup>

Given the limited availability of information, Czechoslovak experts had a very poor understanding of sub-Saharan Africa, and even the apparatus of the sending institutions often failed to adequately prepare, let alone equip, them for their missions. All the preparation in this respect usually took place in the form of just a few meetings in the relevant ministry or FTC, which were usually of very little use. For example, Jan Foustka, a doctor, recalls that the relevant Ministry of Health official replied to his matter-of-fact questions about Ghana and the tropics as such that he asked back in 1961: *'Comrade doctor, I have never been there. Here is your map, here is Ghana and here is the equator. What more can I say about the whole thing?'*<sup>394</sup> Antonín Petlach, who happened to be travelling to the same country at virtually the same time (the two even met there), was not particularly prepared for his trip either - he tried in vain to seek information about Ghana in public libraries and in the press, despite the fact that Czechoslovakia had had a

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<sup>390</sup> Prof. MUDr. Karel Raška (1909-1987) was a prominent Czech epidemiologist and microbiologist, who was particularly responsible for the suppression of so-called childhood diseases such as whooping cough, diphtheria and polio. In the 1960s, he also served as Director of the Infectious Diseases Section of the WHO. <sup>391</sup> NA, f. Monitor – Foustka, 19.4.1964; NA, f. Polytechna (unprocessed), Rozbory a plány, Ministerstvo zdravotnictví, Koncepce zdravotnické pomoci rozvojovým zemím (Analyses and Plans, Ministry of Health, Concept of Medical Aid to Developing Countries), 13.8.1966.

<sup>392</sup> BALEK, pp. 20-21.

<sup>393</sup> Interview with Jiří Šíma, Prague, 11.7.2023.

<sup>394</sup> NA, f. Monitor – Foustka, 19.4.1964.

diplomatic mission in Ghana already since October 1959.<sup>395</sup> This information void may have had roots in the absence of a directive or other systemic measure comprehensively addressing the dispatches of experts in the early years, the desire to satisfy as quickly as possible the demand from developing countries, which often exceeded the capabilities of Czechoslovakia, or the desperate lack of experts on Africa among the staffs of the sending institutions. A dedicated African Department was not established in the Ministry of Foreign Affairs until 1 November 1959, by which time the African countries had been on the agenda of a joint Afro-Asian Department, which reflects, among other things, the low priority given to mutual relations back then.<sup>396</sup> Considering the absence of experienced Africa specialists in the MFA, it can be assumed that other institutions were even worse off in this respect.

A significant part of the pre-departure preparation in the 1960s, in which the family members accompanying the expert also had to participate, was a political briefing - sometimes a series of seminars, other times just a cadre interview arranged for by the sending institution. It came as a set of recommendations on how a proper Czechoslovak expert should behave abroad in order to represent his socialist homeland well. The recommendations related, for example, to limiting contacts with any foreigners (especially from the West), or urging caution, especially in conversations with them, lest the expert become a victim of provocation. Experts were to promote socialism through their work and diligence rather than direct agitation.<sup>397</sup> Most experts, however, were essentially apolitical technocrats and did not perceive the political dimension of their mission very much or did not address it purposefully because of their own lukewarm or even anti-communist convictions.

In terms of other amenities, experts could usually count on a small financial contribution for household furnishings. As concerns other equipment, such as basic medicines, the situation was considerably worse, even doctors did not commonly receive them in the early 1960s, which could be very unpleasant in countries with questionable

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<sup>395</sup> Interview with Antonín Petlach Blansko, 9.5.2019; NA, Archives of the Central Committee of the Communist Party of Czechoslovakia, f. Antonín Novotný, k. 99, Ghana, Jednání o navázání diplomatických styků mezi Československem a Ghanou (Negotiations on the establishment of diplomatic relations between Czechoslovakia and Ghana), 19.9.1959, p. 17.

<sup>396</sup> ZÍDEK, p. 30. The Department had only 10 employees during its first year of operation, which quickly proved insufficient in light of the creation of 17 new states.

<sup>397</sup> NA, f. Monitor – Foustka, 25.4.1964.

water quality, exotic cuisine, and tropical diseases.<sup>398</sup> However, Balek says: *"Nobody cared about the standard of living of the experts abroad. After arriving in a foreign country, they were forced to insure themselves at their own expense, equip themselves with basic household furnishings, and purchase a car, without which staying abroad was impossible, which was a task hard enough to have been performed back at home. They also had to hire a servant so that they would not look like scrooges in the eyes of their local colleagues..."*<sup>399</sup> Hiring a servant, butler, cook or driver - at one's own expense, of course - was an expression of a social status, especially in Africa. The way Sameš and Petlach had to behave during their time in Ghana (1962) was quite the same. Their monthly salary represented a whopping £150 (Sameš, as the leader of the event, received £200), and they contributed to these services from their allowances.<sup>400</sup> Guides and fieldwork helpers, on the other hand, were provided free of charge by the Ghanaian authorities.<sup>401</sup> Many Czechoslovak experts were initially puzzled by the practice of having a servant.

It was always possible to earn much better money abroad than at home in Czechoslovakia. For example, Jiří Šíma, as an employee of the Stavební geologie company in Czechoslovakia, was earning 1,700 Czechoslovak crowns a month, while on a trip to Ethiopia, it was de facto 1,700 dollars for the same work.<sup>402</sup> Experts were usually not paid directly by the government of the host country. The government would typically send the money (in hard currency) to the FTC, which withheld part of it as a commission and only then distributed the payments to the experts on the basis of a prearranged contract. This process was usually safeguarded by the FTC entering in a contract with the commissioning country's delegated institution. A standard "universal" contract concluded by and between the Ghanaian principals and the CS FTCs would look something like this: *"The Buyer (Ghana) shall pay to the Seller (CS FTC) the salaries of the Seller's personnel (experts) in accordance with the terms and conditions mentioned in the respective contracts."*<sup>403</sup>

To illustrate: of the £180-300 that the Ghanaian government paid to Czech doctors in 1962, only £135 per month appeared on their pay slips, the rest, i.e., 25-55%, remained with Polytechna. The Ghanaian government was probably unaware of this happening.

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<sup>398</sup> NA, f. Monitor – Foustka, 19.4.1964.

<sup>399</sup> BALEK, p. 7.

<sup>400</sup> Interview with Antonín Petlach, Blansko, 9.5.2019.

<sup>401</sup> PRAAD, RG-7-1-2180, Invoice No. 5-83110, Technoexport, 2.9.1961.

<sup>402</sup> Interview with Jiří Šíma, Prague, 11.7.2023.

<sup>403</sup> PRAAD, RG 7-1-1701, Terms for seller's personnel, 31.12.1962.

President Kwame Nkrumah discovered this fact only by chance when a Czech doctor Chmel complained to him personally about his poor salary conditions while treating him after the failed assassination attempt in Tamale in the summer of 1962. The President then made thorough enquiries directly with the ambassador about the situation doctors were coping with.<sup>404</sup> The water expert Jaroslav Balek even levied so much to Polytechna during his time in Algeria in the late 1980s that he said he could not afford to buy a decent meal at Christmas and picked edible mushrooms in the forests above Constantine to get better off.<sup>405</sup>

Salary levels and contract forms varied from country to country. They typically did exceed the salaries of the locals, but almost never reached the salaries of Western experts, which was a fact that the Czechoslovaks, to the chagrin of their own socialist government, resented, quite understandably. In 1974, the Czechoslovak ambassador to Tunisia criticized doctor Řeřicha, who had voiced his dissatisfaction with the material conditions being inferior to those enjoyed by the Western doctors. In a letter addressed to the headquarters, the ambassador bitterly stated that Řeřicha and his wife, a nurse herself, "live in a neat small villa" and in total earn more per month than he or his Soviet colleague do, even after the levies to Polytechna (about 10%).<sup>406</sup> The annual profit of FTC Polytechna generated on sending experts abroad amounted to about 10-15 million foreign exchange crowns.<sup>407</sup>

It also seems to have been Polytechna's common practice to interfere with and change the contracts signed with experts in various ways - often without the experts' knowledge.<sup>408</sup> The experts sometimes tried to negotiate with the authorities of the host country by themselves, without Polytechna's knowledge, so as to secure for themselves, for example, a better job in a less remote location, various benefits, etc.<sup>409</sup> In many cases, the experts tried to hide a part of their income away from Polytechna. Jaroslav Balek, who originally went on his mission to Zambia in the early 1970s as a researcher without a

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<sup>404</sup> AMZV, f. TO-T, 1960-64, Ghana, k. 2, Technická pomoc Ghaně (Technical assistance to Ghana), 3.9.1962.

<sup>405</sup> BALEK, p. 7.

<sup>406</sup> AMZV, f. TO-T, 1979-74, Tunisia, k. 2, Poznatky čs. lékařů působících v Tunisku (Observations of Czechoslovak doctors working in Tunisia), 21.1.1974.

<sup>407</sup> For example, in 1970 it was 16 million foreign exchange crowns. AMZV ČR, f. Porady kolegia, Book 142, Vědecko-technická spolupráce ČSSR s rozvojovými zeměmi (Scientific and Technical Cooperation of the Czechoslovak Republic with Developing Countries), Prague, 31.3. 1971.

<sup>408</sup> NA. f. Monitor – Foustka, 25.4.1964.

<sup>409</sup> AMZV, TO-T 1960-64, Ghana, k. 2, Hodnocení vědecko-technické spolupráce s Ghanou (Evaluation of Scientific and Technical Cooperation with Ghana), 6.4.1962.



contract with Polytechna, was subsequently pressured by the company to sign an additional contract after a year of working there already. Polytechna even asked him to retroactively evidence all his earnings and pay his dues accordingly. In response, Balek produced what would be DIY-modified pay slips made using similarly-looking blank slip designs he had bought from a stationery shop in Lusaka.<sup>410</sup> The situation changed a bit in the late 1980s when Czechoslovakia allowed small-scale trade licensing. With his considerable salary, Jaroslav Balek, who from 1987 held a high post at the UNEP headquarters in Nairobi, Kenya, represented for Polytechna, in his own words, "a fat aphid" - the company counted on snatching all the funds from him which were beyond the Czechoslovak ambassador's tariff salary. Balek got around this threat by setting up a trade license for a UN worker in the field of "organizational activities in ecology" and thus could work on his own.<sup>411</sup> From these and similar situations it can be inferred that experts on foreign missions were, to some extent, able to create by themselves the "order and space" in which they were supposed to function. The official system, represented primarily by Polytechna and its rules, was often circumvented, and modified by the experts. It can also be said that Polytechna in general was not at all popular or well respected amongst the rank-and-file experts, especially due to its "payroll deduction policy". Furthermore, its ability to control experts was often very limited, especially those who had been assigned to their missions through international organisations.

### **"At the End of the World" – Everyday Life in an International Community of Experts**

Depending on the nature of their mission, Czechoslovak experts spent from several weeks to whole years in Africa. The usual length of a foreign placement was two to four years, during which time it was possible to go on leave back to the homeland. If the contracts were properly executed, it was possible to extend the contract or to go straight on to the next destination. In the 1980s, we can see efforts by Polytechna to regulate expert exchanges more, to systematically evaluate the performance of experts, and exemptions of more than 5 years spent abroad were also usually decided on directly by the Minister

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<sup>410</sup> BALEK, p. 98.

<sup>411</sup> Ibidem, p.185.

of Foreign Trade.<sup>412</sup> Some experts were based in the metropolises of African countries, but others were sent to remote locations, which made communication with them, for example on salary arrangements, very difficult. It also reduced the possibilities of controlling them.

Working conditions and comfort varied from destination to destination and also according to each particular agreement negotiated with the host country by the FTC. For example, in Ghana in 1962, experts were guaranteed a maximum 42-hour work week, entitled to 5 days off after each month of work, or to 2 months off after every 12 months of work on long contracts. It was envisaged that the experts could spend their leave in Czechoslovakia and the host country would reimburse them and their family members for transport costs. Apart from local public holidays, experts were also entitled to leave during Czechoslovak holidays. Paid sick leave amounted to 3 months at the expense of the host country, including any transport to Czechoslovakia. This also applied to family members.<sup>413</sup>

Experts often travelled with family members - as mentioned above, some host countries even preferred this to happen. Sometimes, especially in the case of health professionals, both partners travelled as experts (e.g., a doctor and a nurse). Other times, the wife stayed at "home" to perform a housewife role (which the system considered when allocating per diems), but there were also many cases where the expert's partner secured alternative employment in the sending country on his or her own. Jaroslav Balek's wife found a job with an Irish design firm during his engagement in Zambia in the 1970s, and her low level of English was not an obstacle. Her employer even lent her a drawing board to use at home so that she would have no problem looking after the children in the afternoons.<sup>414</sup> During his time in Ethiopia in the mid-1980s, Jiří Šíma's wife worked as a secretary in the commercial department of the Czechoslovak Embassy in Addis Ababa.<sup>415</sup>

A significant element that affected the working and day-to-day lives of Czechoslovak (not only water management) experts in Africa was the rather demanding natural and climatic conditions, which were very different from the mild climate of Central

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<sup>412</sup> NA, f. Polytechna (unprocessed), delegátská síť, hodnocení, úkoly delegátům 1982-1989 (delegate network, evaluation, tasks to delegates 1982-1989).

<sup>413</sup> PRAAD, RG 7-1-1701, Terms for seller's personnel, 31.12.1962.

<sup>414</sup> BALEK, p. 99.

<sup>415</sup> Interview with Jiří Šíma, Prague, 11.7.2023.

Europe. The perceptibly more dangerous subtropical or tropical fauna and flora also posed complications. Perhaps the most feared were encounters with snakes, which were often unavoidable, especially during the fieldwork in remote locations. Getting to a hospital in time in case of a bite was unrealistic - for example, the venom of the black mamba can kill a person in minutes. Hydrogeologists in Zambia were therefore equipped with a set of two injections. One was to help against snakes with venom affecting the nervous system, the other against those with venom affecting the bloodstream. The effectiveness of the injections, often stored in substandard conditions, was questionable, as was the chance that the bitten expert would be able to see and recognise the snake that had bitten him/her. Experts also stayed in regular radio contact with headquarters during their field research. If they didn't respond back at a specified interval, the headquarters sent a helicopter out with searchers onboard.<sup>416</sup> A Czechoslovak expert in Ghana in the 1960s complained to the local administration that his children could not play outside because the garden was full of poisonous snakes. He demanded other, more suitable housing. This may seem like a marginal issue, but a combination of similar difficulties may have led to the frustrated expert ending his mission prematurely, before its official end.



**Fig. 15: Czechoslovak experts Havlík, Veverka and Petlach in Ghanaian Village (1960s).**  
Source: Private Collection of Antonín Petlach.

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<sup>416</sup> BALEK, pp. 105-106.

The question of housing was an important one indeed – and its solution often differed vastly, too. Sometimes, to varying degrees, the costs were borne by the host country, sometimes by the experts themselves. Sometimes the experts were given a house, sometimes just an apartment. Otto Hofmann, as a representative of FTC Škodaexport, even stayed with his wife at the Hotel Ghion for an extended time during his stay in Addis Ababa in the mid-1980s. Later, thanks to the pressure he himself had exerted on the Ethiopian administration, he moved to a house near the British Embassy, where he could borrow books at ease.<sup>417</sup>

Experts and their families abroad often lived within the city not far from each other, forming a kind of community. In these communities, they would meet and organize joint events, such as dinners, celebrations of birthdays, holidays, etc. Forming an expatriate community was also a way of coping with living in a foreign, often very different, environment and with homesickness or longing for relatives. Experts were often not afraid to take advantage of the opportunities offered by a more relaxed and liberal environment than they were used to experiencing at home in Czechoslovakia. Jaroslav Balek describes one of the joint events in Lusaka as follows: *A car rushed into a sharp turn on a one-way street with the curious name of Chachacha Road with screeching tires. I leaned my hands convulsively on the dashboard in front of me.... At the steering wheel sat a fairly drunk wife of one of the experts, and her face clearly read that she was absolutely serious about racing that night. Another of the many parties of the Czechoslovak colony was just taking place. That night, it was a very special one indeed. It was New Year's Eve, and everyone had already drunk when someone came up with the crazy idea of organizing a car rally through the city streets. To add injury to insult, the organizers of the party decided that the ladies would drive the cars and a draw was held to pick their partners.*<sup>418</sup>

A similar community of about ten Czechoslovak experts specialising in various fields existed in the European district of El-Menzah in Tunis at the turn of the 1960s and 1970s. According to pharmacist Zdeňka Věříšová, experts from other European countries working in Tunis at the time, especially the French and Belgians, set up similar communities. The nations stuck together, the communities generally did not mix too much, but there were exceptions. In her villa in the El-Menzah district, a French widow,

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<sup>417</sup> Interview with Ofo Hofmann, Říčany, 25.7.2023.

<sup>418</sup> BALEK, p. 99.

Professor Neli Bonant, ran a kindergarten, to which even some Czechoslovaks sent their children.<sup>419</sup> The Czechoslovak embassies did not like this practice much, as they felt that non-Czechoslovak education weakened the ties of the experts' children to their homeland, its culture and especially to the socialist establishment.<sup>420</sup> During his year-long stay in Zambia, Jaroslav Balek sent his two daughters to a Zambian kindergarten and school, which was attended, among others, by the children of experts from Poland and Bulgaria. When the Czechoslovak embassy in Lusaka, which was carrying out random checks at the schools, found out about this, it urged Balek to withdraw his children from the schools immediately, which he did not do in view of the impending end of his contract and departure.<sup>421</sup> While in Burma, René Sameš and his wife provided tuition for their daughters, partly at home themselves and partly by sending them to a local American school.<sup>422</sup> Similarly undesirable as a non-Czechoslovakian education were church visits.

The expert communities were usually quite open to people from all over the world. However, there were some exceptions. For example, it seems that experts from China used to be a very closed community. According to the testimony of the Czechoslovak expert Plevák, a five-member group of doctors from the hospital in Mahdia, Tunisia, practically never left the two villas in which they were staying outside their work duties. They ate exclusively at home and had no contact with other experts.<sup>423</sup> Balek notes that Czechoslovakians in Zambia during the 1970s interacted with foreigners on a regular basis, but almost exclusively in private. For example, it was very rare for foreigners to show up at parties hosted by the Czechoslovak community - perhaps experts did not invite them out of fear of being reported for having non-business encounters with foreign nationals.<sup>424</sup> However, the Czechoslovak community in Addis Ababa in the 1980s lived communally, if also without frequent contact with foreigners. Experts regularly met for parties in the embassy's commercial department, celebrated Christmas together - they even prepared various skits and charades to make it more interesting. There were also sports matches –

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<sup>419</sup> Thanks to this, the Věříš's son learned French perfectly. Interview with Zdeňka Věříšová, Jesenice, 20.9.2021.

<sup>420</sup> AMZV, TO-T 1970-74, Tunisia, k. 2, Rozbor poli+cké situace mezi čs. experty pracujícími v Tunisku a návrhy na opatření (Analysis of the poli+cal situa+on among Czechoslovak experts working in Tunisia and proposals for measures), 4.6.1971.

<sup>421</sup> BALEK, pp. 112-113.

<sup>422</sup> Interview with Věra Samešová and Renée Trnková (née Samešová), Prague, 4.8.2021.

<sup>423</sup> AMZV, TO-T 1970-1974, Tunisia, k. 2, Informažvna správa MUDr. Pleváka /Monas+r/ (Informa+ve report of MUDr. Plevak /Monas+r/), 18.1.1974.

<sup>424</sup> BALEK, p. 101.

it happened once that the Czechoslovak experts even challenged the Ethiopian national volleyball team.<sup>425</sup>

And what was the relationship with the local population like? In general, Czechoslovak experts enjoyed a positive reputation with the governments of the receiving countries, but this was not always the case with the local experts. In 1966, for example, the situation escalated at the hospital in Sfax, Tunisia, where several Czechoslovak medical staff were wrongly suspected or even accused of various crimes as part of a hate campaign led by local Tunisian doctors, whose income, a part of which was collected directly from patients in excess of their salaries, was reduced by the arrival of Czechoslovaks.<sup>426</sup> During their mission to Ghana in 1961, hydro-experts Sameš and Petlach were also confronted with local habits, which they found strange but which had to be respected nonetheless. Working with the locals measuring river profiles, they were only allowed to work on Tuesdays, as on other days the river in question was controlled by ghosts that the natives called "juju", and these were not to be disturbed.<sup>427</sup> There was often a certain superiority in the relationship between the experts and the local population. However, Jiří Šíma appraised the synergy with Ethiopian experts highly; in his words, they made for educated and capable experts.<sup>428</sup>

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<sup>425</sup> Interview with Ofo Hofmann, Říčany, 25.7.2023.

<sup>426</sup> The case involved a paediatrician, MUDr. Nagyidai, accused of manslaughter of a Tunisian citizen in a car accident - the prosecution was eventually dropped by the Tunisian Ministry of Health for manipulated evidence. The obstetrician MUDr. Chalupa, suspected of negligence of care and a series of deaths of newborns, the midwife Zdražilová, who was saved from trial only by the fact that she prudently kept the X-ray images, which showed that she did not cause the death of the newborn, and other Czechoslovak medical workers in Sfax. AMZV, TO-T 1965-1969, Tunis, k. 1, Soudní sžhání dr. Hany Nagyidaiové (Prosecution of Dr. Hana Nagyidai), 3.3.1966.

<sup>427</sup> PETLACH, Antonín, *Vzpomínky blanenského rodáka na půlroční působení v Ghaně v roce 1961 v rámci československé komplexní skupiny techniků pro hydroenergetický průzkum*. In: Sborník Muzea Blanenska, Muzeum Blansko, Blansko 2006, p. 104.

<sup>428</sup> Interview with Jiří Šíma, Prague, 11.7.2023.



**Fig. 16: Jaroslav Veverka and landrover, field works in Ghana (1960s).**

Source: Private Collection of Sameš Family.

Czechoslovakia tried to maintain regular contact with its experts, especially through its embassies. From time to time, the embassies held various meetings for their citizens, and in some cases contacted them personally or by telephone at their places of work. Many of the meetings were formal - dinners, public holidays, political training, but there were also informal meetings at the embassy, such as weekly volleyball games, football matches, etc. These activities were usually attended mainly by experts living near the embassy, i.e., in the capital. Experts often perceived the embassy as the embodiment of "Czechoslovakia". Whether such embodiment was a positive or negative one was mainly influenced by the relations with specific people at the embassy. While Jaroslav Balek speaks rather derisively of the diplomats in Zambia, Jiří Šíma used to play tennis with the Czechoslovak ambassador in Addis Ababa, Eduard Kukan, and their joint stay in Ethiopia brought them closer together.<sup>429</sup> Some experts, such as those sent in through the UN, or representatives of the FTC, often participated in the running of the embassy by being "on duty", i.e., along with the regular staff were ensuring the uninterrupted operation of the office.<sup>430</sup>

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<sup>429</sup> Interview with Jiří Šíma, Prague, 11.7.2023.

<sup>430</sup> Interview with Ofo Hofmann, Říčany, 25.7.2023.

Some experts have been exploited by the Ministry of Foreign Affairs (through the embassy) or the Ministry of the Interior for de facto industrial espionage. In addition, the State Security, especially the intelligence service (I. administration of the SNB) was often interested in the experts' contacts with foreign colleagues and representatives of the local administration, or in strategic objects, etc. For example, the State Security officer in charge was hoping that recruiting René Sameš in 1964 would, among other things, ensure the following: *"I intend to use Sameš as a collaborator to identify persons among foreign experts who are involved in the construction of the Tanoso and Hemang hydroelectric dams in Ghana, where Sameš is the chief engineer of the project. The names of the particular US experts will be quoted at a later stage as there are currently changes in positions..."*<sup>431</sup>

Post-departure or pre-departure interrogations by the State Security were a common part of the stays abroad. Alois Kraus caught the eye of secret intelligence before his departure for India in 1947, agreed to pass on information from the field, even asked for a camera. However, the cooperation was eventually abandoned, because India was not a country that Czechoslovakia was interested in at that time.<sup>432</sup> Balek noted the StB's increased interest in travels to America and Canada as opposed to the operations in Asia and Africa, and he generally assessed the interrogations as being routine and often lacking in content.<sup>433</sup> Balek was kept by the State Security as a "confidant" under the code name KALÁB.<sup>434</sup>

Most experts who have travelled abroad somehow surface in the files of the Archive of Security Forces. After all, one of the goals of the intelligence service was to keep track of Czechoslovak communities abroad - whether emigrants or expatriate experts.

It was quite common, too, that Czechoslovak embassies did not know about the expert agents in disguise, although some of the embassy employees were themselves also connected to the intelligence service (typically someone from the administrative and technical staff, such as a cryptographer or driver). As a matter of fact, one of the tasks

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<sup>431</sup> ABS, MV – Sameš, codename "ZDENĚK VESELÝ", Návrh na verbovku osoby (Proposal for recruitment of a person), 8.1.1964

<sup>432</sup> ABS, MoD, Zpravodajská správa GŠT, Kraus, code name "PIONÝR", vol. 4877.

<sup>433</sup> BALEK, p. 38.

<sup>434</sup> ABS, MV – Balek, codename "KALÁB", vol. no. 792636.



assigned to the cooperating experts may have been to keep an eye on the embassy staff as such.

Although the experts' observations were often chaotic, as they had no intelligence training, they could be useful to the headquarters in Prague.<sup>435</sup> Jaroslav Balek also mentions the somewhat grotesque direct written invitation to engage in spying, which was received by all experts working in Zambia during the first half of the 1970s. The letter stated that *"all Czechoslovaks working in Zambian government institutions are obliged to report any and all serious information of a political or economic nature that they may come across in the course of their employment"*.<sup>436</sup> Experts were also required to report to the embassy on any serious disputes or accidents. However, this happened very sporadically because they were afraid that they might be withdrawn from their mission.<sup>437</sup>

The FTCs, including Polytechna, had their own network of delegates abroad; these delegates usually worked in the trade missions established at the embassies or had their own offices somewhere in the city. In 1989, the tasks of a Polytechna delegate included, for example, visiting outlying locations of experts on a quarterly basis, visiting all of them on a semi-annual basis, addressing experts' problems or negotiating with employers. In addition, inter alia, they were to keep proper records of the movements and whereabouts of the experts and their families.<sup>438</sup> The abilities of these delegates and their mutual sympathies with the experts were, of course, entirely an individual matter. Many delegates also cooperated with the State Security Service. According to Otto Hofmann, the FTC Škodaexport, for example, was unofficially known in the 1980s as an organisation full of agents.<sup>439</sup>

## Conclusion

From the second half of the 1950s to 1989, Czechoslovakia sent thousands of civilian experts to African countries, including tens to lower hundreds of hydroexperts. The exact

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<sup>435</sup> E.g., AMZV, TO-T 1970-1974, Tunis, k. 2, Správa čl. lékaře s. Vrečka o vnitropoličské situaci Tuniska (Report of the Czechoslovak physician Vrečka on the internal political situation in Tunisia), 30.10.1973.

<sup>436</sup> BALEK, pp. 106-107.

<sup>437</sup> AMZV, TO-T 1965-1969, Tunis, k. 1, Řešení případů čs. expertů – soudní sžhání dr. Hany Nagyidaiové (Resolution of cases of Czechoslovak experts – prosecution of Dr. Hana Nagyidaiová), 31.3.1966.

<sup>438</sup> NA, f. Polytechna (unprocessed), delegátská síť, hodnocení, úkoly delegátům 1982-1989 (delegate network, evaluation, tasks to delegates 1982-1989).

<sup>439</sup> Interview with Ofo Hofmann, Říčany, 25.7.2023.

numbers are impossible to ascertain due to the incompleteness of the archives of the former Ministry of Foreign Trade. The selection of experts was often performed in a non-conceptual and rushed manner, given the need to quickly meet demand and fulfil the obligations under bilateral or multilateral treaties. Especially in the first half of the 1960s, the Czechoslovak administration was unable to provide adequate pre-departure training and equipment to the experts. Later, in the 1970s and 1980s, many processes used in the selection of experts and the creation of so-called cadre reserves had already been fairly stabilised, however, the preparation of experts for a completely different cultural, social, or climatic environment remained completely inadequate. The reason for this was, at least initially, the lack of competent experts on Africa in the institutions responsible for expert exchanges (the Ministry of Foreign Affairs, the Ministry of Foreign Trade and its subordinate companies, especially Polytechna and Technoexport); the situation was even worse in the specialist ministries (e.g., the Ministries of Education and Health). Political and sometimes even linguistic considerations were often disregarded because of the lack of professionally competent experts. In view of the shortage of linguistically competent experts and the insufficient availability of experts in specific subfields of hydroexpertise (research of river flows and profiles, hydrology, ecology, hydrogeology, "damming", etc.), people who were downright politically disloyal - anti-communist, anti-socialist – were often allowed to travel abroad, which had an impact on the growing percentage of emigration to the West.

It can also be stated that young, sometimes less experienced experts went to Africa. This may have been partly due to the more difficult working and living conditions, which older and more established colleagues were not willing to endure. This fact, however, raises the somewhat provocative question of whether Africa was not considered by expert circles, even if only subliminally, as a kind of a "hydraulic laboratory", where it was possible to experiment, to try out novel, often risky procedures that could not be tried at home, thus allowing the experts themselves to win their spurs – i.e., to learn in. Much like what Sara Prichard mentions in the context of the activities of the French colonial experts in Maghreb.<sup>440</sup>

The Cold War created good conditions for the scientific and technological internationalism. Czechoslovak hydroexperts regularly participated in international

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<sup>440</sup> PRICHARD, p. 598.

conferences, symposia, professional meetings and excursions. The excellence of their hydroexpertise got many of them as far as to the West (including the United States), even if they were not members of the Communist Party. These events were opportunities and platforms for sharing expertise and for communication across the professional community. Sometimes, as it was the case of Alois Kraus' trip to the USA and Canada, they also became direct technopolitical instruments of the state's foreign policy. This can be seen as a manifestation of scientific internationalism in the service of the state.

Communities of experts were an important element of the Cold War internationalisation. They were essentially semi-closed international communities exposed to the pressures exerted by the local majority community, different customs, sometimes difficult climatic conditions, supervision by the host country and by the sending Czechoslovakia. Czechoslovak hydroexperts in Africa do not seem to have publicly maintained many relationships with experts from other countries, not even with the Soviets. From the state's point of view, the experts functioned as professionals - human instruments of hydropolitics, but they indeed had the potential to compromise the sending state and its establishment in the receiving country to a greater or lesser extent through their behaviours, because, regardless of their internal convictions, they were still its representatives.

Paradoxically, the mix of issues mentioned above, as well as the era of Cold War rivalry, often fostered emergence of strong personal relationships and circulation of expert knowledge across the opposing blocs. Strong personal ties between professionals (both water and administrative) allowed for continuity of cooperation despite the alternating political regimes.

## Conclusion

The Czechoslovak water management tradition is long and dates back to the Austro-Hungarian period, when the first large and modern water works were built in Bohemia. Czechoslovakia was also able to rely on a powerful and advanced engineering industry from the time of the First Republic, which was an excellent prerequisite for the future development of hydropower (turbines, generators). Through water management studies at the technical universities in Prague, Brno and later Bratislava, Czechoslovakia from the 1930s onwards produced experts who gained practical experience while working on the first projects of dams, locks, and hydropower plants at home and abroad (through private companies such as Lanna a. s.). After the communist takeover in Czechoslovakia (1948), water management construction, particularly that focusing on hydropower, became part of the socialist vision of modernity of the new regime. Dams, as the "great structures of socialism", played a key role in this vision. In the early 1950s, the strong influence of Soviet hydraulic engineers is evident, and several Czechoslovak experts also completed study stays in Moscow at this time. The state quickly started building large water works, especially a cascade of dams on the Vltava River, using all its available water management capacity - even experts working abroad were asked back to Czechoslovakia, such as Alois Kraus, recalled from India in 1948 to join the problematic construction of the Orava Dam. During the 1950s, as a result of acute domestic needs, an industrial complex was created consisting of companies producing hydrotechnology (ČKD Blansko, Škoda, Sigma Olomouc, etc.) and companies capable of designing and managing the implementation of water works (Hydroprojekt, Hydroconsult, Vodní stavby, etc.). A special position in this environment was held by Hydroprojekt, a design company inspired by the Soviet Hidroprojekt, which centralised Czechoslovak design expertise and implemented de facto all large water works in the country. The completion of domestic water construction in the late 1950s and early 1960s made the Czechoslovak state offer this previously accumulated and now vacant capacity abroad. This gradually set the wheels in motion for water export, which was taken up by the then emerging state-owned foreign trade companies (Technoexport, Polytechna, Škodaexport, etc.). Considering the overall complexity of domestic water management construction, the volume and experience of expertise that was provided to other socialist countries which did not have such know-

how themselves, and the subsequent export of this expertise and technology abroad makes me strongly believe that Czechoslovakia was, alongside the Soviet Union, the water management leader of the Eastern Bloc.

Several changing forms can be traced in the Czechoslovak water export model. In terms of destinations, hydroexport and hydrotechnology was provided to friendly socialist countries in the form of a kind of "brotherly assistance" during the 1950s; Czechoslovakia "helped", for example, Bulgaria and Romania, and, as far as non-European countries are concerned, China and North Korea. From the 1960s onwards, Czechoslovakia began to offer its water management know-how to the countries of the Global South, in addition to Southeast Asia and Latin America, in particular to Africa. The reasons for the success in winning such contracts was the quality that could be readily demonstrated on the example of "domestic achievements" - in practical terms, this was happening for example during various state visits. Furthermore, there was the good reputation of Czechoslovak engineering in the world, which helped especially in the exportation of turbines or generators. The ability to tailor deliveries to the specific conditions and requirements of the client and the ability to improvise during the execution of the contract counted for an important feature. It also seems that Czechoslovakia was often helped in winning contracts by the fact that it was a smaller state, which in the eyes of African leaders was not potentially putting their countries at such a risk of unequal treatment or subsequent interference in internal affairs as if working with the great powers or former colonial powers. The absence of a colonial past was also an advantage. Compared to other Eastern Bloc states, Czechoslovakia was able to draw on contacts, networks of representation and experience from the pre-war era in many African countries during the early years.

The cases chosen in this thesis show the high ambitions of Czechoslovak water management expertise and the considerable trust from the state institutions that it was enjoying. This is evidenced by the considerations for the Czechoslovak representatives to be involved in such massive projects as the Volta River Project or the High Aswan Dam. Both projects were unique and pioneering at their time. The story of potential Czechoslovak participation in the High Aswan Dam construction has not been told until now.

Given the fragmentation of the construction of large water works into dozens or hundreds of smaller sub-contracts, it can sometimes be misleading to judge the success of projects by merely looking at whether or not they have actually been finalised. Indeed, we often slip into assessing them as a whole, which may not be a telling parameter. The sites of the Hemang and Tanoso hydropower plants in Ghana were pointed at here, because their initial design studies had been prepared by the Czechoslovak experts from Hydroprojekt. Although the power plants and the dams themselves were never built in the end, the contracts for the hydropower survey and initial studies were completed in good quality, on time and to good acclaim by the client. There are dozens of such cases.

The political-economic objectives of Czechoslovak hydropolitics changed from the 1950s to the 1980s. While the 1950s were marked by solidarity with the "brotherly" socialist countries, from the 1960s onwards there was a greater interdependence with foreign policy. As soon as the new concept of Czechoslovak foreign policy towards Africa was adopted in 1961, hydropolitics became almost immediately targeted towards the states that the concept describes as "countries of priority interest" (Ghana, Egypt). Hydropolitics is also beginning to serve as a tool to promote socialism in the African countries, which were expressing more or less sympathy for it. The disillusionment with the less-than-optimal success of this promotion and the outstanding loans granted to African states subsequently led to a greater pragmatism to prevail in Czechoslovak foreign policy, which was reflected in the practices adopted in terms of hydropolitics. From the 1970s, the export of Czechoslovak hydropower know-how became a relatively efficient money machine, bringing hard currency (dollars, pounds) to Czechoslovakia through African contracts, with which the state could purchase Western goods or technology. The Czechoslovak koruna was not convertible. In the period covering 1960s to the 1980s, water contracts often included efforts to obtain raw materials otherwise unavailable in Czechoslovakia. In Ghana, it was not just cocoa that was needed for Czechoslovak chocolate factories, but also gold, diamonds, or bauxite. In Egypt, these commodities were represented mainly by phosphates and cotton, in Ethiopia it was also phosphates and various ores. Generally speaking, the political objectives of hydropolitics were to strengthen Czechoslovakia's position in the particular destination country.

It is not easy to determine where the main creative centre of Czechoslovak hydropolitics lay. In the context of Africa and the selected case studies, I tend to believe that the main initiative came from the Ministry of Foreign Trade and the Ministry of Foreign Affairs, which actively used hydropolitics to pursue the foreign policy objectives of the socialist Czechoslovakia and involved other ministries, production enterprises and professional institutions in their practices. The experts under observation were field professionals, performing a set of tasks assigned to them by a superior - albeit often with a high degree of autonomy - rather than deciding, for example, which contracts Czechoslovakia would bid for and why.

Czechoslovakia specialized mainly in the export of small and medium-sized hydroelectric power plants and their complex equipment. Firstly, it had its own domestic experience with similar constructions, and the export was also facilitated by the fact that, according to the agreements concluded within the Comecon, the Francis turbines necessary for equipping such hydropower plants were designated to be manufactured in Czechoslovakia (at the ČKD Blansko plant) for all the countries of the Eastern Bloc. Outside of Africa, the construction of so-called pumped storage plants (Markersbach etc.) was also of a major concern, but the conditions were not suitable for this type of plants in Africa and therefore local governments were not interested in them so much. An important portfolio of expertise, which Czechoslovakia was exporting from the 1950s onwards, consisted of hydrological, hydro-energetic, hydrogeological, hydrophysical and additional field surveys.

In terms of execution of the individual projects, the process did not change much from the 1960s to the 1980s. Professional and manufacturing Czechoslovak companies, such as Hydroprojekt or ČKD Blansko, did not participate in foreign contracts directly. They competed for them under the umbrella of a foreign trade company (typically Technoexport, as in the case of Ghana and Egypt, or Škodaexport, as in the case of Ethiopia), which ensured the complex execution of the project and provided the necessary backing services to the professional and manufacturing enterprises – from the application for the contract, on to the calculations, logistics and on-site support. The activities of the foreign trade companies, their spheres of activity, or even the financial flows, were all coordinated by the Ministry of Foreign Trade.

The three selected case studies show that water resource development in Africa has provided good examples of competition and cooperation between countries, both "across the Iron Curtain" and within the socialist bloc. The fact that both the Czechoslovaks and the Hungarians were interested in hydrological surveys of rivers in southwestern Ghana in the early 1960s, and that both parties competed to win the contract, suggests that Eastern Bloc countries could, and quite commonly did, compete in terms of similar tenders. The party awarding the contract sometimes tried to pre-negotiate the terms and conditions (as in the case of Ghana and the Hungarians) so as not to antagonise any of the participants in the future. At other times, the bidding states attempted to arrange e.g., a joint bid, on their own, as it was the case when the High Aswan Dam tender was being considered. In 1959, Prague took the initiative to coordinate potential bids with Poland, GDR, Bulgaria, and Hungary. Cooperation with Western companies and countries was not exceptional in participating in water tenders, as evidenced, for example, by the project assigned for a study of the comprehensive use of the Sava River basin in Yugoslavia (1968-1975), which was prepared by Hydroprojekt in consortium with the Italian firm Carlo Lotti under a contract with UNDP. In Africa, I could not trace any example of a major "eastern" cooperation on a large water work until the 1980s. I consider the position of the Soviet Union as the main water leader of the Eastern Bloc to be very specific in terms of "cooperation". The case of the High Aswan Dam shows that if Moscow cared about a major water project, it was able and willing to neutralize any potential competition within the Eastern Bloc, as it did with Czechoslovakia in 1959. In the 1980s, on the other hand, Prague's involvement in the Ethiopian Malka Wakana project was actively supported and promoted. It is therefore evident that, although the Soviet Union did not seek to influence every single water contract in Africa, or at least those in which it was not to be involved, in cases of particular political interest, such as the High Aswan Dam, it acted uncompromisingly from a position of strength vis-à-vis its eastern "partners." It can thus be concluded that Czechoslovak hydropolitics in Africa was, to some extent, dependent on Soviet hydropolitics, all the more so when their interests crossed.

A probe into the development of Czechoslovak water management clearly shows the continuity of the expertise itself. In principle, socialist Czechoslovakia directly followed the



foreign activities of private companies in the field of water engineering and technology, which were nationalised after the communist coup in 1948 (e.g., the company Lanna a. s.). However, the personal contacts and experience of the "old school" experts, who were indispensable to the new regime, remained key to future success. The example of Ethiopia, and in particular of the expert hydrogeologist Jiří Šíma, who had worked there since the mid-1980s, demonstrates the continuity of mutual water cooperation after 1989. Here, too, personal contacts played an essential role.

All three case studies confirm Vincent Lagendijk's argument that dams (or large water projects) are a global phenomenon. They further prove that the Czechoslovak hydroexpansion in Africa has become part of the global hydroexpansion. The work of the Czechoslovak experts in Ghana, which began in 1961 with a hydroelectric survey in the basins of the West Ghanaian rivers Pra, Ankobra and Tano, and then continued until about 1968 with the initial studies of the Hemang and Tano hydroelectric plants, was a continuation of the hydrological survey carried out by the Hungarian experts in 1960. In the broader perspective of the overall development of Ghana's water resources, the Czechoslovak activities then ran parallel to those of the Soviets, who supplied the survey and design study for the Bui Dam and the massive Volta River Project. It involved many sub-contractors from 16 countries around the world, such as Japan (Hitachi Ltd.), Austria (Waagner-Biro Aktiengesellschaft), Great Britain (Chicago Bridge Ltd.), under the lead of the Italian company Impreglio and the American design giant Kaiser Company. The original Volta River Project studies were provided by the British. In the event of the ultimately unimplemented involvement of the Czechoslovaks in the construction of the High Aswan Dam in the late 1950s and early 1960s, the experts were to work to a British design prepared by Alexander Gibb and Co. in cooperation with the Soviets and Egyptian subcontractors. Participation in the Malka Wakana contract in Ethiopia during the 1980s meant that Czechoslovakia supplied the hydroelectric equipment and part of the transmission system, while the dam itself was designed and built by the Soviets in cooperation with Ethiopian firms. The original studies of the Wabe Shebelle basin, where a dam was built, were carried out in 1967-1971 by French experts from the hydrological division of the *Office of Scientific and Technical Research Overseas (ORSTOM)*. Hydrologists or hydrogeologists working in Ethiopia were in turn participating in

international survey groups. Global water management thus serves a good example of the permeability of the 'ideological boundaries' of the Cold War world, in which cooperation between experts across the power blocs was quite common.

I believe that the Cold War acted as an accelerator influencing the global development of the water sector, as its period was marked by a huge increase in the number of large waterworks developed around the world. The end of the Cold War, on the other hand, saw a significant decline in such construction efforts, which analogously applied to the involvement of Czechoslovak expertise in the global water development.

Beyond the contracts themselves, Czechoslovak experts let their voice be heard on a global stage through their participation in international conferences and symposia or mutual exchange visits. Another example is their involvement in the global professional discourse in the form of contributions to professional periodicals, etc. Proof of the global dimension of Czechoslovak water management can also be seen in the fact that many Czech experts have obtained prestigious positions in international organisations (UNDP, UNESCO, UNEP, ICOLD, etc.) or in foreign agencies. It should be noted though that the international community's desire for a balanced representation of East and West has also played a role in filling these prominent leadership positions.

From the second half of the 1950s up to 1989, Czechoslovakia sent thousands of civilian experts to African countries, including tens to lower hundreds of hydroexperts. Their selection was often far from being conceptual and tended to be rushed, given the desire to quickly meet demand and fulfil the obligations set out in bilateral or multilateral treaties. Especially in the first half of the 1960s, the Czechoslovak administration was unable to provide adequate pre-departure training and equipment to support the experts. Later, in the 1970s and 1980s, while many processes in the selection of experts and in the creation of so-called cadre reserves got stabilised, the preparation of experts for an absolutely different cultural, social or climatic environment remained completely inadequate. The reason for this was, at least initially, the profound lack of competent experts on Africa present in the institutions responsible for expert exchanges (the Ministry of Foreign Affairs, the Ministry of Foreign Trade and its subordinate companies, especially

Polytechna and Technoexport); the situation was even worse in the specialist ministries (e.g., the Ministries of Education and Health). Political and sometimes even linguistic considerations were often put on the back burner in view of the lack of professionally competent experts. Owing to the shortage of linguistically competent experts and the absence of experts in specific subfields of hydroexpertise (research of river flows and profiles, hydrology, ecology, hydrogeology, "damming", etc.), people who were downright politically disloyal - anti-communists, anti-socialists – were often commissioned abroad, which had an impact on the rising percentage of emigration to the West. Expert communities were an important element of the Cold War internationalisation. They were essentially semi-enclosed international communities exposed to the pressures of the local majority community, different customs, sometimes adverse climatic conditions, supervision exercised by the host country and by the sending Czechoslovakia. It seems that Czechoslovak experts did not maintain many relationships with experts from other countries in public. Paradoxically, the mix of these challenges and the era of Cold War rivalry often fostered the emergence of strong personal relationships and the circulation of expert knowledge across antagonistic blocs. Firm personal ties between professionals/technocrats (whether water or administrative ones) allowed for the continuity of expert cooperation despite the changes in political regimes.

It has also been noticed that it was rather the young, sometimes less experienced experts who went to Africa. This may have been partly due to the more challenging working and living conditions, which the older and more established colleagues simply did not want to cope with. This fact, however, raises the somewhat provocative question of whether Africa was not considered by the expert circles, if just subliminally, as being a kind of a "hydraulic laboratory", where it was possible to experiment, to try out new, often risky procedures that could not be tested at home, and, concerning the experts themselves, to win spurs for themselves – i.e., to learn. Not unlike what Sara Prichard mentions in the context of the activities run by the French colonial experts in Maghreb.<sup>441</sup>

This work aimed to focus on field experts. It appears from the selected examples that these experts, regardless of the time they went on their missions, did not perceive the

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<sup>441</sup> PRICHARD, p. 598.

political dimension of their work too much, or that they were not interested in it. The country that had sent them abroad, i.e., Czechoslovakia, was mostly represented by the embassy and its staff. The way they perceived the "state" in each particular destination therefore depended a lot on the specific personal relationships established there. In terms of their "mission", experts came to "modernise" - to develop the "underdeveloped" African states, they came to "help" through water projects. They were professionals focused on their expertise. Other personal motivations for travelling to Africa could be highly individual. Their list would contain e.g., the desire to travel, to quit the domestic "drab socialism", if for a while, to try out such professional exposure abroad that would not be realistically performable at home, or simply to earn more money.

The study of technopolitics - hydropolitics in this case - also has a strong topicality dimension. For example, the current activities of China and Russia in Africa confirm that the development of water resources within this region, especially in the field of hydropower, is still one of the tools frequently used by foreign policy. In the Cold War context, technopolitics allows for bringing into play new actors (experts), new types of commodities (expert reports, studies) and new decision-making centres outside the bureaucratic and political apparatus. De facto, it allows for a broader perspective than, for example, diplomatic history does, and thus has the potential to fill some previously blank panes in the mosaic of conflict.

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## **Bibliography**

### **Archives**

#### **Security Forces Archive**

ABS, Volumes of secret collaborators (TS), a. no. 630407, René Sameš "ZDENĚK VESELÝ"

ABS, TS, 45044, a. no. 12306, Kofi Batsa "LUPA"

ABS, TS, a. no. 637605 MV, Jaroslav Balek "KALÁB"

ABS, TS, Zpravodajská služba Generálního štábu (ZS/GŠ), sign. OS-4877 ZSGŠ, Alois Kraus "PIONÝR"

#### **State Regional Archive Praha**

SOA Prague, NAD 1403, f. LANNA, a.s.

SOA Prague, NAD 1408, f. Vodní stavby

#### **National Archive of the Czech Republic**

NA, Archiv ÚV KSČ, 1945-1989, f. Presidium 1962-66

NA, Archiv ÚV KSČ, f. Antonín Novotný, carton 99, Ghana

NA, Archiv ÚV KSČ, f. Politické byro ÚV KSČ

NA, f. Ministerstvo zahraničních věcí – Výstřižkový archiv III (MZV VA III)

NA, f. MZO (unprocessed)

NA, f. Polytechna (unprocessed)

NA, f. Monitor

#### **Archive of the Czech Technical University**

ČVUT, f. Theodor Ježdík

#### **Archive of the Czechoslovak Academy of Sciences**

Archives of the Czech Academy of Sciences, collection Commission of the Presidium of the Czechoslovak Academy of Sciences for Complex Research on Developing Countries.



### **Archive of the Ministry of Foreign Affairs of the Czech Republic**

AMZV, f. Teritoriální odbory (TO) - Ordinary (O), 1945-1959, United Arab Republic (SAR)

AMZV, f. TO-O, SAR, 1945-1959.

AMZV, f. TO-Tajné (T), 1960-1964, SAR

AMZV, f. TO-O, 1960-1964, SAR

AMZV, f. TO-T, 1965-1969, SAR

AMZV, f. TO –T, 1965-69, Ghana

AMZV, f. TO-T 1960-1964, Ghana,

AMZV, f. TO-T, 1980-1989, Etiopie

AMZV, f. DTO - 1945-1989, Etiopie

AMZV, f. TO-T 1965-1969, Tunisko

AMZV, f. TO-T, 1970-1974, Tunisko

AMZV, f. Porady kolegia 1953-1989

AMZV, f. Telegramy odeslané 1959-1960

AMZV, f. Telegramy došlé 1959-1960

### **Archive of the National Technical Museum**

NTM, f. 718 – Alois Kraus

NTM, f. 711 – Ladislav Votruba

### **The National Archives London – Kew**

TNA, DO 35/8657, Report on Economic Relations between Ghana and the Soviet Bloc Countries for the Quarter Ending 31<sup>st</sup> March 1959, May 1, 1959; Ghana's Trade with Soviet Bloc, G.W. Marshal to P. Jenkins, November 18, 1960.

TNA, FCO 35/155, Ghana expels four east Europeans, Times 7.6.1967.

TNA, T 236/4463, Countering of Soviet Bloc Economic Offensive, Country Studies – Ghana, 7.10.1958.

TNA, PREM 11/4824, Foreign Office Telegram No. 8413 to Washington, Message to President Kennedy from the Prime Minister, November 16, 1961.

TNA, DO 195/192, Telegram No. 78 (1043/9/8), Nkrumah in Poland, August 8, 1961.

Telegram No. 10323, Nkrumah's visit to Hungary, August 1, 1961.

TNA, DO 195/192, Telegram No. 53 (10355/8/8), Programme of President Nkrumah Visit to the Soviet Union from July 10-25, August 8, 1961. Telegram No. 71(1054/61)  
Summary: State visit to Czechoslovakia of the President of Ghana, August 11, 1961.

### **African Studies Centre Leiden**

LEIDEN, Ghana, Development Plan (1951)

LEIDEN, Ghana, Second Development Plan (1959-1964)

LEIDEN, Ghana, Seven-Years Plan (1963/64-1969/70)

### **Public Records and Archives Administration Department (Accra, Ghana)**

PRAAD, RG-17-2-496A, Volta River Project, Tema Press: 1965.

PRAAD, ADM-5-1-539, Volta River Authority Annual Report for the year 1962, 1963, 1964, 1965.

PRAAD, RG-17-1-310, Bui Power Project.

PRAAD, RG-7-1-2150, Hydro-Electric Power Development.

PRAAD, RG-7-1-1690, Subcommittee on Eastern Trade and Economics.

PRAAD, RG-7-1-2180, Czechoslovak Proposals, Hydro Electric Surveys, Western Region.

### **Archive of the World Bank**

WB, A1995-149, other #19, 1761701, Volta Power Project - Ghana - Loan 310 - P00834 - Negotiations - Volume 8, Ghana - Volta River Project - Visit of Ghana Delegation to the Bank, March 1, 1961.

WB, A1995-149, other #19, 1761701, Volta Power Project - Ghana - Loan 310 - P00834 - Negotiations - Volume 8, Michael L. Lejeune to Mr. Eugene R. Black, March 8, 1961.

WB, A1995-149, other #19, 1761701, Volta Power Project - Ghana - Loan 310 - P00834 - Negotiations - Volume 8, Ghana: Volta River Project, March 20, 1961.

### **Private Archives and Collections**

Antonín Petlach – Blansko

René Sameš – Praha

Jiří Šíma – Praha

Otto Hoffman – Říčany

Company Archive SWECO, a. s. - Praha

## **Memoirs**

BALEK, Jaroslav: *Agentem ve vlastních službách*, Tábor: Lulu 2008.

KRAUS, Alois: *Inženýrský životaběh*, Praha 1992 (unpublished manuscript).

MENERT, Evžen: *Na západ od Londýna*, Prague 1967.

## **Reports**

UN, UNEP: *Hydropolitical Vulnerability and Resilience Along International Waters: Africa*, 2005.

Imperial Ethiopian Government, National Water Resources Commission, Ethiopia-France Cooperative Program, Wabi Shebelle Survey, Vol. 3, Hydrological Survey of the Wabi Shebelle Basin, 1973.

## **Newspapers and Journals**

Czechoslovak Foreign Trade

Ethiopian Herald

Hydroprojekt

Rudé právo

Svět v obrazech

Vodní hospodářství

## **Books**

ADAS, Michael: *Dominance by design, Technological imperatives and America's civilizing mission*, Cambridge 2006.

ANDERSEN, Casper: *British Engineers and Africa 1875-1914*, Cambridge 2011.

ARSANO, Yacob: *Ethiopia and the Nile, Dilemmas of National and Regional Hydropolitics*, Zurich: ETH, 2008.

BARTOŠEK, Karel: *Report on Wandering in Communist Archives. Prague - Paris (1948-1968)*. Prague 2000.

BISHOP, Elizabeth: *Talking Shop: Egyptian Engineers and Soviet Specialists at the Aswan High Dam*, Vol. 1-2, Chicago, 1997.

BROŽA, Vladislav et al.: *Ladislav Votruba, DrSc. (1914-2002)*, Prague: ČVUT 2014.

COLLINS, Robert: *The Nile*, London 2002.

CONCA, Ken: *Governing water, Contentious transnational politics and global institution building*, Cambridge 2006.

CONRAD, Sebastian: *What is Global History*, Princeton University Press, 2016, pp. 485-489.

CRUMP, Laurien, ERLANDSSON, Susanna: *Margins for Manoeuvre in Cold War Europe the Influence of Smaller Powers*, London 2020.

CULLATHER, Nick: *The hungry world: America's Cold War battle against poverty in Asia*, Cambridge 2010.

DEJMEK, Jindřich, *Diplomacie Československa, Díl II. Biografický slovník československých diplomatů (1918-1992)*. Prague 2013.

DRAGOSTINOVA, Theodora K.: *The Cold War from the Margins, A Small Socialist State on the Global Cultural Scene*, New York, 2021.

DVOŘÁČEK, Jan, PICKNEROVÁ, Linda, ZÁHOŘÍK, Jan (eds.): *A History of Czechoslovak Involvement in Africa: Studies from the Colonial Through the Soviet Era*. The Edwin Mellen Press, Lampeter 2014.

EKBLADH, David: *The great American mission: modernization and the construction of an American world order*, Princeton 2010.

ESCOBAR, Arturo: *Encountering Development, The making and unmaking of The Third world*, Princeton 1995, p. 34.

GERITS, Frank: *The Ideological Scramble for Africa, How the Pursuit of Anticolonial Modernity Shaped a Postcolonial Order, 1945-1966*, Cornell University Press, Ithaca and London 2023.

GERŠLOVÁ, Jana, SEKANINA, Milan: *Lexikon našich hospodářských dějin*. Prague: Libri 2003.

GLEIJESESES, Piero: *Conflicting Missions: Havana, Washington, and Africa, 1959-1976*, University of North Carolina Press, Chapel Hill 2002.

HECHT, Gabrielle: *Entangled Geographies, Empire and technopolitics in the global Cold War*, Cambridge 2011.

- HOLEČKOVÁ, Marta Edith: *The Story of a Forgotten University, University of 17 November (1961-1974) and its place in the Czechoslovak educational system and society*. FF UK, Prague 2019.
- IANDOLO, Alessandro: *Arrested Development, The Soviet Union in Ghana, Guinea, and Mali, 1955-1968*, Cornell University Press, 2022.
- JOSEPHSON, Paul R.: *Industrialized Nature: Brute Force Technology and the Transformation of the Natural World*, Washington DC: Island Press/Shearwater Books, 2002.
- KLINGENSMITH, D.: *"One Valley and a Thousand": Dams, Nationalism, and Development*, New York 2007.
- KUNZ, Daniel, *Economic Diplomacy of the Suez Crisis*, Chapel Hill: N.C, 1991.
- KUŽVART, Miloš, NEUŽIL, Josef: *V Ghaně a Guineji*, in: *Ročenka populárně vědeckého, zeměpisného a cestopisného měsíčníku Lidé a Země*, Publishing House of the Czechoslovak Academy of Sciences, Prague 1961, pp. 148-156.
- MIESCHER, Stephan, *Dam for Africa: Akosombo Stories from Ghana*, Indiana University Press 2022.
- MITCHELL, Timothy: *Rule of Experts, Egypt, Techno-Politics, Modernity*, London 2002.
- MUEHLENBECK, Philip E.: *Czechoslovakia in Africa, 1945-1968*, Palgrave 2016.
- MUEHLENBECK, Philip E., TELEPNEVA, Natalia, (eds.): *Warsaw Pact Intervention in the Third World, Aid and Influence in the Cold War*, London 2018.
- OLŠÁKOVÁ, Doubravka, JANÁČ, Jiří: *The Cult of Unity, Stalin's Plan to Transform Nature in Czechoslovakia (1948-1964)*, Prague 2018, p. 161.
- POLÁK, Karel, PLUHAR, Zdeněk: *ČKD Blansko Závody Jiřího Dimitrova n.p. 1698–1973*, Blansko: ČKD Blansko 1973.
- RÁKOSNÍK, Jakub, SPURNÝ, Matěj, ŠTAIF, Jiří, *Milníky moderních českých dějin, krize konsenzu a legitimacy v letech 1848-1989*, Argo: Praha 2018, pp. 169-170.
- RIVLIN, Helen: *The Agricultural Policy of Muhammad Ali in Egypt*, Cambridge 1961.
- SANCHEZ-SIBONY, Oscar: *Red Globalization, The Political Economy of Soviet Cold War from Stalin to Khrushchev*, Cambridge 2014.
- SLÁDEK, Čestmír: *Colonel Toby: Na dvoře krále králů*, Prague 1999.
- SNEDDON, Christopher.: *Concrete Revolution, Large Dams, Cold War Geopolitics, and the US Bureau of Reclamation*, Chicago 2015.

- SOMMER, Vít et. al.: *Řídit socialismus jako firmu, technokratické vládnutí v Československu, 1956-1989*, Prague: Lidové Noviny 2019.
- STANEK, Lukasz.: *Architecture in Global Socialism, Eastern Europe, West Africa and the Middle East in the Cold War*, Princeton University Press, Princeton and Oxford 2020.
- TELEPNEVA, Natalia.: *Cold War Liberation, The Soviet Union and the Collapse of Portuguese Empire in Africa, 1961-1975*, The University of North Carolina Press, 2021.
- TISCHLER, Julia: *Light and Power for a Multiracial Nation. The Kariba Dam Scheme in the Central African Federation*, Cambridge Imperial and Post-Colonial Studies Series. Basingstoke/New York: Palgrave Macmillan, 2013.
- TRECKER, Max: *Red Money for the Global South East-South Economic Relations in the Cold War*, London, New York: Routledge, 2020.
- TVEDT, Terje: *The Nile in the Age of the British, Political Ecology and the Quest for Economic Power*, London: Tauris 2004.
- VAN DER VLEUTEN, Erik, OLDENZIEL, Ruth, DAVIDS, Mila: *Engineering the Future, Understanding the Past – A Social History of Technology*, Amsterdam: Amsterdam University Press 2017.
- VOTRUBA, Ladislav: *Naše velké vodní stavby socialismu*, Prague 1954.
- VYHLÍDAL, Milan: *Activities of Czechoslovak instructors in the Egyptian armed forces, participation in Egyptian military education 1956-1977*. Prague: Carter Reproplus s.r.o, 2016.
- WATERBURY, John: *Hydropolitics of The Nile Valley*, Syracuse 1979.
- WESTAD, Odd Arne: *The Global Cold War, Third World Interventions and the Making of Our Times*, Cambridge University Press 2005.
- WESTAD, Odd Arne, LEFFLER Melvyn P.: *The Cambridge History of the Cold War, Vol. 1, Origins*, Cambridge University Press, 2010, p. 10.
- WORSTER, Donald: *Rivers of empire, Water, aridity, and the growth of the American West*, New York 1985.
- YLÖNEN, Aleksii, ZÁHOŘÍK, Jan (eds.), *The Horn of Africa since 1960s*, Routledge, London 2017.
- ZÍDEK, Petr: *Československo a francouzská Afrika, 1948-1968*, Prague: Libri 2006.
- ZÍDEK, Petr, SIEBER, Karel: *Československo a Blízký východ v letech 1948–1989. Ústav mezinárodních vztahů*, Praha 2009.

ZÍDEK, Petr, SIEBER, Karel: *Československo a subsaharská Afrika v letech 1948–1989*. Ústav mezinárodních vztahů, Praha 2007.

## Articles

80<sup>th</sup> Anniversary of the Birth of Academician Sergei Yakovlevich Zhuk, in *Hydrotechnical Construction*, Vol. 6, no. 9 (1972), p. 893.

AKHTER, Majed: *The Hydropolitical Cold War, the Indus Water Treaty and state formation in Pakistan*, in: *Political Geography*, vol. 46, 2015, p. 65-75.

ALATOUT, Samer: *Hydro-imaginaries and the construction of the political geography of the Jordan River, The Johnston Mission, 1953-1956*, in: DAVIS D., BURKE, E. (Eds.): *Environmental imaginaries of the Middle East and North Africa*, Athens 2011, pp. 218-245.

BORTLOVÁ, Hana: *Czech Tractors, Cuban Oranges: Economic Relations between Socialist Czechoslovakia and Revolutionary Cuba*, in: *Central European Journal of International and Security Studies*, Vol. 7, No. 3, 2013, pp. 77-95.

BRENDEL, Benjamin: *Side Effects of Modernity, Dam Building, Health Care, and the Construction of Power in the Context of the Control of Schistosomiasis in Egypt in the 1960s-1970s*, in: *Naturwissenschaften, Technik und Medizin*, 2017, Vol.25, No.3, pp. 349-382.

BŘEZINOVÁ, Kateřina: *Turbines and Weapons for Latin America: Czechoslovak Documentary Film Propaganda in the Cold War Context, 1948-1989*, in: *Central European Journal of International and Security Studies*, Vol. 7, No. 3, 2013, pp. 38-58.

EKBLADH, David: *"Mr. TVA," grass-roots development, David Lilienthal, and the rise and fall of the Tennessee Valley Authority as a symbol for U.S. overseas development, 1933-1973*, in *Diplomatic History*, Vol. 26, 2002, pp. 335-374.

EYAL, Gil, BUCHHOLZ, Larissa: *From the Sociology of Intellectuals to the Sociology of Interventions*, in: *Annual Review of Sociology*, Vol. 36, 2010, pp. 117-137.

GOCKING, Roger: *Ghana's Bui Dam and the Conquest over Hydro Power in Africa*, in: *African Studies Review*, Vol. 64, Issue 2, June 2021, pp. 339-362.

HAAS, Peter: *Introduction: epistemic communities and international policy coordination*, *International Organization*, in: *Cambridge Journals*, Vol. 46, No. 1., Winter 1992, pp. 1-35.

HULÍK, Karel: *Projekt a výstavba úpravny Cairo-Jih*, in: Sborník k 20. výročí založení Hydroprojektu, 1972.

CHERYACHUKIN A. P., SITNIN, O. V.: *Malka Wakana Hydroproject on the Webi Shebeli River in Ethiopia*, in: *Hydrotechnical Construction*, Vol. 34, Nos. 8-9, 2000, pp. 485-489.

CHMIEL, Juraj: *Československý zbrojářský priemysel a taliánsko-etiopejský konflikt*, in: *Historie a vojenství*, No. 2, 1991, pp. 40-64.

JANÁČ, Jiří: *Hydrocrats and the Czech Water Mission in the Twentieth Century (1930-1960)*, in: *Soudobé dějiny*, Vol. 24, No. 1-2, 2017, pp. 19-53.

JANÁČ, Jiří: *Building Hydrosocialism in Czechoslovakia*, in: *Global Environment*, Vol. 13, No. 3, October 2020, pp. 610-633.

JEŽEK, Jan: *Úpravna vody pro zásobení Sofie*, in: *Hydroprojekt*, No. 3, 1969, pp. 14-16.

JIANG, Li: *Development of Relations Between China and Czechoslovakia and Its Successor States, Czechia and Slovakia*, in: *Chinese Journal of Slavic Studies*, Vol. 2, No. 1, 2022, pp. 100-113.

KAIKA, Maria: *Dams as symbols of modernization: the urbanization of nature between geographical imagination and materiality*, in: SWYNGEDOUW E.: 'Technonatural revolutions: the scalar politics of Franco's hydro-social dream for Spain, 1939-1975', in: *Transactions of the Institute of British Geographers*, Vol. 32, No. 1, pp. 9-28.

KOTT, Sandrine: *Cold War Internationalism*, in: SLUGA, G., CLAVIN, P.: *Internationalisms and Twentieth-Century History*, Cambridge University Press: 2017, pp. 340-341.

KOURA, Jan: *A Prominent Spy: Mehdi Ben Barka, Czechoslovak Intelligence, and Eastern Bloc Espionage in the Third World during the Cold War*, in: *Intelligence and National Security*, 2020, pp. 318-339.

KOURA, Jan, PEŠTA, Mikuláš: *Československo a studená válka v Africe, Přístupy, interpretace a roviny zkoumání*, in: *Paměť a dějiny*, Vol. XIV, No. 3, 2020, p. 4.

KOURA, Jan - WATERS, Roger: *"Africanos" versus "Africanitos" the Soviet-Czechoslovak Competition to Protect the Cuban Revolution*, in: *The International History Review*, Vol. 43, Issue 1, 2021, pp. 72-89.

KROPÁČEK, Luboš: *Sociological Notes on the Great Ghanaian Project*, in: *Nový Orient*, Vol. XXI, 1966, pp. 80-84.

LAGENDIJK, Vincent: *Streams of knowledge: River development knowledge and the TVA on the river Mekong*, in: *History and Technology*, Vol. 35, No. 3, pp. 318-319.



LARON, Guy: "Logic dictates that they may attack when they feel they can win:" *The 1955 Czech-Egyptian Arms Deal, the Egyptian Army, and Israeli Intelligence*, in: *Middle East Journal*, Vol. 63, No. 1, 2009, pp. 69-84.

LARON, Guy: *Cutting the Gordian Knot. The Post-WW2 Egyptian Quest for Arms and the 1955 Czechoslovak Arms Deal*, in CWHIP, Working paper No 55 (February 2017).

LORENZINI, Sara: *The Socialist Camp and the Challenge of Economic Modernization in the Third World*, in: N. NAIMARK, N., PONS, S., QUINN-JUDGE, S., eds.: *The Cambridge History of Communism*, Cambridge: Cambridge University Press 2017, pp. 341-363.

MACKOVÁ-JŮNOVÁ, Adéla: *Export of Experts. Czechoslovak Academy of Sciences and Iraq in the 1960s*, *Works from the History of the Academy of Sciences*, 2018, no. 2, pp. 47-76

MACKOVÁ, Adéla, *Výuka českého jazyka v Káhiře*, in: *Pražské egyptologické studie*, No. V, 2006, pp. 1-3.

MACKOVÁ, Adéla, *Vznik a počátky Českého egyptologického ústavu*, in: *Nový Orient*, Vol. 61, No.1, pp. 57-60.

MACKOVÁ JŮNOVÁ, Adéla, „*Journey of Czechoslovak Cultural Delegation to Egypt in 1956., Cultural Agreement between Egypt and the Czechoslovak Republic*“, in: *Acta Faculty filozofické Západočeské University v Plzni*, Vol. 3, pp. 101-110.

MAZANEC, Jakub: *Československý Hydroprojekt v Africe*, in: *Paměť a dějiny*, Vol. XIV, No. 3, 2020, pp. 33-41.

MAZANEC, Jakub: *Margins of Everyday Life of Czechoslovak Experts in Africa. Motivation - Nomination - Preparation - Emigration?* in: *Prague Papers on the History of International Relations*, Prague: Institute of World History, NO. 1-2, 2021, pp. 66-79.

MÁDROVÁ, Kamila: *Development and Strategy of the Czech Technical University's Contacts with Third World Countries in the 1960s*, *Práce z dějin Akademie věd*, 2018, No. 2, pp. 21-44.

MEDVETZ, Thomas, *Field Theory and Organizational Power. Four Modes of Influence Among Public Policy "Think Tanks"*, in: HILGERS, Mathieu, MANGEZ, Eric (eds.): *Bourdieu's Theory of Social Fields, Concept and Applications*, London – New York, 2015, pp. 221-237.

MENCLOVÁ, Barbora: *Czechoslovak Forest Experts in Cold War Angola*, in: *Prague Papers on the History of International Relations [online]*, No. 1-2, 2021, pp. 79-92.

- MIESCHER, Stephan, "'Nkrumah's Baby': The Akosombo Dam and the Dream of Development in Ghana," in: *Water History*, Vol. 6, No. 4 (2014), pp. 341-66.
- MIESCHER, Stephan, TSIKATA, Dzodzi, "Hydro-Power and the Promise of Modernity and Development in Ghana: Comparing the Akosombo and Bui Dam Projects," in: *Ghana Studies*, Vol. 12/13 (2009/2010), pp. 55-75.
- MOLLE, Francois: *Planning and managing water resources at the river-basin level, Emergence and evolution of a concept*, in: International Water Management Institute. (IWMI Comprehensive Assessment Research Report 16).
- MOLLE, Francois: *River-basin planning and management, the social life of a concept*, in: *Geoforum*, vol. 40, 2009, p. 484-494.
- OESTIGAARD, Terje: *Water, national identities and hydropolitics*, in: SANDSTRÖM, Emil, JÄGERSKOG Anders, OESTIGAARD, Terje, *Land and Hydropolitics in the Nile River Basin, Challenges and New Investments*, New York 2016, p. 211-230.
- OSEI-OPARE, Nana, *Uneasy Comrades: Postcolonial Statecraft, Race and Citizenship, Ghana-Soviet Relations, 1957-1966*, in: *Journal of West African History*, Vol. 5, No. 2, Fall 2019, p. 85-111.
- PEŠTA, Mikuláš: *Between Solidarity, Trade and Politics. Military training of Africans in Czechoslovakia in the 1960s*, in *Memory and History* 14/3 (2020), pp. 24-32.
- PETLACH, Antonín: *Vzpomínky blanenského rodáka na půlroční působení v Ghaně v roce 1961 v rámci československé komplexní skupiny techniků pro hydroenergetický průzkum*. In: *Sborník Muzea Blansko, Muzeum Blansko, Blansko 2006*, pp. 101-108,
- PRITCHARD, Sara: *From hydroimperialism to hydrocapitalism, "French" hydraulics in France, North Africa and beyond*, in: *Social Studies of Science*, Vol. 45, No. 4, pp. 594-595.
- RICHTEROVA, Daniela, PEŠTA, Mikuláš, TELEPNEVA, Natalia, *Banking on Military Assistance. Czechoslovakia's Struggle for Influence and Profit in the Third World, 1955-1968*, in: *International History Review*, Vol. 43, No. 1 (2021), pp. 90-108.
- SALMAN, Salman.: *The new state of South Sudan and the hydro-politics of the Nile Basin*, in: *Journal Water International*, Vol. 36, Issue 2, 2011, p. 154-166.
- SEIDE, Wondwosen Michago: *"Lease the land, but use the water"*, in: SANDSTRÖM, Emil, JÄGERSKOG, Anders, OESTIGAARD, Terje: *Land and Hydropolitics in the Nile River Basin, Challenges and New Investments*, New York 2016, p. 166-188.

SLATER, David: *The geopolitical imagination and the enframing of development theory*, in: *Transactions of the Institute of British Geographers*, Vol. 18, 1993, p. 419-437.

SMITH, Tony: *New Bottles for New Wine: A Pericentric Framework for the Study of the Cold War*, in: *Diplomatic History*, 2000, Vol. 24, No. 4, pp. 567-591.

SWYNGEDOUW, Eric: 'Not a drop of water...': *state, modernity, and the production of nature in Spain, 1898-2010*, in: *Environment and History*, Vol. 20, No. 1, pp. 67-92.

SIEBER, Karel: *Československo a občanská válka v Nigérii (1967–1970)*. in: *Historie a vojenství*, 2002, No. 2, pp. 267–302.

SNEDDON, Christopher: *The sinew of development: Cold War geopolitics, technical expertise, and water resources development in Southeast Asia, 1945-1975*, in: *Social Studies of Science*, Vol. 42, No. 4, pp. 564-590.

SNEDDON, Christopher., FOX, Coleen: *Cold War, The US Bureau of Reclamation, and the technopolitics of river basin development, 1950-1970*, in *Political Geography*, vol. 30, 2011, p. 450-460.

TELEPNEVA, Natalia: *Saving Ghana's Revolution. The Demise of Kwame Nkrumah and the Evolution of Soviet Policy in Africa, 1966-1972*, in: *Journal of Cold War Studies*, Vol. 20, No. 4 (Fall 2018), pp. 4-25.

TELEPNEVA, Natalia: 'Code Name SECRETARY': *Amílcar Cabral, Czechoslovakia, and the Role of Human Intelligence during the Cold War*, in: *The International History Review*, Vol. 42, Issue 6, 2020, pp. 1257-1273.

TVEDT, Terje, COOPEY, Richard: *A "water systems" perspective on history*, in: TVEDT, Terje and Coopey, Richard (eds.), *A History of Water, Series 2, Volume 2: From Early Civilization to Modern Times*, London: I. B. Tauris, pp. 3-28.

WOLDEKIROS, Abadi: *Tendenční neutralita: československý zbrojní průmysl a italsko-habešský konflikt*, in: *Soudobé dějiny*, No. 1-2, 2006, pp. 9-28.

ZÁHOŘÍK, Jan: *Itálie a Etiopie (1914-1941)*, in: *Historický obzor*, No. 9-10, 2006, pp. 203-208.

ZÁHOŘÍK, Jan, DVOŘÁČEK, Jan: *Czech Travelers, Entrepreneurs and Advisors in Ethiopia, 1918-1937: a Preliminary Study*, in: *Journal of Ethiopian Studies*, vol. 47, December 2014, pp. 53-68.

ZÁHOŘÍK, Jan: *Czechoslovakia and Congo/Zaire under Mobutu, 1965–1980*, in: *Canadian Journal of History*, 2017, Vol. 52, Issue 2, pp. 290-314.

ZÍDEK, Petr: *Československo v konžské krizi 1959–1961*. in: *Historie a vojenství*, No. 3, 2006, pp. 23–33.

## Online Sources

TVEDT, Terje: *The Nile Waters Issue*, available from:

<http://africanhistory.oxfordre.com/view/10.1093/acrefore/9780190277734.001.0001/acrefore-9780190277734-e-20>, [cited 2023-06-25].

The 1902 Treaty between Ethiopia and Great Britain, available from:

<https://hornaffairs.com/2011/06/08/read-the-1902-ethiopia-uk-treaty-share-your-view/>, [cited 2023-06-25].

*United Arab Republic and Sudan Agreement (With Annexes) For The Full Utilization of the Nile Waters (1959)*, available from:

[https://www.internationalwaterlaw.org/documents/regionaldocs/uar\\_sudan.html#sudan2](https://www.internationalwaterlaw.org/documents/regionaldocs/uar_sudan.html#sudan2) [cited 2023-07-06].

Velvyslanectví České republiky v Addis Abebě, *Historické kontakty*, available from:

[https://www.mzv.cz/addisababa/cz/zeme\\_a\\_organizace\\_akreditace/etiopie/historicke\\_kontakty.html](https://www.mzv.cz/addisababa/cz/zeme_a_organizace_akreditace/etiopie/historicke_kontakty.html) [cited 2023-06-25].

MZV, *Slavnostní udělení Ceny Gratias agit 2018*, available from:

[https://www.mzv.cz/jnp/cz/udalosti\\_a\\_media/archiv\\_zprav/rok\\_2018/tiskove\\_zpravy/x\\_2018\\_06\\_08\\_gratias\\_agit\\_2018.html](https://www.mzv.cz/jnp/cz/udalosti_a_media/archiv_zprav/rok_2018/tiskove_zpravy/x_2018_06_08_gratias_agit_2018.html) [cited 2023-07-04].

Časopis stavebnictví, *Alois Kraus – stavitel přehrad*, available from:

<https://www.casopisstavebnictvi.cz/clanky-alois-kraus-stavitel-prehrad.html> [cited 2023-02-25].

Lidové noviny, *Kalendář hrdinů, Nenápadný organizátor. Alois Kraus uplatnil své schopnosti během povstání v Praze – Vršovicích*, available from:

[https://www.lidovky.cz/orientace/nenapadny-organizator-alois-kraus-uplatnil-sve-schopnosti-behem-povstani-v-praze-vrsovicich.A210903\\_094632\\_In-historie\\_ape](https://www.lidovky.cz/orientace/nenapadny-organizator-alois-kraus-uplatnil-sve-schopnosti-behem-povstani-v-praze-vrsovicich.A210903_094632_In-historie_ape) [cited 2023-02-25].

Slovenské dotyky, *Alois Kraus – stavbyvedúci Oravskej priehrady*, available from:

[https://www.czsk.net/dotyky/7\\_2002/kraus.html](https://www.czsk.net/dotyky/7_2002/kraus.html) [cited 2023-02-25].

iDNES.cz, *Antonín Petlach postavil vodní elektrárnu Dlouhé stráně*, available from:

[https://www.idnes.cz/brno/zpravy/antonin-petlach-postavil-vodni-elektrarnu-dlouhe-strane.A160620\\_2254582\\_brno-zpravy\\_vh/foto](https://www.idnes.cz/brno/zpravy/antonin-petlach-postavil-vodni-elektrarnu-dlouhe-strane.A160620_2254582_brno-zpravy_vh/foto) [cited 2023-02-25].

Český Rozhlas, *Antonín Petlach*, available from:

<https://brno.rozhlas.cz/moravske-pribehy-aneb-osudy-neobycejnych-lidi-8799046/4>

[cited 2023-02-25].

## Dissertations and Theses

BUZÁSSYOVÁ, Barbora: *Socialist Internationalism in Practice: Shifting Patterns of the Czechoslovak Educational Aid Programmes to Sub-Saharan Africa, 1961-1989*, dissertation, Department of the History of Science and Technologies, Institute of History of Slovak Academy of Sciences, 2021.

DVOŘÁČEK, Jan: *Československo-etopijské vztahy 1945-1974*, ( disertační práce), Univerzita Pardubice, Fakulta filozofická, 2018.

JANÁČ, Jiří: *European Coasts of Bohemia. Negotiating the Danube-Oder-Elbe Canal in a Troubled Twentieth Century*, dissertation, Charles University, 2012.

LAUEROVÁ, Mirka: *Vývoj ekonomických vztahů Československa a Čínské Lidové Republiky v letech 1949–1989*, (MA diss., Prague University of Economics and Business, Prague 2007.

MENCLOVÁ, Barbora: *Between Global Ambitions and Economic Pragmatism: Czechoslovak Experts in Angola and Mozambique in the Cold War*, dissertation, Faculty of Social Sciences, Charles University, 2023.

VAVREČKOVÁ, Veronika: *Czechoslovakia and Egypt in 1945-1968*, dissertation, Institute of History, Faculty of Arts, University of Hradec Králové, 2019.

## Documentary Films

CLARK, Lane R., MIESCHER, Stephan: *Ghana's Electric Dreams*, 2022 (online: <https://ghanaselectricdreams.com/>)

## Interviews and Correspondence

Interview with Antonín Petlach, Blansko, 9.5.2019.

Interview with Věra Samešová and Renée Trnková (née Samešová), Prague, 4.8.2021.

Interview with Zdeňka Věříšová, Jesenice, 20.9.2021.

Interview with Jiří Šíma, Prague, 11.7.2023.

Interview with Otto Hofmann, Říčany, 25.7.2023.

Email correspondence with Jiří Šíma – July 2023