

Climate services in action

Exploring the articulations of food and climate policy regimes in Guatemala



Fig. 1: Local Technical Agro-climatic Committee in Guatemala City. Photo credit: LTAC-Centro, ANACAFE, 2022.

Done by	Harold Raul Bellanger Rodriguez
Student email	harold.bellanger.rodriguez@umontreal.ca
Supervisor	Nicole Gombay; Kevin Gould
Institution	Université de Montréal; Concordia University
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Abstract: Climate services (CS) are a modern tool that produces sub seasonal and seasonal climate forecast to inform policymakers and decision-makers on health, energy, disaster risk reduction and agriculture. Amidst climate change, food security has become one of the main areas of interest for the CS community. However, multidisciplinary studies have provided insight on the challenges of deploying CS in agriculture. Lately CS advocates have championed a participatory approach, coproduction of knowledge and innovation to make climate knowledge legible and transferable to users. This research provides a new perspective by focusing on the provision of CS in colonial and capitalist context, a topic generally neglected by the CS literature. Fieldwork done in Guatemala includes archival work, interviews with key actors and participatory observation in Local Technical Agro-climatic Committees (LTAC) and forums. The LTAC are a space of encounter where CS advocates transfer modern climate knowledge to potential users to provide agroclimatic advise. Fieldwork suggests that the production of locally relevant climate information in the LTAC occurs in a technical, apolitical, and historically decontextualized manner. Through a technical delivery of information, the LTAC become a space of contrasts between a discourse of inclusion and democratization of knowledge and a concealment of the neoliberal and colonial food system. An institutional analysis has evinced the institutional limitations in which government officials must learn to navigate while maintaining unstable and temporary working contracts.



Fig. 2: Local Technical Agro-climatic Committee participants. Photo credit: LTAC-Centro, ANACAFE, 2022.

Theoretical problem	Multi-disciplinary approaches have suggested that, to improve the implementation of CS in agriculture, research must consider a paradigm expansion that allow more systems of knowledge and placed based approaches to be taken into account (Beveridge et al., 2018). This research takes a step back from the local case studies of CS implementation and examines how national institutions implement CS.
Practical problem	This research examines how the Guatemalan national meteorological institution, the ministry of agriculture and the national secretary of food security and nutrition collaborate in the implementation of locally relevant CS. It questions the best scales of CS operation by examining how decisions are taken and how governmental officials and experts navigate through a capitalist and colonialist apparatus they are part of.
Research objectives	<ul style="list-style-type: none"> • Examine the components and the functioning of the Guatemalan food system and the Guatemalan climate institution. • Explore how and to what extent Guatemalan institutions and scientific communities involved in climate forecast and food security exert relations of power through knowledge. • Examine the potential effects that the development of CS in Guatemala has in shaping discourses of food security programs.

Theoretical background: Modern western climate knowledge in the form of CS promise development and improvement of farmers' livelihood (Edwards, 2006; Hewitt et al., 2012, 2013). The mechanisms and ways in which CS is implemented at community level has become an important challenge that demands a multi-disciplinary approach that includes a social science perspective. Work done in the past decade has focused on communication, trust, and building technical capacities (Haines, 2019; Taddei, 2012, 2013; Webber, 2019). This research draws on critical development studies (Ferguson, 1993; Li, 2007) to explore CS discourses of development and examine the effects that CS implementation has on food



security. It engages with institutions (Broome & Seabrooke, 2012; Douglas, 1986) and the ways in which government officials coordinate through ambiguous concepts and technical speech while neglecting the capitalist and colonialist systems of oppression in which the Guatemalan food system operates (Prado-Córdova, 2011).

Methodology: To analyze the implications that result from the relations between the climate infrastructure and the food system, this research demands a dynamic and flexible qualitative method capable of adjusting and allowing a dialogue between disciplines and theories (Woolley, 2009). In doing so, the fieldwork done throughout 2022 included the triangulation of archival work, semi-structured interviews with key actors, and participatory observation at forums, workshops and LTACs (see figure 1 and figure 2). Throughout this work, I first focused on identifying how discourses of CS and food security articulate in selected publications and grey literature of key institutions and governmental agencies (Gobierno de Guatemala, 2022; Navarro-Racines et al., 2020). Second, semi-structured interviews were used to reveal how the discourse materialized through the interactions and activities of governmental officials, academics, and private researchers involved in CS implementation. Third, I carried out participatory observation in the Guatemalan meteorological institution, SESAN and the ministry of agriculture as well as on various on-line forums.

Preliminary results	<ul style="list-style-type: none">• While the LTACs offer a space to integrate diverse voices, its potential to generate change is reduced because conversations with CS users are preconditioned/structured by the CS advocates.• LTAC's lack of legal recognition meant that the CS products did not carry legal weight. This meant that governmental institutions were 'liberated' from proactive involvement. In Other words, the government is self-regarded as a provider of information with limited responsibilities over its citizens.• The idea that (backwards) culture resists technical solutions diminishes the capacity of self-reflection from the government. For instance, government officials do not consider their logistical weaknesses or the history of repression.• The middleman (technicians and crop advisors) are mostly bottom tier government officials who have no power for decision-making and are also victims of a neoliberal state that hires most of them on temporal jobs.
Practical Implications	<p>It is vital to examine the middleman, that is to say, the government officials that deploy the CS. Their experience and struggles are key to understanding how they operationalize the CS discourse and navigate around structural limitations.</p> <p>The LTAC have great potential to generate change. It is important to review the way in which the LTAC generate a space for actors to communicate and be heard. Most importantly, to provide users and peasants with the set of tools to demand deeper, structural changes.</p>
Theoretical implications	<p>This research provides a new perspective to the CS community and CS advocates in general. It brings into discussion the potential effects that colonialism and capitalism in the food system have in the implementation of CS for food security. This approach will allow further questioning regarding scales of operation or the widely neglected food system, the food regime, and the colonial history.</p> <p>Existing technical studies of communication in CS have been inadequate to examine the structural challenges related to capitalist and colonial dynamics in which government officials and <i>técnicos</i> navigate on. This research shows how a wider perspective that focuses on the CS advocates, government officials and institutions, provides new questions and insights that otherwise would not be considered.</p>



References:

Beveridge, L., Whitfield, S., & Challinor, A. (2018). "Crop modelling: towards locally relevant and climate-informed adaptation." *Climate Change*, 147(3), 475-489.

Broome, A., & Seabrooke, L. (2012). "Seeing like an international organization." *New political economy* (Vol. 17, Issue1).

Edwards, P. (2006). "Meteorology as infrastructural globalism." *Osiris*, 21(1), 229-250.

Guzmán Böckler, C., & Herbert, J. (1970). *Guatemala: Una interpretación Histórico-social*. Editorial Cholsamaj.

Webber, S. (2019). "Putting climate services in contexts: advancing multi-disciplinary understandings. Introduction to the special issue." Springer.