

SP11: Institutional Arrangements in Horticulture and Collective Action along the Value Chain

Project partners:

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I. Objectives

a. Overall aim and objectives of the sub-project

The **main objective** of this sub-project is to understand the formal and informal institutional arrangements that facilitate subsistence and commercial horticulture in East Africa and that secure the sustainability of the horticulture production in rural, peri-urban and urban areas. The objective is thus to add to the technical and economic research of the horticulture sector by analysing the institutional environment.

Specific objectives are:

- 1) To assess and compare the underlying institutional arrangements for land and water, considering inter-sectoral competition in urban/peri-urban environments.
- 2) To assess the impact of diverse institutional arrangements on the sustainability of horticulture in different East African regions.
- 3) To investigate the interaction of all involved stakeholders and to identify and analyse cooperative solutions enhancing the efficiency of the horticulture production along the value chain.

b. Relevance of sub-project to the objectives of the project (output)

Within all three value chains, sustainability will only be reached when institutional factors are taken into consideration as they define the set of possible actions. The institutional framework with its formal and informal rules determines what actors must, must not, may, can and cannot do (Commons 1934; Ostrom 2005) and is thus essential for improving the given production and marketing systems. Cooperative solutions, for example, are of special importance for small-scale producers of indigenous vegetables and the research will evaluate how collective action can increase the efficiency of indigenous vegetable production in accordance to each step in the value chain (**Output 2**). This sub-project provides an additional benefit to the already existing focus on institutional arrangements in **Output 3** as it places particular importance on informal rules and cooperation that facilitate or hinder the production, marketing and export. In urban and peri-urban areas, the (mainly informal) access to land and water is a relevant constraint for sustainable horticulture, as well as it can provide an opportunity especially for small-scale production. Thus, the sub-project provides tangible input to **Output 4**. The subproject also contributes to **Output 1** in several ways, but mainly as the research is conducted in a participatory manner and stakeholders are not only part of the research but also of the formulation of specific research questions as well as in the utilisation of the findings. **Output 5** focuses on different dimensions of sustainability with this sub-project contributing the necessary knowledge in regard to institutional factors. This project also contributes to **Output 6** with educating two African nationals as PhD researchers with all supervisors providing relevant teaching of theoretical and methodical knowledge.

c. Research and/or technical goals of the sub-project

African land tenure systems are very much diverse and characterised by often overlapping rights with multiple users using the natural resources for multiple uses. Likewise, water is used for different purposes by different people and although land and water are inseparably linked, the rights to those do not always coincide (Bruns/Meinzen-Dick 2000). However, both land and water are main input factors for horticulture and property rights on these resources play an essential role for horticulture production. One aim of this research is thus to analyse and compare different institutional solutions in different East African regions and their impact on horticulture production with an emphasis on the **formal and informal interplay**. Two main areas will be deeply investigated: the **water-land nexus** as well as the **inter-sectoral competition for land** that is found in urban and peri-urban areas. A third research goal is to understand **the role** of both formal and informal types **of cooperation** among producers (and other stakeholders), identifying how these cooperation can ensure against risks (e.g. environmental like climate change or fiscal like price fluctuations) and what factors might hinder participation in collective initiatives. One objective is to identify activities along the value chain where collective action can be an option to increase the overall efficiency and the sustainability.

II. State of knowledge

The East African Horticulture Sector is characterised by a high diversity of production systems, ranging from small-scale informal and formal producers or urban gardening to export-oriented crop culture on both small and large-scale rural farms (see for example Creemers 2002; Streiffeler 2002; Neven/Reardon 2004; Eaton/Meijerink/Bijman 2008). Likewise, the property rights schemes in East Africa are very much diverse, ranging from informal culture on peri-urban waste lands to contract farming on private lands (see for example Payne 2001; Creemers 2002; Mwangi/Meinzen-Dick 2009). Also, the cooperation among horticultural producers is diverse with different forms of collective action being it formal in Producers Organisations (POs) or informal like in community marketing initiatives where transport costs are shared (see for example Meinzen-Dick 2009).

Looking at this abundance of different ways of producing, consuming and marketing of horticulture produce in East Africa, it is important to understand the impacts different institutional arrangements have on the success of sustainable horticulture in the region. However, institutional factors in horticulture have been neglected in research and a systematic documentation and analysis still lacks sufficiency (Eaton/Meijerink/Bijman 2008). Further, the effects of cooperation on the efficiency and sustainability of activities along the value chain in horticulture have been neglected. In all three partner countries, the Horticulture sector is found on a different level of development. Kenya has been successful in promoting export horticulture and an increase in the number of supermarkets around the larger cities can be noticed (Neven and Reardon 2004). Ethiopia, on the other hand, has just started investing in export of horticulture produce (Eaton/Meijerink/Bijman 2008). At the same time, in all of these countries, the formal property regime for Horticulture production differs substantially. In Ethiopia, for example, is land a state owned resource, but leasing land for large-scale horticulture production is rather facilitated at least for domestic investors (Hallam 2009; Horne 2011). On the other hand, in Kenya, land is private property, but depending on the area, land might also be illegally encroached and cultivated with vegetables (Creemers 2002; Streiffeler 2002).

Besides the formal institutional environment (e.g. contract law), informal arrangements play an important role for economic development. Especially in poorer countries, formal arrangements might be rather weak (at least in terms of monitoring and sanctioning) and thereby informal rights and collective action become even more important. However, also the reasons for participating in collective action differ among, but also within the countries. Common property arrangements often spread the risks and serve as an insurance against environmental risks (Payne 2001; Mwangi/ Meinzen-Dick 2009). Nevertheless, in Tanzania, for example, cooperatives are rather unpopular due to negative experiences made by farmers earlier (Eaton/Meijering/Bijman 2008). Thus, it is important to identify not only formal and informal ways of cooperation, but also to understand the reasons for engaging or not engaging in cooperation. These might also differ depending on the stages of the value chain. In order to comprehensively understand the horticulture sector, its contribution to food security as well as to international export sector, it is essential to understand why certain arrangements to produce and market vegetables exist and how they are determined by the respective transaction (Hagedorn/Arzt/Peters 2002), the transaction costs, the characteristics of the production process and the supply chain (Eaton/Meijerink/Bijman 2008) as well as by the characteristics of the stakeholders and their cooperation. Further, it is important to understand how different arrangements influence the success of the horticulture effort and can thus sustainably support poorer farmers. The research conducted within this sub-project builds on to the already existing knowledge on the horticulture sector in Eastern Africa and provides a holistic analysis of the institutional environment of subsistence and export-oriented horticulture production in the region that is missing until today. This includes and analysis of the impacts of different institutional arrangements on the sustainability of horticulture production as well as the identification of the incentives and constraints for cooperation in the East African horticulture sector.

III. Detailed description of work plan

a. Planned activities and milestones

Activity	Milestone	Time frame	Responsible partner
I1: To assess the formal legal framework for Horticulture in the partner countries, focusing on land and water law	the underlying legislation for horticulture is understood	01/2013 - 06/2013	EU
I.2: To analyse the formal and informal institutional arrangements that govern natural resources, considering legal pluralism	the overall institutional framework is analysed and described	01/2013 - 12/2013	HUB
I3: To assess the impact of different institutional arrangements on the sustainability of horticulture, considering the different stages of the value chain	the impact of different institutions on the value chain is analysed and described	01/2014 - 7/2015	HUB
I4: To compare the identified institutional arrangements with regard to their impact on the sustainability across countries/regions and across respective activities according to the value chain	a cross-country analysis with regard to "successful" institutional arrangements is conducted	7/2015 - 4/2016	EU
I5: To understand the formal and informal types of cooperation between different stakeholders in the horticulture sector	collective action in the Horticulture Sector is understood	01/2014 - 12/2014	EU
I6: To assess and compare cooperative behaviour in the horticulture sector in the partner countries	the behaviour of different types of stakeholders along the value chain is assessed and described	01/2015 - 6/2016	EU
I7: To analyse the impact of different cooperative arrangements, considering especially the poor (who wins - who loses)	the importance of cooperative solutions for the poor is assessed and described	01/2015 - 12/2017	EU

IV. Utilization of results (Uptake)

The objective is to provide high value research that is of utilisation not only for the research community, but also for different actors in the East African context. In general, key stakeholders of this research are policy-makers and civil society organisations in the horticulture sector of the respective countries. More precisely, the findings are of special interest for farmers, farmers' cooperatives and producers' organisations (e.g. KENFAP). As the research will be conducted in a participatory manner, these stakeholders (groups) will also be able to define part of the research agenda themselves. Additionally, extension services as well as other (private) service providers (e.g. seed and farm input stockists) and the private sector with its associations (e.g. Fresh Produce Exporters Association of Kenya (FPEAK)), traders, contractors and market intermediaries will be benefiting from the findings provided by this sub-project.

An improved market access or enhanced horticulture practices will only be successful if the respective local situation is understood. Different solutions will be necessary for different contexts (e.g. countries) and for different transactions (e.g. production, marketing). Rather than expecting a single regulatory solution for the region, it is essential to look at the performance of each formal or informal rule and consider how those different rules can complement one another (Meinzen-Dick 2009). Summarising, incorporating institutional factors into the research determining the success and failure of horticulture, this sub-project contributes to an improved understanding of each of the three value chains (indigenous,

coordinated and urban/peri-urban) and thereby it contributes to a holistic understanding of the horticulture sector and its value chains.

V. Internal division of labour and cooperation with other subprojects/ third parties

Within this sub-project it is envisaged to employ one German Post-Doc researcher leading the sub-project. Her duties include not only the contribution to the research objectives and representing the sub-project but also documenting, reporting and presentation of the findings to the scientific community as well as to relevant stakeholders. Two African nationals will be employed as PhD students. One student will be employed during the years one to three, the second student will start his research in year three of the project. It is envisaged, that the students spend much time in the field as this is considered key for conducting their research on local levels. During these times, they will be hosted at Egerton University. Supervision of the students will be provided in close cooperation by the Division of Resource Economics at the Humboldt Universität zu Berlin as well as the researchers from the Department of Agriculture and Agri-Business Management at Egerton University. Participating in the PhD programme of Humboldt Universität zu Berlin, it is also supported that the PhD students spend a substantial amount of time at the German University in order to participate in relevant course work and to benefit from the research community at the Division of Resource Economics. Further, it is planned to apply for additional funding for e.g. travel to conferences and research stays in Germany and the partner countries respectively.