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## Narratives on the Brazilian Amazon: from national development to global conservation



The perception and interest in the Brazilian Amazon, today a global symbol of ecological conservation, has undergone changes over time. André Felipe Cândido da Silva, historian at Casa de Oswaldo Cruz in Brazil, recently gave a conference entitled "The Amazon as an Anthropocene Hotspot" at the Institut d'Història de la Ciència of the UAB, in which he examined the collaboration between Brazil and Germany in the initial ecological studies of the Amazon. This international collaboration was crucial to understand and protect the region from the devastation caused by the Brazilian military dictatorship, to place the territory in the realm of global interest, and to point out its role in the context of the Anthropocene.

**André Felipe Cândido da Silva** is a biologist and historian of science, medicine and the environment, affiliated with the Casa de Oswaldo Cruz, Oswaldo Cruz Foundation (Rio de Janeiro, Brazil). He specializes in the history of life sciences and medicine in Brazil during the 20th century, focusing on the circulation of knowledge between Brazil, Europe and the USA, as well as on the interconnection of health, knowledge and environment. Currently, he coordinates the research group "History, Health and Ecology in the Great Acceleration" at the Brazilian Research Council and directs the project entitled "The Amazon as a microcosm of the Anthropocene: The history of transnational research on Amazonian ecology and the environmental impacts of the Great Acceleration (1952-2002)"<sup>[6]</sup>.

The Brazilian Amazon is at the epicenter of global attention as an emblematic symbol of contemporary ecological and environmental crises. With enormous ecological wealth, the region is known in the media as the "lungs of the planet" or the "green ocean" with which humanity hopes to absorb pollution in order to save itself from environmental collapse <sup>[1]</sup>. These narrative metaphors, rooted in the public perception although nuanced in the scientific one, have sparked a growing international interest in its protection, especially driven by the increasing devastation of the rainforest, a phenomenon that was exacerbated during the past ultra-right government of Jair Bolsonaro (2019-22) <sup>[2]</sup>. But the Brazilian Amazon is not only limited to its ecological value, it also encompasses social and cultural aspects of the communities that live and coexist with the forest, intertwined with political, economic and colonial factors that have been shaping the narratives around the Amazon throughout history.

These complex dynamics that have characterized the region since the 20<sup>th</sup> century were addressed last April 10<sup>th</sup> at the Institut d'Història de la Ciència (iHC) during the talk entitled "The Amazon as an Anthropocene Hotspot: the German-Brazilian cooperation on tropical ecology studies", given by André Felipe Cândido da Silva, historian at Casa de Oswaldo Cruz, Oswaldo Cruz Foundation (Brazil), and presented by Carolina Granado (iHC-UAB). His historical research, developed through the study of transnational scientific collaboration networks, has been essential to understand the origin of the current global interest in the Amazon and the role of this territory in the context of the Anthropocene.

During the talk, da Silva critically reviewed the scientific discourses and findings on Amazon ecology between 1952 and 1992 by German limnologist Harald Sioli and the collaborative network between Brazil and Germany. This collaboration transcended the boundaries of scientific research to become part of a broader effort aimed at understanding and protecting the Amazon globally, especially in the face of alarming rates of deforestation caused by infrastructure and colonization projects during the Brazilian military dictatorship (1964-1985), a phenomenon that bears similarities to the ecological changes occurring during the Bolsonaro administration <sup>[3]</sup>.

### **Ecological globalization, transnational collaboration**

The lush Amazon River basin, which spans nine countries in South America, is one of the largest tropical rainforest territories on the planet. In Brazil, the vast geographical extension - almost 70% of the entire Amazonian territory - the enormous volume of water and the astonishing socio-environmental diversity have put this region in the global spotlight <sup>[3]</sup>. "Everything about the Brazilian Amazon has to do with continental dimensions", explained da Silva to contextualize his object of study.

Scientific relations between Brazil and Germany began to grow closer in the early 19<sup>th</sup> century, when many German naturalists became interested in the Amazon's aquatic landscapes, soils and forests in order to understand its complex tropical ecology <sup>[4]</sup>. The German limnologist Harald Sioli dedicated his studies, from the early 1940s, to investigate the physical, chemical and biological properties of Amazonian rivers. "According to Sioli, rivers are expressions of landscape, of a chain of reactions and relationships, a very complex mosaic of diverse Amazonian landscapes," the researcher enthusiastically explained.

This approach led Sioli to lead a team of scientists focused on these issues and to make important advances in the emerging field of tropical ecology, with a particular emphasis on water bodies. "Studying the waters of Brazil's Amazon not only allowed us to understand its

complex ecology, but also to identify the main transport routes for people and resources, as well as sources of local and national income" noted da Silva.

Towards the end of the 1960s, the dialogue between German and Brazilian researchers was formalized through cooperation agreements. The main institutions involved were represented by the Instituto Nacional de Pesquisas da Amazônia (INPA), created in 1952 in Brazil, and the prestigious Max Planck Institute for Limnology in Germany. This German-Brazilian cooperation was part of a broader effort within transnational epistemic networks to study the ecology of the Amazon, although it was not always balanced between the parties in terms of credit for research results or power to define the priorities of study topics.

### **The narrative of developmentalism: from the dictatorship to the present day**

During Brazil's military dictatorship (1964-1985), the Amazon experienced a major acceleration in terms of development, which severely threatened its tropical ecosystem. During this period, the government carried out the deforestation of vast areas of rainforest to implement large-scale infrastructure projects, such as the construction of transnational highways, hydroelectric power plants and huge agricultural plantations, as well as programs to encourage migration to the Amazon region. These initiatives, already devised in the pre-dictatorship period, were aimed at boosting the development of areas considered "backward" in the vast Amazonian territory <sup>[5]</sup>.

Da Silva pointed out, based on historiography on the subject, how in the advertising campaigns of the time there are references to the Amazon as a "green hell" or a "demographic vacuum" to be occupied and taken advantage of, ignoring the present socio-environmental existence. "The development narrative played a key role in the country's modernization policies and was legitimized by scientific authority," said the historian. "In fact, the ideological value of Amazonian developmentalism was so deeply rooted in Brazilian politics that it is still present today in the country's political doctrines, based on the notion of modernity and international development," he added.

Many scientists opposed the dictatorship, not only for political reasons, but also because of the ravages on the Amazon ecology. Especially from the 1970s onwards, researchers from transnational networks such as Sioli did not limit themselves to scientific study, but also vehemently criticized as activists the human impacts of the dictatorship that endangered the ecosystem. This epistemological shift made the Amazon an icon of the global environmental debate, in which it went from being a regional landscape subject to development imperatives to a fundamental site for global biodiversity conservation, water storage and climate regulation <sup>[6]</sup>.

The conclusion of the seminar was marked by a participatory audience discussion, which questioned the ecological globalization of the Amazon and the role of interdisciplinary and collaborative approaches to address the socio-environmental challenges facing this region. Da Silva's reflections, based on the analysis of the complex historical and scientific dynamics that have shaped the Brazilian Amazon in the 20th century, remind us of the importance of understanding the origin of these narratives in order to understand the epistemic and material dimensions that underpin our relationship with the environment and that have shaped our understanding of the Anthropocene.

**Júlia Orrit González**

Communication and Promotion Area

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