

"Emergency Agriculture and Food Security"

*An International, Interdisciplinary KOSMOS Research Workshop
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Research Motivation and Interdisciplinarity

Despite the notable decline of food insecurity worldwide in the last decade, 795 million people remain undernourished, especially in emergency settings where the availability of and the access to nutritious food often continues to be a critical concern for victims of natural and human-made disasters.¹ The concept of food security is based on four intertwined dimensions: availability, access, use and quality. Addressing all four dimensions of food security for these victims remains a challenge for the international community and national governments in light of ineffective outcomes of food aid, particularly in protracted and complex humanitarian emergencies.² At the same time, displaced individuals resort to various survival and coping strategies such as cultivating vegetable gardens for self-sustenance.³ However, very little is known in either the natural or the behavioral sciences about the nature and the effectiveness of such basic agricultural survival strategies and their impact in reducing food insecurity, not just through provision of food but also through their nutritional and safe use.

Previous studies of food security at times disregarded the emergency characteristics of the agricultural system or failed to include a nuanced understanding of these (sometimes endogenous) processes in the analyses. Recent advances in conflict and disaster research have helped to understand how emergencies themselves are socio-economic systems which can be analyzed at both macro and micro levels.⁴ Hence rather than considering "emergency" to be a background of food insecurity, we are now better equipped to understand the detailed "emergency" system and its interactions with and relevance to both food security and the wider agricultural system working under emergency conditions.

¹FAO, IFAD and WFP. (2015). *The State of Food Insecurity in the World 2015*. Meeting the 2015 international hunger targets: taking stock of uneven progress. Rome, FAO.

²Alinovi, L., Hemrich, G., and Russo, L., (2008). *Beyond relief: food security in protracted crises*. Practical Action Publishing, 2008.

³Pingali, P., Alinovi, L. and Sutton, J. (2005). *Food security in complex emergencies: enhancing food system resilience*. *Disasters*, 29(S1): 5–24.

⁴Brück, T., Justino, P., Verwimp, P., Avdeenko A., and Tedesco, A., (2015). *Measuring Violent Conflict in Micro-Level Surveys: Current Practices and Methodological Challenges*. World Bank Research Observer, forthcoming. And: Justino, P., Brück, T., and Verwimp, P., eds. (2013). *A Micro-Level Perspective on the Dynamics of Conflict, Violence and Development*. Oxford University Press, Oxford.

There remain both system-wide knowledge gaps as well as research questions focusing on the role of individuals, groups and institutions in creating, shaping and overcoming food insecurity in emergencies. The reliance only on national measures of food availability during crises disregards crucial individual-level, socio-economic aspects relevant to understanding food security. These include but are not limited to: consumption, diet diversification, and measures of malnutrition. With the increasing availability of household and individual-level data sources in emergency settings, it is feasible to provide meaningful measures of food security, as well as to undertake rigorous interdisciplinary causal-effect approaches and analyses on food access, production, and intake.

This emerging literature builds on four more traditional fields, namely natural sciences (for its understanding of both plant sciences and human nutrition), agricultural sciences (emphasizing a system approach to man-nature interactions), development economics (with its recent emphasis on sound empirics and clean, causal identification of the drivers of human behavior), and the study of disasters (both in human geography and political and peace sciences). The focus of the new research field is on generating testable hypotheses and rigorous evidence, which further encourages the collaboration of quantitative social scientists and natural scientists. Without the combination of these perspectives, "Emergency Agriculture and Food Security" could not be understood in its entirety and possible policy responses would likely fail to overcome the challenges.

Aims and Research Questions

The proposed KOSMOS Workshop will bring together leading Berlin-based, German and international researchers working on various related aspects of this emerging field. They will pursue three related objectives:

1. To review recent findings and scientific progress (the "state of the art");
2. To identify and prioritize novel research questions (or "knowledge gaps"); and
3. To plan future research collaborations and joint proposals.

These objectives will be attained by reviewing a set of related research questions with short presentations and subsequent plenary discussions.

The overall research themes include:

1. Forms and representations of emergencies and fragile environments;
2. Drivers of food insecurity in emergencies and in fragile environments;
3. Agricultural practices in emergencies;
4. Consequences of food insecurity in emergencies and in fragile environments, especially at the individual level;
5. The role and impact of local and global policy actors for emergency agriculture and food security;
6. New and emerging data sources and indicators; and
7. Methods and techniques.