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SOUTHERN AND INDIGENOUS PERSPECTIVES ON INNOVATIONS AND
TECHNOLOGIES

**DIGITIZING THE AGRARIAN STRUGGLE: ARTIFICIAL INTELLIGENCE AND
THE MASSIFICATION OF AGROECOLOGY BY BRAZILIAN AGRARIAN
SOCIAL MOVEMENTS**

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Artificial Intelligence (AI) may be among the most disruptive forces to have emerged in recent generations. In rural contexts, AI applications, such as tools for disease prevention and farm management, are already contributing to the further intensification of industrial agriculture. This article asks whether there is space for agroecological family farming within current trajectories of AI development and deployment. Drawing on scholarship in critical agrarian studies, data studies, and digital geographies, the article examines the early implementation of the Artificial Intelligence for Agrarian Reform and Agroecology (IAARA) initiative, developed by the Landless Workers' Movement (MST) and the World March of Women, within a broader global articulation promoted by the International Organization for Popular Cooperation (BAOBAB). Seeking to challenge dominant models of AI governed by large technology corporations,

which have concentrated power and exacerbated inequalities in access to and control over digital infrastructures, IAARA aims to strengthen and democratize popular, traditional, and agroecological knowledges. Empirically, the research is based on semi-structured interviews with IAARA's technology developers and leaders of allied social movements, complemented by a critical analysis of the political–technological imaginaries that underpin the project. IAARA exemplifies how Brazilian social movements conceptualize digital technologies as a contested terrain. Although most AI technologies have been promoted and controlled by industrial agriculture, these movements also identify them as opportunities to upscale agroecology. Partnerships with Chinese developers and the formation of a collective of social movement AI theorists illustrate ongoing efforts to reduce dependency on Big Tech actors in the promotion and governance of these technologies.

Palavras-chave: agrarian social movement; agroecology; technological transition; artificial intelligence; iaara.