Going beyond "Add women and stir" in inclusive innovation processes: Facilitating participatory activities with pineapple chain actors in Uganda

K. Bitzan[1,2]; K. Tröger[1,3]; M.A. Lelea[1,3]; G. Kagoro-Rugunda[4]; B. Kaufmann[1,5]

[1] *German Institute for Tropical and Subtropical Agriculture (DITSL), Witzenhausen, Germany*
[2] *Vienna University of Economics and Business, Vienna, Austria,*
[3] *Agricultural and Biosystems Engineering, University of Kassel, Witzenhausen, Germany*
[4] *Mbarara University of Science and Technology, Mbarara, Uganda*
[5] *Social Ecology of Tropical and Subtropical Land-Use Systems, Institute of Agricultural Sciences in the Tropics (Hans-Ruthenberg-Institute), University of Hohenheim, Stuttgart, Germany*

Abstract
Transdisciplinary investigation of agricultural value chains can encourage innovation by bringing people together for knowledge integration and learning. The quality and result of the process is however dependent on how the diverse chain actors are identified, characterised and involved. Gender-sensitive approaches to innovation processes must go beyond mere rhetoric. Rather, inclusive innovation can be fostered when the gendered needs of women are considered in order to enable active involvement. This paper attempts to go beyond this, and shows how an iterative process containing a gender-sensitive stakeholder analysis can lay the foundation for facilitating inclusive innovation processes.

This paper presents research that is part of a transdisciplinary project to reduce post-harvest losses and improve livelihood benefits among primary actors in pineapple value chains in two different regions in Uganda. We introduce an iterative process including (i) actor identification and characterisation, (ii) establishing selection criteria and participation targets, (iii) identification of challenges and constraints for inclusion and (iv) design and implementation of multi-stakeholder processes, as well as integrated feedback and reflection on each step. In order to obtain the information needed, a multi-methods approach was used, comprising of semi-structured interviews, participatory group activities, and participant observation with actor groups along the chain in addition to multi-stakeholder meetings.

This paper describes the gendered composition of the different actor categories. A variety of constraints and challenges for participation were identified particularly for women, e.g. time constraints, lack of resources and intra-household power relations. With feedback and reflection, it was possible to develop context-specific strategies to circumvent certain challenges. However, in order to achieve the desired inclusiveness, balancing the needs of different chain actors requires constant vigilance. This paper concludes with lessons learnt while applying this iterative process with pineapple chain actors in Uganda.

1. Introduction

In transdisiciplinary research scientists collaborate with societal stakeholders, for instance through collaborative learning processes (Jahn et al., 2012; Lelea et al., 2014). As highlighted by Mayoux (1995), Agarwal (1997; 1998; 2001) and Cornwall (2003), participatory processes are not equally beneficial to those involved, and the quality of participation is dependent on how stakeholders are identified, selected and included in the process. Therefore, the needs and constraints of diverse stakeholders must be carefully considered to enhance inclusivity of participatory processes.

This research is conducted on pineapple value chains in Uganda in the frame of a transdisciplinary research project which seeks to reduce losses and add value in East-African food chains (RELOAD). We understand food value chains as purposeful human activity systems (Kaufmann et al., 2013), and aim to enhance systems understanding in order to foster innovation using multi-stakeholder processes.

This paper presents an iterative process on how to increase inclusivity of participatory activities that can promote systems learning among primary actors in the pineapple value chain. A gender-sensitive stakeholder analysis was conducted to prepare for multi-stakeholder meetings. The iterative process involves actor identification and characterisation, identification of targeted participants' challenges and constraints to participation, the process design and implementation of multi-stakeholder meetings. With each step, feedback and reflection allows for needed adjustments. As aspects of the cycle are repeated, action can be taken to increase inclusivity of activities alongside consideration of the researchers' own constraints. We present and discuss the lessons learned from facilitating this process in two value chains.

After a brief overview of the literature, the methodology is presented with background and the study area, along with an explanation of the data collection methods. Results are presented on actor identification and characterisation including constraints and challenges. These then inform strategies aiming to enhance inclusivity of multi-stakeholder processes. Finally, we reflect on lessons learned from application of this iterative process.

2. Literature Review

2.1 Learning and innovation processes
Transdisciplinary research can take the form of participatory processes for learning, whereby stakeholders share ideas and perceptions to capitalise on each other's knowledge and skills to co-create new knowledge. The facilitation of actor learning and reflection within a transdisciplinary research project "*may help actors challenge and redefine the very structures that hinder their progressing…*" (Loeber et al., 2007:97), leading to changes in understanding, perceptions and actions, which may allow for improvements of a particular problem situation (Kaufmann et al., 2013; Lang et al., 2012). Moreover, social learning can occur through dialogue and social interaction, and changes that arise may go beyond the learning of individuals but rather extend to wider communities of practice (Röling, 2002; Reed et al., 2010; Coudel et al., 2011). In this paper, the term 'collaborative learning' is used as the umbrella term to understand the process of bringing actors together for learning and developing new ways of doing things.

Challenging and redefining structures of behaviour and perception, can be considered as "innovation process", when these new insights are translated over time into innovation, which is the introduction of new things, ideas or ways of doing something. This interactive learning process occurs among people, e.g. actors in a value chain who are participants in a transdisciplinary research project. The agricultural innovation systems (AIS) approach associated with systems theory focuses on analysing complex relationships and innovation processes in agricultural systems (Clark, 2002).

The diversity of actors, institutions and processes involved in value chains emerge as complex systems and have associated challenges. These challenges, typically linked to a variety of actors, can be addressed by multi-stakeholder processes where actor groups come together and interact in collaborations such as meetings, trainings, interactive activities and field visits (Klerkx et al., 2012; Spielman et al., 2009). Commonly, intermediaries are involved

as facilitators, e.g. researchers who initiate multi-stakeholder processes (Röling, 2002). However, these processes are also context-specific and differ (Leeuwis & Pyburn, 2002), so that the real application of methods and steps must be tailored to the given context.

Drawing from learning and innovation literature, the design of the presented research ideally enhances actors' awareness and understanding of the relations between the activities and practices which shape the structure of the system they act in, and the resulting impacts and practices. The crucial assumption is that this awareness may encourage collaborative action and innovation for improved management, enhanced value creation and greater livelihood benefits.

2.2 Gender-inclusivity in participatory and innovation processes

Formalizing participatory innovation processes to improve livelihood benefits for actors requires awareness about their different levels of access to the process and, in turn, necessitates careful process design. Thus, it is important to understand actors' constraints and interests, and reflect on the target group, so that innovation processes do not create unintended negative side effects such as creating greater inequalities among actors. The responsibility of researchers to prevent exclusion in innovation processes is increasingly recognised and conceptualised as 'pro-poor innovation', 'grassroots innovation or 'inclusive innovation' (Cozzens & Sutz, 2014; George et al., 2014). 'Inclusive innovation', has been defined as the inclusion of groups who are currently marginalised within some aspect of innovation (Foster and Heeks 2013). The actors comprising marginalised groups however, vary according to the context and research focus, and also differ depending on the innovation process in question (Joseph, 2012). Typically, marginalised groups in innovation processes are those who face the greatest barriers to inclusion, such as women and those living in remote locations.

The exclusion of marginalised actors in participatory processes can occur outright regarding 'who does and does not' attend activities, and can also occur more subtly during the process itself (Agrawal, 1998; Cornwall, 2003). Studies have identified various constraints for actors, particularly women, to attend participatory processes. These include lack of knowledge, resources and skills (e.g. literacy levels) (Egunya & Reed, 2015); limited mobility to attend meetings and activities due to lack of transport means, safety, living in remote locations; needing permission from others (Mayoux, 1995; Chaudhury et al., 2012); time constraints due to high workloads or domestic chores (Mayoux, 1995; Cornwall, 2003; Agrawal, 1998; Chaudhury et al., 2012; Swaans et al., 2014; Egunya & Reed, 2015); and additional constraints related to roles and relations in society (Mayoux, 1995, Agrawal, 1997; 1998; Chaudhury et al., 2012). Furthermore, power imbalances between actors (Cornwall, 2003; Agarwal, 2015) and a lack of regard when voicing opinions (Agrawal, 1997; 1998; 2001) can restrict participants from fully engaging and benefiting from participatory activities, even when they are present.

The understanding that attendance in participatory activities does not automatically entail being fully engaged and benefitting from the process echoes a critique given to programs which only superficially address gender with empty rhetoric. Referring to the instances when women would be included in programs, jobs and meetings simply to fill gender quotas without adequate consideration of the context-specific differences between persons and the complex relations between women and men which are root causes of inequalities (Cornwall, 2003), Charlotte Bunch named this phenomenon '*Just add women and stir'* (Harding, 1995).

Kingiri (2013) draws upon this line of critique and provides direction on how gender can be integrated into thinking around innovation processes in agriculture, suggesting a shift from gender analysis to gender learning, which is defined as the way that *"new experiences and*

local context should inform the process of making agricultural innovations gender sensitive" (Kingiri, 2013: 538). Thus, this paper explores the beginning of a process which might be similar to gender learning, and provides an empirical example of how such innovation processes may be facilitated to become more gender-sensitive. A gender-sensitive stakeholder analysis sets the stage for the initiation of stakeholder processes, through identification, characterisation, and targeted selection of actors, as well as identifying gendered challenges and constraints for attending and participating during multi-stakeholder meetings. Feedback and experiences from setting up these innovation processes allow researchers to learn about the gendered system and subsequently inform, reform and reframe the methodology for subsequent multi-stakeholder processes to increase inclusivity.

3. Methodology

3.1 Background of the study
This paper is situated within a larger study that investigates post-harvest losses in pineapple value chains in Uganda. It aims at improved system understanding through learning and multi-stakeholder processes with primary chain actors[1]. Various participatory methods are used, focusing on bringing actors together for activities such as mental modelling and sharing perspectives. This larger study is on-going and is being carried out with several field stays in Uganda. This paper is based on experiences made during the second field stay between July and September 2015 and presents the approach and result of the initiation of innovation processes, including gender-sensitive stakeholder analysis.

3.2 Study area
Field research was conducted in Masaka district in the central region, and Ntungamo district in southwestern Uganda (see Figure1a and 1b). In both areas, pineapples are predominantly produced by smallholders, and traded fresh. Study areas differ in some social and environmental characteristics (see Table 1).
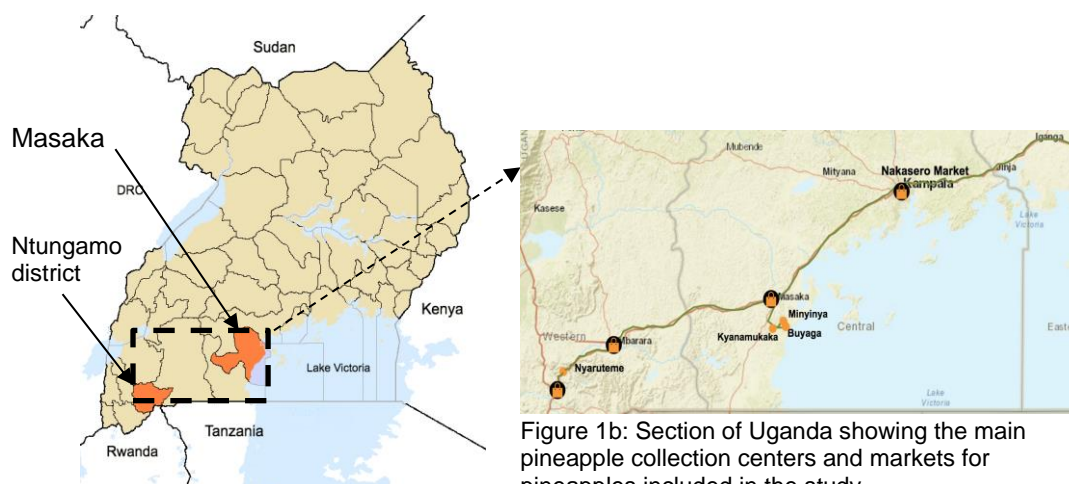

Figure 1a: Map of Uganda, marking study regions.

Figure 1b: Section of Uganda showing the main pineapple collection centers and markets for pineapples included in the study.

Table 1: Characteristics of study areas. Sources: *Field data,**UBOS (2009),***Rücker (2005)

District	Ntungamo	Masaka
Dominant ethnicity	Banyankole	Baganda
Mean annual rainfall**	Bimodal high rainfall >1200 mm/year	Biomodal high rainfall >1200mm/ year

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[1] Primary actors are understood in this paper to be actors whose income and business are dependent on the sale of pineapples. In contrast, supporting actors are understood as those who make an income working as wage labourers.

Elevation	1500m	1200m
Soil type***	Loam, clay loam	Loam, sandy loam
Primary crops grown*, **	beans, banana, coffee, sweet potato	beans, sweet potato, banana, cassava, coffee, maize
Distance to main markets (Figure 1b)	Ntungamo town (10km), Mbarara (80km), Rukungiri (40km), Kampala (350km)	Masaka town (30km), Kampala (150km), Nairobi (800km)
Main mode of transportation used in to transport pineapples*	Bicycles and motorcycles used from farms to Nyaruteme collection center; cars transport to markets (Ntungamo, Mbarara, Rukunjuri); trucks transport to Kampala.	Pick-up truck used from farm to collection centers; trucks from collection centers to Kampala and Nairobi. Motorcycles and cars used from farms to Masaka town markets.

3.3 Data collection and analysis methods

The fieldwork was carried out by two female researchers[2], each accompanied by one female field assistant who acted as translator, cultural broker and mediator (Caretta, 2014). The data used for this paper was collected in the frame of a gender-sensitive stakeholder analysis. This was then used to inform the facilitation of multi-stakeholder processes. A summary of the activities conducted within this multi-method approach and their gender distribution is depicted in Table 2.

Table 2: Summary of sessions and gendered participation in fieldwork activities

Activity	Session	Ntungamo		Masaka	
		N = male	N = female	N = male	N = female
Semi-structured interviews		14	8	13	15
Value chain mapping	1st	4	1	3	3
	2nd	2	3	-	-
	3rd	1	5	-	-
Daily activity clock	1st	3	1	x	-
	2nd	1	4	-	-
Group discussion	1st	1	4	0	15
	2nd	3	0	0	4
Multi-stakeholder meeting	1st	8	5	6	2
	2nd	6	4	6	3
	3rd	7	3	-	-

Researcher-practitioner socialisation and identification

Aiming for a broad representation, value chain actors were identified through purposeful snowball sampling and observations at locations where transactions within the value chain take place. The aim was to gain insights regarding which male and female actors are involved in the value chain and what diverse roles and functions they have. As formal organisational structures (e.g. groups and cooperatives) were not common in the study area, many individual relations between researchers and chain actors needed to be established. Researcher-practitioner socialisation occurred through informal discussions and engaging in practical value chain activities such as selling pineapples with local traders in Ntungamo, or digging and planting pineapples with farmers in Masaka. These activities built trust and raised interest in our participatory activities.

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[2] Authors Bitzan and Tröger

Semi-structured interviews (SSI)

In order to gain understanding about value chain functions, activities, challenges and constraints, chain actors were interviewed using semi-structured questionnaires (SSI). In light of the planned participatory group methods, focus was also given to gender-based constraints, challenges and differences. Additionally, respondents were asked about their interest and motivation in taking part in group activities, meeting other stakeholders, and collaborative learning. Narrative questions during interviews were used to gain an understanding of the complexity of the gendered actor landscape, and to identify possible entry points for collaborative learning processes.

Participant observation

Throughout the field stay, the researchers lived in or near the communities and spent time engaging with chain actors, their families and their activities, which provided opportunity for participant observation further validating responses. Notable observations and daily interactions between actors outside of interviews or group activities were recorded as field jottings (Emerson et al., 2011).

Participatory group activities

Group activities were first organised with chain actors belonging to the same actor group (e.g. farmers). This was done either by researchers or by asking chain actors to organise a group of people who would be interested in sharing knowledge and learning. Group activities aimed to contribute to gender-sensitive stakeholder analysis including actor identification and characterisation regarding function, activities, constraints and challenges in the chain. Further, group activities aimed to initiate the sharing of ideas, knowledge and perspectives towards systems learning. The methods employed were gendered value chain mapping, daily activity clock, and group discussions where dialogue was primarily on the topic of gender differences and inequalities.

Multi-stakeholder meetings

Informed by the interview responses and single group activities, innovation processes were initiated by bringing various chain actors together (e.g. farmers, traders and brokers) in the form of multi-stakeholder meetings and activities. The goal of the meetings was to develop a common understanding of the chain and its challenges and to work towards improving communication and collaboration among chain actors. To encourage learning, different participatory tools including cognitive mapping, problem/opportunity tree, card collection, ranking and role-play were applied. Moreover, team building exercises and games encouraged communication and trust-building among participants (e.g. Helium stick, and building a paper tower). Following multi-stakeholder processes, informal feedback discussions were held to help researchers identify points of improvement for continuing the process. Methodological adjustments occurred in the field according to the context-specific needs of chain actors.

Accounting for the situation, researchers made decisions on targeting specific chain actors to attend the multi-stakeholder meetings. These participants were selected according to several criteria, including their function, characteristics and interest in collaborating with others. Targeted participants were more closely considered when planning the logistics of multi-stakeholder processes regarding time and arrangement of activities so that they would be able to attend. The general research and facilitation approach is presented in Figure 2. The diagram depicts the iterative steps that can be involved in facilitating inclusive innovation processes.

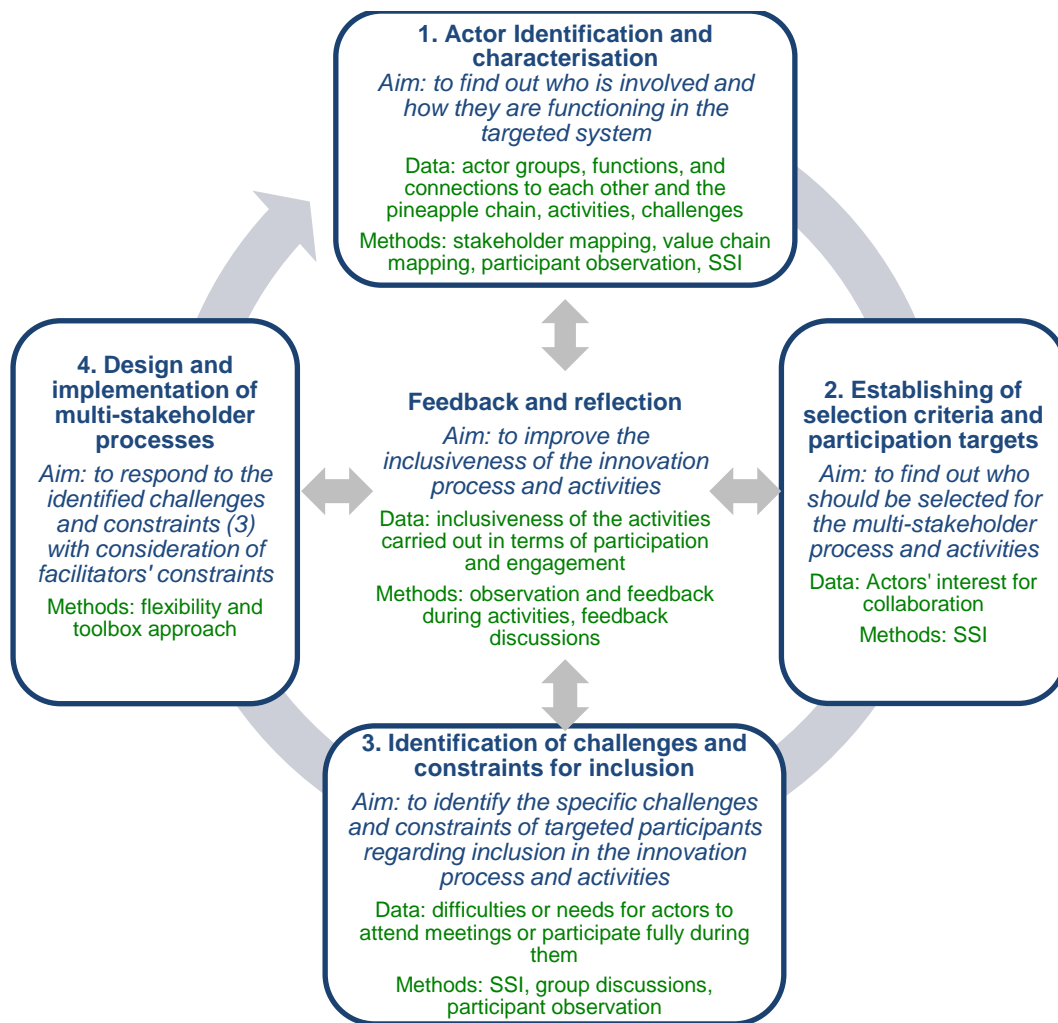**Iterative process of facilitating inclusive innovation processes:**

Figure 2: Diagram of steps to facilitate inclusive multi-stakeholder processes.

Data analysis

Interviews and group sessions were audio-recorded and subsequently transcribed and translated verbatim (Regmi et al., 2010) from the languages: Luganda and Ryankole into English. When audio recording or transcription was not possible or not desired by participants, detailed field notes in the form of jottings were taken (Emerson et al., 2011). Transcripts and field notes were analysed through thematic coding, using MAXQDA software for qualitative data analysis.

4. Results

Results are presented in this section according to the described steps for facilitating inclusive innovation processes in the methodology section (see Figure 2). At every step of the process, researchers had to remain flexible and adjust their plans for activities and meetings to take account of feedback from participants, and reflection from their and their field assistants' own observations. This feedback and reflection and associated adjustments to the process are noted under every step.

4.1 Step 1: Actor identification and characterisation

In each study area, participatory value chain mapping and responses from the semi-structured interviews provided insight into the structure of the value chains with regard to chain functions, the respective actor categories as well as their linkages and challenges. Figure 4 (Ntungamo) and Figure 5 (Masaka) show the gendered participation in actor categories along the value chain.
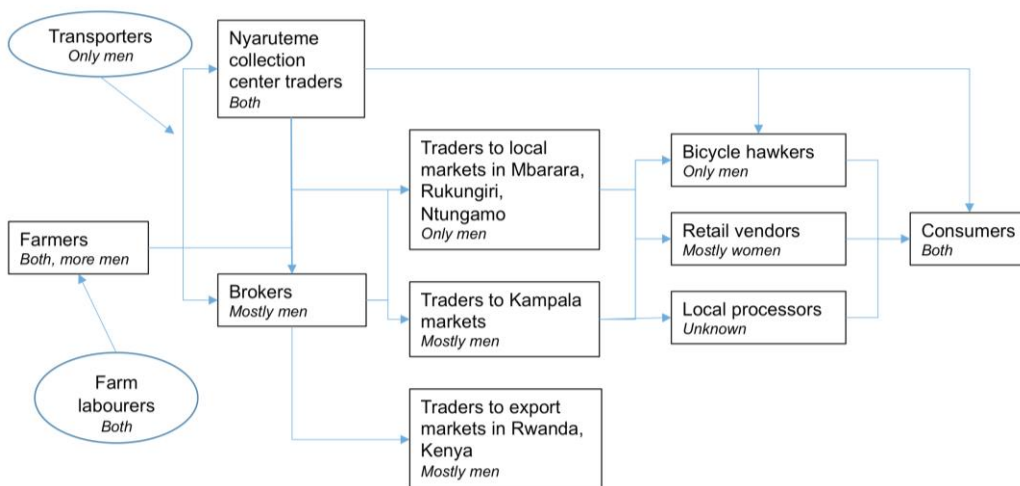
Figure 3: Value chain structure and gendered composition of actor categories in Ntungamo.
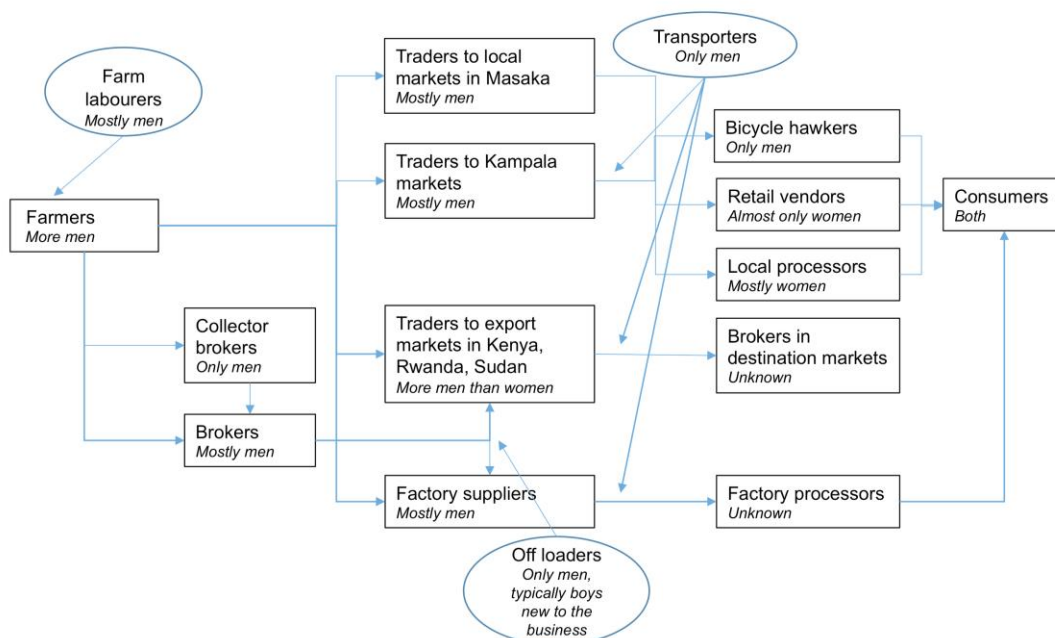

Figure 4: Value chain structure and gendered composition of actor categories in Masaka.

Data on gendered participation shows that there were fewer women present in some of the actor categories along the pineapple value chains. The majority of women involved act as pineapple farmers (Ntungamo and Masaka), local traders (Ntungamo), retail vendors (Ntungamo and Masaka) and local processors (Masaka). Some women were identified who acted as brokers and large traders (Masaka), while only men were identified in some primary actor categories such as brokers (Ntungamo), bicycle hawkers (Ntungamo and Masaka), and collector brokers (Masaka). These findings meant that for inclusive multi-stakeholder processes, it would be important to try and include women from those actor categories in which they were active.

4.2 Step 2: Establishing selection criteria and participation targets
For the selection of chain actors to participate in the meetings and activities, the following criteria were established. Targeted participants were primary actors from the pineapple value chains who (1) expressed interest in meeting other actors from the chain and in learning, (2) engaged in the pineapple business as their primary source of livelihood, (3) have experience

and knowledge about the business (i.e. were not new to it), and (4) represent a diversity in terms of gender, socioeconomic level, activities and location. Further, we also aimed to include those who normally have less opportunity to interact and share ideas (e.g. coming from remote locations). Through these criteria, we sought to bring willing and engaged people together who have relevant knowledge to share with one another and would benefit from system learning.

Some chain actors expressed interest to participate in multi-stakeholder meetings because they wanted to exchange with actors of their own actor category:

> "*I [would] talk with my fellow trader because theft of pineapples is on rise; there are some people who harvest unripe pineapples and then some have deserted the business because they are stolen pineapples. […] Another thing, as traders we need to have good moral over the farmers; and when there is some disagreement, then it becomes hard to manage" (*SSI, female trader, Masaka).

Or because they wanted to learn about other chain actors business and strategies:
> *"I would like to meet a broker, I would like to ask how he manages his job, the benefits that he gets and I also share with him how I benefit from the business as a farmer and a trader."* (SSI, female farmer trader, Ntungamo)

> "*I would love to meet brokers from other areas. […] When I meet them I would like to hear from their side how they fared during the season and how they are running their business. This way I would get their experiences such as boss fraud, non-payment and the likes"* (SSI, male collector broker, Masaka)

Participants were not limited only to those selected by the researchers. Meetings and activities were open and the invitation was extended to multiple individuals from each actor category. This allowed chain actors to self-select and choose to attend, as well as to bring friends who were interested in coming. Researchers made efforts to select chain actors to participate in multi-stakeholder meetings with whom they had built rapport and relationships (through researcher-practitioner socialisation), as these chain actors would also be familiar with the learning-based approach and collaborative goals of the research.

Finally, despite the efforts made, it was not always possible to include important or suggested practitioners into the entire process, and some chain actors chose to opt-out of the process. For example, those who generally had critical perceptions of group activities, expressed reluctance to participate. Urban market vendors who were invited to attend multi-stakeholder meetings were not interested to invest a significant period of their day to travel to rural areas where the meetings were held.

Feedback and Reflection
Reflection on and feedback from the first multi-stakeholder meeting in Ntungamo showed that there were significantly more farmers attending than traders, despite that the meeting was held at the Nyaruteme collection center where traders work. Furthermore, a village chief and a farmer's group leader who attended the meeting tended to dominate the discussion. Informal discussions after the meeting with individuals indicated that some did not feel they were able to speak openly during the discussions or disagree with certain points because of the hierarchical power relationships between participants. For subsequent meetings, researchers made sure to include a balance of actor categories.

Similarly, in Masaka individual feedback with a woman farmer who participated in the first multi-stakeholder meeting indicated that she perceived the meeting to have shortcomings in

terms of the balance of actor groups. She said that she felt inhibited when speaking because there were few farmers, and that if there had been 4-5 farmers she would have been more willing to talk to the traders in a better way. When the researchers asked if her discomfort speaking had anything to do with being a woman, she was clear that this was not the case.

4.3 Step 3: Identification of challenges and constraints for participation in multi-stakeholder processes

In this section, challenges, constraints and needs of targeted participants regarding their inclusion in multi-stakeholder processes are presented. They were identified during the interviews but also during group activities.

Time constraint

The gender-sensitive stakeholder analysis revealed particular time constraints for woman to directly participate in multi-stakeholder processes. Women actors have a high burden of household chores alongside activities in the pineapple value chain. Their schedules are very full:

> *"I wake up at 5:30 am then I wash clothes, light the charcoal stove, …then prepare breakfast around 6am; meanwhile as the breakfast is on the stove, I wash the utensils and clothes. After having breakfast… at around 8am I start work in the pineapple garden until 11am… I wash, and then come here [Nyaruteme collection center]. I can say that it take me about 30 minutes from the garden to home and also about 30 minutes to wash up; so that I can reach here at 12pm… I stay here selling until 6pm… when I leave, I have to do domestic work like washing utensils, clothes, and then prepare supper"* (daily activity clock, female farmer trader, Ntungamo).

Observations further showed that women respondents, particularly those with young children, found it difficult to take time off to give interviews and to join group activities. Often when they did agree to give interviews, they would need to multi-task—engaging in child-care, household or business work such as selling pineapples (Nyaruteme collection center; Masaka retail vendors) during the interviews. This daily activity clock data showed that women had greater time constraints discouraging attendance at multi-stakeholder meetings. They were often unable to take time off from productive and reproductive work. When participants were asked directly about their time constraints regarding meetings and group activities, they mentioned for example having to return home to cook for children during lunchtime (SSI, female local trader, Ntungamo), for the family in the evenings (daily activity clock, female local traders, Ntungamo) and having to know about meetings early enough to be able to free some time in their schedules and make arrangements to attend meetings (informal discussion, female farmer, Masaka). The time constraint facing women was most pronounced for the few women who were brokers and large traders (Masaka). These women had to manage household and business responsibilities and it was very difficult to schedule interviews with them.

Lack of transportation and communication resources

Some participants, primarily farmers who lived in remote locations mentioned challenges with mobility associated with the costs of hiring transportation, or otherwise having to spend a significant time walking to the locations where the meetings took place. Furthermore, researchers noted that some chain actors lived in areas with poor or no mobile phone reception or did not own mobile phones, creating challenges to communicate with researchers to be informed about meetings. For some women this was exacerbated, as some households also only owned one mobile phone, which was commonly in the husband's possession. The challenges of transportation and communication were most significant during periods of heavy rain, when researchers observed that some areas and homes were only accessible on foot due to bad roads and steep hills.

Intra-household power distribution

Discussions regarding gendered dimensions shed light on intra-household power relations, particularly in male-headed households. Women farmers in Masaka said they needed permission from their husbands to engage in group activities. Reasons they cited were: that men did not want their wives to be moving around alone; working with new people; getting involved in 'bad things'; or, making more money than them (group discussion, female farmers, Masaka). Additionally, one instance in Ntungamo showed that the husband of a female trader insisted that he attend rather than his wife.

Feedback and Reflection

In Ntungamo, a woman local trader who held an important role at the collection centre was never able to attend any of the meetings, due to several urgent family matters coming up and business to conduct. In Masaka, feedback from the second multi-stakeholder meeting indicated that a female broker had not participated but rather sent a trader colleague to represent her instead, as she suddenly had business activities to deal with and could not attend herself. Similarly, when asking other participants why they had not come despite agreeing to earlier, they cited reasons such as illness of children, business activities or urgent family matters.

In both places, meetings were often delayed and lengthened due to participants arriving late, or due to unexpected heavy rain (which halted activities held in venues with tin roofs as it was too loud), or other factors, such as when a snake was found in the collection centre, which interrupted and delayed the meeting. Researchers realised that unforeseen circumstances were very common and created challenges and constraints to attend meetings beyond those identified in the interviews.

4.4 Step 4: Design and implementation

The challenges and constraints to inclusion of chain actors required researchers to design and implement multi-stakeholder processes in a way to try and circumvent these barriers.

Attending meetings

To address the time constraint of participants, particularly women, meetings were scheduled as short blocks of time (e.g. 1,5 – 2 hours), at a times convenient for them, usually afternoons after they had finished working in the garden and preparing lunch for children. Meetings needed to conclude before dark to allow participants a safe return home and to allow women to have time to prepare supper for their families. Meetings were also planned to be open, allowing participants to join and leave at any time, as well as welcoming them to bring children. Meetings in Ntungamo were scheduled at Nyaruteme collection centre to be close to the local traders' work place, and in Masaka meetings were held in a local school in Mininya, a relatively central village close to many women pineapple farmers that had been identified.

To reduce transportation constraints for remote chain actors, transport costs were reimbursed by researchers, or motorcycle-taxis were hired to directly pick up participants and bring them to meetings. When prospective participants were identified who could not be reached by mobile phone, researchers would visit them directly or find ways to pass information to them through contact persons (e.g. neighbours, friends or group leaders) to inform them about activities. Further, participants were encouraged to bring friends who would have similar interests in the process.

Intra-household power relationships were more difficult to address, and required careful consideration of what to do depending on the specific context to avoid causing conflict or tension within households. Discussing the research and multi-stakeholder meetings with both

parties in a household was important in some cases where women may not have been allowed to attend without their husbands' permission. In these instances, the researchers invited both because they felt that otherwise the women would not have attended. In other cases, researchers directly addressed that they would like the participation of a certain individual.

Sharing information outside of meetings to increase inclusivity
To increase inclusivity, researchers sought to disseminate information outside of meetings. In Ntungamo for example, researchers talked to traders who did not attend meetings individually and in small groups. These discussions aimed to share topics discussed at multi-stakeholder meetings, and seek additional opinions on the content in less formal settings. For example, such conversations were used to check that the joint-problem identified at the multi-stakeholder meeting was also considered of high importance to traders who did not attend. Furthermore, chain actors were encouraged to send a representative to meetings if they could not attend themselves. At the last multi-stakeholder meeting held in Ntungamo, researchers facilitated the participants to nominate two contact persons; one to represent farmers, and the other traders, to continue communication when the researchers returned to Germany. Together, the researchers and the group agreed to nominate one woman and one man. Furthermore, feedback seminars conducted at the end of the field stay in both Ntungamo and Masaka aimed to disseminate the knowledge and discussions with the whole community. In Ntungamo, participants and the local community were invited to Nyaruteme collection center to view all the output from multi-stakeholder meetings and group activities and ask questions. In Masaka, researchers travelled to each village they had worked in and briefly displayed the visualizations from group work to share with the community, answer questions, and get feedback.

Inclusivity during meetings
Attempts were made to facilitate meetings in which all participating chain actors could have an equal opportunity to have their voice heard and their opinions considered.

In Ntungamo, the first multi-stakeholder meeting was set-up as a discussion round, where a representative from each actor category shared cognitive maps made during group activities and participants identified and discussed connecting factors which spanned several actor categories. This set-up aimed to share the knowledge gained during group activities with single actor categories, and to stimulate discussion on how actors' activities influence one another and their value chain.

In Masaka, during the first multi-stakeholder meeting, participants separated in two working groups, with each group consisting of farmers, brokers and traders, and then came together after one hour to share and discuss. One group used cognitive mapping to identify challenges which affected all chain actor categories. The other group used a problem tree to delineate the topic of trustworthiness, which was one of the topics mentioned often by women and men as something they would like to speak about.

Feedback and Reflection
Observations during multi-stakeholder meetings and feedback from participants after meetings suggest that subsequent meetings were more inclusive than the first meetings in both Ntungamo and Masaka. In the first multi-stakeholder meeting in Ntungamo, dialogue and exchange was dominated by men and also heavily led by two more powerful actors. Also, beginning the meeting by having participants share cognitive maps may have already put those participants who had not been involved in the mental modelling activities into the role oflisteners rather than equal participants to contribute to the discussion. In subsequent meetings, icebreaker games were used to enhance team building. Activities were structured

so that participants could each present and discuss their contributions either writing them on a card or contributing verbally when it was their turn helped to encourage more participants to share their ideas. Observations during the meetings showed that this led to more dialogue and exchange, as ideas and opinions were given from each participant and discussed, rather than participants simply responding to the statements made by a few.

In Masaka, a multi-stakeholder meeting contained a role-play in which participants acted out different chain functions than those they normally engage in. During the role-play, they demonstrated how the pineapple moves from farm to the market. A subsequent discussion about the role-play and connecting factors was set-up in a structured way, whereby each participant was given a turn to stand in front of the group and lead discussion about the influence of a particular factor (e.g. quality of pineapples) on other actors - farmers, brokers and traders - in either positive or negative ways. Positive feedback from chain actors about the meetings, as well as observations during the activities, showed that all participants were having fun, were engaged and actively sharing opinions. This performative method enabled more inclusive communication than methods focused on verbal interactions.

5. Lessons learned
Critical reflection based on feedback and observations during activities and meetings suggest that the strategies applied to increase inclusivity according to gendered needs were not consistently effective. However, attendance and quality of participation during meetings seemed to improve consecutively. This underlines the importance of an iterative repetition of the described steps when striving for inclusive innovation processes.

Lessons learned:
- It is particularly challenging to sufficiently account for and balance the different time constraints of targeted participants. Particularly, more consideration needs to be given to accommodate time constraints of women. Moreover, it is necessary to remain flexible and to identify alternative ways of planning and structuring meetings, for instance by including activities that account for late arrivals by participants, unforeseen circumstances and interruptions.
- Trying to bring multiple stakeholders together without considering power relationships reduced knowledge sharing and made it more difficult to facilitate and direct activities. As the level of confidence to interact and speak out at meetings varied and also depended on the level of familiarity with participatory methods and mutual trust among those gathered, it is suggested to consider the involvement of more powerful stakeholders at a later stage. This gives all participants a chance to get to know the process first, gain confidence and finally voice their opinions.
- Interactive activities such as icebreaker games or role-play that involve movement created an atmosphere conducive to team building and establishing trust. They were important in improving communication and creating a fun atmosphere, thereby encouraging participants to continue attending meetings.
- Suggesting that chain actors bring friends or colleagues who have similar motivation to learn and with whom they feel comfortable seemed to encourage more active participation in meetings.
- Having time and opportunity for ample socialisation between researchers and practitioners before initiating innovation and multi-stakeholder processes is important, especially to encourage women to join. Socialisation must also continue in between meetings, where researchers check in with participants through phone calls and visits to maintain a friendly, trustful relationship. In this regard, the cultural and political context of the study site as well as previous experiences that the targeted practitioners had with former projects needed to be taken into consideration.

- As the agreement and support of husbands played an important role for some of the women's attendance, it is equally important to find out about their specific influence and what can be done to improve their attitude towards the research in order to ease participation for women.

This study has faced many challenges in making participatory processes inclusive. We found that understanding the situation, including constraints and challenges of individuals within actor groups, is necessary to inform the design of participatory processes. Moreover, this study goes beyond mere discussion around the need for inclusiveness by documenting its application. We conclude that an iterative process is necessary because analysis of participants' constraints only at the beginning of a process is not sufficient. Ideally, steps are repeated to take into consideration feedback and reflection in order to make the whole process more inclusive. Finally, the experiences and lessons learned can further inform participatory processes by seeking inclusivity beyond simply "add women and stir".

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