

## Livestock systems in urbanized environments: A review and synthesis of livestock system under land use dynamics in developing countries

The objective of this work is to identify the inter-linkages and assess the inter-plays of the “coupled systems” from resilience and adaptedness criteria focusing on livestock sector in urban environments within developing countries. Livestock contribute substantially to food security in developing countries, particularly to the poor and under-nourished groups. Livestock systems in developing countries are highly dynamic and characterized by rapid change. This is largely driven by rapidly increasing demand for livestock source food (LSF) in response to human population growth, income growth and urbanization. Over the next several decades, the pace of urbanization will accelerate and it is expected that by 2050, 70% of world’s population will be concentrated in metropolitan centers. On the other, the supply response of livestock systems will increasingly be affected by competition for natural resources, particularly land and water, competition between food and feed and by the need to operate in a carbon constrained economy. Several developing countries will therefore have to face significant adjustment pressures while poverty becomes increasingly urbanized, demand for urban LSF grows, and cities exert greater influence on peri-urban and rural livelihoods and environments. Accordingly, there is significant uncertainty about both how livestock systems might evolve to meet the increased demand for LSF and what the socioeconomic and environmental consequences of these changes will be.

The main contribution of the project is to provide a literature review and synthesis (list of priorities for future research) in regard to LSF and urban sprawl challenges in the developing country context. This work will augment the ongoing efforts aiming to address how urban systems co-evolve and how resilient they are when accounting for interplays with other related systems. Moreover, the planned work will provide a useful starting point for more general research on co-evolution of coupled urban-rural systems, and generate a deeper understanding of urbanization dynamics within the geographical context of the study. Furthermore, the translation of science obtained through this proposed project will be useful for the purpose of policy design.

Collaborating partners and institutes:

- The Arid Land Agricultural studies and Research Institute, Faculty of Agriculture, Ain Shams University Cairo, Egypt
- International Crops Research Institute for the Semi-Arid Tropics (ICRISAT )
- Swedish University of Agricultural Sciences

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