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## A hard nut to crack

– a gender analysis of a community and a value chain in  
Indonesia

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## **Abstract**

In this master's thesis, I have investigated gender dynamics within a village called Batudulang on the Island of Sumbawa in Indonesia. It is qualitative research, based on observations, focus groups and semi-structured interviews. The villagers are practising agroforestry systems, where candlenut trees are one important crop for the preservation of nature as well as the villager's income. Many of the nodes in the value chain of candlenut are concentrated in this village and there are possibilities for development of processing technics so that the villagers can get more income from the nut. In terms of existing research, there are studies on the candlenut value chain from this area, but not with a gender focus. I have therefore concretized my gender analysis of the community with a gender analysis of the candlenut value chain. In order to get an understanding of how gender dynamics are created, I have used concepts of Gender system, Nature-culture division and Gender contract. Investigating gender dynamics in the community and in the value chain can be a base for further analysis of social change, where women can be targeted in order to increase decision power and access to resources. Access to resources, decision making agency and collective action are three empowerment factors that I have investigated in this thesis. I have found that there are some divisions between women and men in the candlenut value chain, but compared to many other studies on gender dynamics in value chains, women in this value chain tend to have more power and be involved in value-adding activities. In the community, I have highlighted where women have less access to resources and decision making agency, which is a general analysis of women's situation in order to understand how interventions can be gender sensitive. Some of these inequalities in access to resources and agency are affecting women's possibility to participate in and benefit from the candlenut value chain, while others are less visible.

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## **1. Introduction**

We were driving on a narrow road, which wound up between the mountains. Suddenly I could catch a glimpse of a village climbing up on the mountainside surrounded with dense vegetation. We stopped on the steep road that was passing through the village, in front of a house and a small grocery shop. The road was continuing to a village even further into the mountain landscape, but I stayed in the village called Batudulang. Batudulang is a village located on the island of Sumbawa, one of 17 508 islands in Indonesia. In this village the majority of the inhabitants are gaining income from agroforestry crops, such as coffee, fruits, timber and candlenut. Many of them are getting an important share of their income from the candlenut, which is an oil-rich nut used for cooking and cosmetics (Cunningham et al 2011). The World Agroforestry Centre has done research on how advances in the candlenut's production process can benefit the local actors (Muktasam, Efendy & Perdana 2016). Nevertheless, there has never been a gender-sensitive study done in this area analysing who is participating where and who benefits from the candlenut. In many value chains women are concentrated in the nodes where less value is created, such as production and retailing (Awona et al. 2002). They tend to have less access to resources and decision possibilities. Given the role of the candlenut as an important source of income for farmers as well as for labour and traders, it is highly relevant to investigate the gender dynamics in its value chain, since women and men tend to have different levels of participation and do not benefit equally (Andersson et al. 2016). I have used an analytical framework developed by the Netherlands Development Organisation, which focuses on gender-sensitive value chain research (Terrillon 2010). To evaluate the gender dynamics in a value chain, the first step is to find where women and men are situated in the different nodes and which roles they have. In order to understand why women and men participate differently, factors such as access to resources and control over resources are crucial to investigate. In my research I have first tried to understand women's access to resources and their agency in general, to understand women possibilities to be active outside of their household and run independent businesses. Then, I have tried to see where women participate in the candlenut value chain and if there can be improvements in the tasks directed to women.

My findings are divided into five chapters. First I present the current situation in the village, the candlenut production and all actors in the candlenut value chain. Second, I present and discuss the gendered division of tasks in the value chain. Third, I discuss women's access to resources and how this is affecting their possibilities to be active outside their household and engage in independent businesses. Fourth, I discuss women's decision making agency in the village and along the value chain and connected to collective action. Fifth, I analyse social change for women in the community and in the candlenut value chain.

## **1. 1 Aim and research questions**

I aim to study what gender dynamics there are in the village of Batudulang in general, and in the value chain of candlenut in specific.

I have three research questions:

- 1) What are the gender dynamics in the value chain of the candlenut? Who is involved where? What factors are influencing these gender dynamics?
- 2) How do gendered norms, roles and responsibilities affect women's possibilities to access resources and arenas of decision in the community?
- 3) How do gendered norms, roles and responsibilities affect women's opportunities to be active outside the household and in businesses?

## **2. Method**

### **2.1 Research approach**

I have used qualitative methods in my research since the focus has been to understand the dynamics between actors; power relations, norms, hierarchies and how they are created in social interactions (Creswell 2014 p. 185). I have used a case–study design with a focus on in-depth interviews and observations to understand the gender dynamics in general and specifically in the candlenut value chain bound to some defined places and contexts (Bryman 2012 p. 66).

My research has an inductive approach, starting from data collection, continuing with categorizing the material, analysing it and lastly, discussing generalizations guided by social theories (Creswell 2014 p. 66). I have investigated four nodes in a value chain; production, processing, collecting and trading. My data collection started in a village called Batudulang where they produce, process and retail the nuts to traders in Mataram. The study have been focusing on the village level and is complemented with information from other places, Sumbawa Besar, Pancordao and Mataram, along the value chain of candlenut. Together with the World Agroforestry Centre (ICRAF), we have chosen this village since contact was already established through previous projects. Further, because there was an interest from both me and the organisation to complement previous research on the candlenut value chain in the area with a gender perspective. Through existing research and initial information collected in the village, I have selected places and informants along the value chain. Discovering that the local village not only handled production but also processing and trading made it interesting to focus on the village level. Moreover, women's strong participation in production and processing made it relevant to deepen the research in these nodes. Therefore collected material is mostly coming from the village. This have had an effect on sample selection, in particular, the focus has been on gender dynamics between rural women and men and not on gender dynamics in an urban setting. I have used a feminist perspective in my theorisation, which provides an overall orientation and has pointed me to what issues are important to raise (Creswell 2014 p. 64). This theoretical perspective is also including the role of the researcher and how she/he is part of the research process, which I address below.

### **2.2 Data collection**

I have worked close to ICRAF and this has helped me to; first, get an understanding of the place. Second, it has introduced me to key informants that have directed me to other informants (Silverman 2015 f60). This collaboration has influenced my sampling of informants, especially the key informants, and is affecting what information I have gathered. They were all individuals that had either formal or informal legitimacy in the community. The key informants, suggested specific people for my interview in order for me to cover different groups in society. Besides, I sampled other individuals from the focus groups and in the village as a complement to the key informant's suggestions, in order to reduce their impact on the sampling of informants. In the village, I have interviewed farmers of different ages (women and men), collectors (women and men), processors (woman and men), and widowers



(woman and man). In the following value chain, I have interviewed traders and processors in Sumbawa (women), Pancordao (man) and Mataram (woman and man). To get complementary information I have talked to two civil servants, one in the nutrition agency and one in the forestry agency. All together I have interviewed 23 persons. The interviews were semi-structured, with prepared questions but with the flexibility to change depending on the answers (Silverman 2015 p.186). Sometimes I have interviewed one person at a time, but sometimes members of the family were joining the conversation. This was hard to prevent but can have an influence on the interviews since some issues are more difficult to express while having the husband, wife, children or neighbours listening. Interview questions have been developed with the guidance from, *Gender mainstreaming in value chain development*, an analytical framework created by the Netherlands development organisation (Terrillon 2010). This framework is developed as a gender mainstreaming tool for policy making, projects and programmes design, monitoring and implementation and planning at different levels. The framework raises four areas in which gender inequalities come forward; 1) Gender roles/equal opportunities/women's empowerment 2) Gendered differentiation in access to resources/rights 3) Gendered differentiation in control over benefits/leadership 4) Gendered differentiation in influence on enabling factors/mainstreaming. This four areas can be analysed through three different levels; Macro level (cultural, policy and regulatory environment), Meso level (delivering pro poor development services) Micro level (outreach and impacts at household level) (Ibid). There are question developed in the framework for each area and level, forming an analytical grid which can be used for context analysis. I have used this analytical grid as a help to cover important areas and levels in my analysis of the gender dynamics in the village and in the value chain.

During my fieldwork, I have done participatory observations where I interacted with the participants as well as passive observations without interactions (Creswell 2014 p.190). I have lived in the village for almost two weeks, in a family, and have spent all my time with the villagers. Through this, I could get an understanding of the social interactions between people. I also went with the villagers to their field to work with them; this allowed me to get some understanding of their reality. During most of the time in the village, I was accompanied by my translator, which was enabling me to do interactive observations. Even when I could not understand what they said I could capture people's feelings, humour, expressions etc. The body can be seen as a tool of observation, so-called "imaginative empathy" when we do not have the intellect to rely on (Hansen 2003). Being part of the community for some time allowed me to participate in some of their work and embody my observations.

I have done one focus group in the village with participants of the candlenut value chain. Focus groups can be used as a complement to interviews and deepen the understanding of intragroup relations (Bosco & Herman 2010). I have used it partly as a survey of what actors are represented in the value chain, their locations, where the value is created and where women and men are involved, as well as to observe the interaction between women and men in the village (Ibid). Moreover, how the participants talked about the actors, tasks and processes. The whole focus group lasted for three hours in total, with 20 participants, 14 women and 6 men. An official letter that my supervisor wrote invited them. The village

secretary was distributing the invitation to people involved in the production, processing and collecting of candlenuts. We aimed to have 50/50 women and men, but ended up with a female majority. The focus group discussion was divided into two sections, the first was conducted in the whole group with Aulia (my supervisor from ICRAF) and me as leaders. In the second session we have separated women and men, Aulia was leading the groups with men and Pratiwi (my translator) and me leading the groups of women. In the first session, the participants were asked to draw a map of the candlenut value chain with all actors and their activities, where women and men are most involved and where the value is added. During the mapping, Aulia had the role as a facilitator since he could understand what they discussed and interrupt with questions. Aulia was a skilled facilitator, trying to catch all participants' opinions. Men tend to take the leading role in the discussions even if they were less in number. Nevertheless, women were giving their point of view as well, but not taking the leading role if they were not asked to. To design the first part of the focus group discussion I took help from the analytical framework *Gender mainstreaming in value chain development* (Terrillon 2010 p.17-18). In the second session, we asked the participants to score what activities men and women usually are involved in. In this session, we could observe that more women were giving their opinions compared to the first part. The outcome of the ranking was in some categories quite different between the group of women and men. This tool is called *pepple game* and the guidance for this was found in a *User guide in gender analysis in agroforestry*, it is developed by researchers in ICRAF (ICRAF 2014).

Using these three methods allows me to triangulate the information and ensure the validity of the data (Creswell 2014 p.210).

### **2.3 Worth considering**

In general, the researcher's personal experiences and the research process in itself is affecting the research (Aull Davis 2007 p.5). What subject and which informants the researcher is selecting is highly influenced by his/her previous experience and disciplinary context (Ibid). Therefore my research cannot be seen as isolated from me as a researcher but interwoven with my experiences and knowledge from before. I am schooled as a western feminist and am critical about society and its inequalities. Being a white western, from the academia is having an influence on my research, as well as my gender and class belonging (Creswell 2014 p.64). While doing the field study I tried to listen and be open-minded, instead of raising my opinions. Even if it has not always been easy, I have through listening limited my personal opinions to have an impact on my material. Through theorisation of the empirical material, I have reduced my personal opinions. Nevertheless, just being a western scientist can limit the informant's possibilities to express their reality. Partly since they may have a preunderstanding what I want to hear, partly because of the power relations between scientist and informant (Creswell 2014 p. 64). To reduce the impact of power relations on my material, I have tried to be humble in all interactions and focus on being the one learning from them. Power relations diminished a bit since I lived with them and took part in their daily activities instead of coming there every day as a researcher to just conduct interviews or focus

groups (Creswell p 93). Nevertheless, participating in the life of my informants has mainly been positive and enabled us to build trust (Aull Davies 2007 p.8).

Being part of an organisation while conducting research can create a bridge between the researcher and participants. In my case the contact between ICRAF and informants seemed to be positive. An obstacle for me, being connected with the organisation, could be that informants hold on to information they think will not be good for their relation with the organisation. Sometimes I could understand that the informants had expectations on me to transfer their opinions to the organisation, which can create a problem for the future collaboration (Pripp 1999 p. 48-49f). To avoid this, I have tried to clarify that I did not have an operating role in the organisation. I presented myself and the objectives of my study, how the information is going to be used and assured that they will not be named in the text (Creswell p.93). I have instead used fictive names in the presentation of my empirical material. While doing research in a context where people have a different cultural horizon compared to the researcher, difficulties in interpreting the situation can emerge. My interpretations are based on experiences and knowledge from my cultural horizon (Katz 1996). I have tried to be conscious about this while drawing conclusions and triangulate the data to get a good understanding of the situation as well as confirming my interpretations with the informants. My translator was with me all the time during my time in the village and she interpreted, both hidden and double meaning in what people expressed. We usually had an open discussion about the interviews and observations. This averted many possible misunderstandings and helped me in my interpretations. On the other hand, her interpretations are based on her background. She is coming from another part of the Sumbawa where they do not have the same traditional language, she has a university education and is working in the university as a teacher. This can influence her interpretation, how people perceive her and what they chose to share. There are other issues while working with a translator that have to be considered. I was working with two professional translators during my fieldwork. Even if we understood each other and I am satisfied with the translation work, the issue of not understanding all details remains. This is affecting my material and analysis. Talking through the interviews afterwards and asking follow up questions to avoid misunderstandings has been a tool for me to reduce misleading data. The citations I use in the text are translated through my translator and are probably not giving the exact word of my informants. Furthermore, I as a researcher am involved in the social interactions that I am studying and become a part of constructing it (Aull Davies 2007 p.5).

### 3. Theory

#### 3.1 Feminist theory/gender theory

The dichotomy and hierarchy between women and men are important factors for how society is constructed, as well as in the gendered participation and benefits of the candlenut value chain. Construction of gender, in the society and in the specific value chain, is relevant for my empirical material since it is partly explaining when and how gender divisions and hierarchy is reproduced by both women and men together. To have Hirdman as a theoretical inspiration is therefore logical. I have chosen to complement theories of Hirdman with Ortner and her discussion of how dichotomies are created. In my empirical material, I could see how social perceptions of the physical body are a foundation for social interactions and attributes that both women and men are connected to.

Hirdman (1988) defines gender as a dynamic system, which is restricting people to certain kinds of actions and defines their possibilities. She states that the gender system is a base of all other domains in the society such as economy, social relations and politics. Hirdman (1988) claims that the object of feminist research is not the woman, but rather reality in which she is acting. Her definitions of gender are having strong influences from theories focused on structures (Norlander 2003). Two examples of this are; First, the logic of dichotomy and separation of women and men. Second, the logic of hierarchy where the man is superior (patriarchy). These two patterns are legitimising each other; the superiority of men and subordination of women can only be maintained through the segregation of women and men. The “law” of separation is everywhere, physical (places), tasks and psychology (characteristics). It is creating meaning while structuring the world into categories, but it is also creating power relations between the two oppositions (Hirdman 1988). Both Groz (1993) and Ortner (1974) are arguing for the importance to understand why women and men are categorised differently. Groz (1993) argues that there are different binary categories that are created to organize the world, like nature and culture, body and mind, self and other, reason and passion. These binaries are connected to a hierarchy where the symbols of masculinity are privileged (Groz 1993). Ortner (1974) is deepening the discussion about women's connection to nature and men's connection to culture. Culture is seen as superior over nature since the creation of culture is through control over nature. Why women are seen as connected to nature is partly because of their physical body, with a closer connection to reproduction and the physical constraints connected to that, like child caring, menstruation, and breastfeeding. The social construction of a women's body as being connected to nature is placing her in social situations that are considered further away from culture, like the domestic sphere. In the next step, her social situation is determining what psychological attributes are connected to her. She is considered as thinking in a subjective and practical sphere compared to men being more in the objective and abstract sphere. Why men are connected to culture is because they have the possibility to be creative outside the reproductive sphere, and then artificially through technology and symbols (ibid). In conclusion, the attributes of women being caring and practical is based on their social situation in the domestic sphere which is based on the perceptions of her physical body as closer to nature. I argue that this culture- nature division can be seen in an Indonesian modern

society where men usually are related to politics and religious institutions and women are related to reproductive activities.

Categories of women and men are attached to both institutional and interactional level. This connection is legitimizing the separation of roles since it is reproduced through people's interaction and embedded in the institutional frame (Dolan 2001). Social control is embedded in both the institutional and interactional level and is influencing the reproduction of gender relations. In order to avoid sanction from the community women and men are acting within the current norms (Ibid). In my material I have seen that patrilineal and patrilocal structures are having an important impact on women's access to resources and decision making. I could see a tendency that women are moving from other places to their husbands in the village and through that their possibilities to speak up becomes limited, but I do not have enough material to conclude that the community in its whole is patrilocal. What I more easily can conclude is that the patrilineal structures are limiting women to get access to resources such as land.

*Gender contract* is a concept developed by Hirdman (1988). This contract is a way of understanding why and how both women and men support the gender system. They are represented in different levels; in the cultural level with illusions about the idealised woman and man; in institutional level and in the individual level. It consists of conceptions about how women and men should interact. In working task division; what tools should be used by whom. In language; what words they can use and how they can talk. In appearance; what clothes to wear. It is an expression of the dependence between women and men and how the individual is acting in the system and reproduces it. One has to understand the contract as a way of creating meaning and organising reality; as a way of avoiding conflicts in the private sphere through defining men and women's different domains. The domain of politics, for example, is connected to men. Inside the limitations of the gender contract, women can operate power in their domains, such as the domestic sphere. Nevertheless, the difference of power in the contract is important to recognize. It is usually not a contract in the meaning of a bargained agreement between two parts, but more of a one-sided decision, which is making the power uneven (Hirdman 1988).

### **3.2 Empowerment**

Kabeer (1999) is discussing empowerment, through access to resources and agency. Through this approach, the concept of empowerment becomes relevant for my empirical material. Factors of women's opportunities to be active outside of the household are affected by their access to resources and their decision making agency. Kabeer (1999) is also stressing the importance of collective action while empowering women, which can highlight important factors in my material.

Empowerment can be seen as both a theoretical and analytical framework, but one overlapping definition is that empowerment is about change (Turner & Maschi 2015). According to Kabeer (1999) being empowered is a process of change for someone that is disempowered, it is about the ability to choose and thereby the possibility to have different alternatives to choose between. Empowerment is part of the feminist theory where it is used

as a concept to analyse how to increase power for marginalized individuals and groups. The focus is on increasing personal, interpersonal and political power so that the marginalized can take action together for a change. It is a process where the oppression is identified in order to increase awareness and consciousness about the issue (Turner & Maschi 2015). Summerson Carr (2003) is writing about empowerment as an on-going circle instead of a linear process,

*“the cyclical nature of empowerment ensures that this position shifts as people move through the empowerment process, gaining psychological power through conscientization and political power through engagement in social action and the resulting change” (Evans 1992 in Summerson Carr 2003).*

To understand empowerment one has to define powerlessness in the first place. Powerlessness is partly about lacking resources and material things, as well as the lack of self-esteem. This lack is deriving from experiences of repeated oppression and the absence of support (Summerson Carr 2003, Turner & Maschi 2015). Powerlessness can be seen as a result of institutional and structural sexism (Summerson Carr 2003).

To measure empowerment, three factors have to be investigated according to Kabeer (1999), resources, agency and achievement. In my thesis, I will focus on resources and agency. Ribot and Peluso (2003) are defining access to resources as “the ability to benefit from things-including material objects, persons, institutions and symbols”. They write that access is a dynamic process that is changing with time and differences in the political-economic environment. They define access as an ability rather than a right, the ability to benefit from resources. Access is partly about the right to own property officially, but access is also determined through mechanisms, processes and social relations that are giving the ability to benefit from the resources (Ribot & Peluso 2003). It means that even if a person officially has the right to a resource, norms or unwritten rules can prevent him/her to benefit from the resource. Doing an access analysis can identify why and for what reasons some groups of people can benefit from a resource while others cannot. Ribot and Peluso (2003) argue that the mechanisms of access are; right-based access and structural and relational mechanisms of access. Right based access can be when someone officially owns the resources. Structural and relational access is developed through the political-economic and cultural constraints for a specific context. Even if my focus will be on the social and cultural aspects of access, I do not diminish the influences of *de facto* ownership for the ability to act independently in the household or community (Kabeer 1999). Kabeer (1999) writes that the outcome of access is shown if more access is increasing agency and achievements. Agency is human action and being a human is being an agent (Giddens 1984). According to Giddens (1984), agency and structure cannot be analysed separately. He is arguing that people are not completely free to act independently, since we are embedded in the structures, nevertheless people are agents that are reproducing the structure as well as acting for social change. He writes that people have control over their actions, but cannot assess the larger consequences following their actions (Ibid). In my thesis, the focus is on decision-making-agency at the household level and in community level. Kabeer writes

*“Few cultures operate with starkly dichotomous distributions of power with men making all the decisions and women making none. More commonly we find a hierarchy of decision-making responsibilities recognized by the family and community, which reserves certain key areas of decision-making for men in their capacity as household heads while assigning others to women in their capacity as mothers, wives, daughters and so on” (Kabeer 1999 p.).*

It is therefore common that women are deciding over household related consumption compared to men dealing with bigger expenditures such as the school for children and investment in businesses (Kabeer 1999). In my thesis, I will use the concept of empowerment based on how structures can be changed and how individuals are acting inside the frames of structures. Having the freedom to choose between different opportunities, described by Kabeer (1999), is therefore not connected to the individual but to the group of women.

In the analytical framework that I have used (Terrillon 2010), she utilises the concept of *control over resources*. I have chosen to replace this with the agency since it is more suitable for my research. Control over resources is a concept related to the exclusive possibility to utilise a resource, which is not what I am searching for.

Collective action and solidarity among women is a way to challenge gendered norms and oppression. Women sharing experiences and formulating common goals can enable a change in the community towards more collective power. It can take away the isolation of women connected to household and family (Sweetman 2013). Individuals that are affected by socio-economic factors in the society can be powerless while taking action. Collective action can then create self-esteem and a feeling of "we can" (Kabeer 2003). To build a collective identity through collective action can contribute to women's freedom to move and act outside of the structural norms. Moreover, it can create an awareness of their situation and reflect on it (Kabeer 1999). Both of these are important empowerment factors and will be analysed in this thesis.

## 4. Literature review

Value chains are shown to have gendered divisions of responsibilities. There is a tendency that women are involved in less valuable nodes, while men are in charge of more income-generating nodes such as large scale trading. There is also a difference in what kind of value chain women and men are predominantly involved in. Women tend to participate within value chains of subsistent crops, compared to men being involved in more valuable cash crop chains (Andersson et al. 2016). Therefore it is interesting to investigate if the candlenut value chain is different, or follows similar patterns. It is especially interesting since the collection of wild products such as nuts is usually performed by women, moreover the trading with agroforestry products is dominated by women (Shackleton 2011, Catacutan & Naz 2015). Will this connection be seen in other studies, allowing women to benefit from the candlenut even if it is a cash crop? Will there be a difference since the nut is not wild, but cultivated?

To analyse gender dynamics in a value chain it is interesting to look at both vertical and horizontal relations between actors, even if they in many cases are interwoven and hard to separate. Horizontal relations can be understood as the relations between people involved at the same level, for example between producers. Vertical relations are happening between different nodes of the value chain, such as producer and collector (Coles & Mitchell 2010). One other dimension that Coles and Mitchell (2010) mention are the different levels that are influencing women's opportunities to participate in and benefit from the crop. They separate the household level and the value chain level. In the household, participation dynamics are created through bargaining, decision-making and division of tasks. At value chain level participation can be gained through access to chain functions, services and resources (ibid.). These two levels are influencing each other and are therefore sometimes hard to distinguish. Related to this, earlier studies show that one influencing factor of women's possibility to benefit is their responsibility for domestic work, which is limiting their time in the productive sphere as well as their flexibility. From one study on shea butter, women are involved in supplementary and complementary income generating activities; as compared to men being more involved in primary income activities with non-timber forest products (NTFP) (Shackleton et al. 2011). Shackleton et al. (2011 p. 138) writes

*“In many NTFP value chains both men and women may be involved, either independently at different stages or together for certain functions (Schreckenber and Marshall 2006), but in many such cases women may be subordinate to men or may carry out activities that have limited visibility”.*

One study from Cameroon shows that women have responsibility for harvesting and dominate the retail sector, compared to men having responsibility for the wholesale trading (Awona et al. 2002). Wholesale trading includes a lot of travelling time and requires flexibility, therefore women tend to have difficulties to access this sector because of household duties (Kanmegne et al 2007). In the Congo, women are also dominating the retailing sector. They say that retailing gives them an opportunity to stay close to the house, that it is less physical labour and that they do not need to travel far (Ingram et al. 2014). In a literature study on agroforestry value chains, in all cases, women tend to have responsibility for smaller business compared to men. Reasons for this were seen to be household responsibilities, distance to



trading sites, social perceptions, access to capital and literacy level (Ingram et al. 2015). Women tend to have lower access to resources compared to men, education, land, credit and technology are some of them (Kiptot 2015, Coles and Mitschell 2010). The increase in women's income is shown in the literature to have a greater influence on the well-being of the whole family compared to increases in men's income. When women are involved in trading nodes, they tend to have more control over money and how it is spent (Ingram et al. 2015).

To integrate both productive and reproductive responsibilities in the value chain analysis are essential to fully understand the gender dynamics.

*"Households are important in the feminist analysis because they organize a large part of women's domestic/ reproductive labour. As a result, both the composition and organization of households have a direct impact on women's lives, and in particular on their ability to gain access to resources, to labour and to incomes." (Moore 1988, p. 55 cited in Kabeer 1991, p. 6)*

I have focused on getting a general understanding of factors that can influence women's participation in and benefits from agriculture value chains. This is because I want to highlight possible obstacles for women wanting to participate actively in decision making influencing the value chain and in production, processing and marketing of a crop. This is relevant for ICRAF wanting a gender approach to their development work within the village, for the candlenut as well as other agroforestry crops. It is also relevant as a complement to previous base-line research in the area, with the deeper analysis of what factors are influencing women's opportunities to be active outside the household and to be involved in businesses.

## 5. Background

Indonesia is an archipelago country with 17 508 islands. The diversity of culture, languages and traditions is very high. Indonesia is one of the biggest Islamic countries, with 90 % of the population being Muslims (OECD 2016). It is a country that has been changing drastically during recent years and is reaching goals (such as MDGs) towards poverty reduction, increased access to primary education and eradication of some diseases. Nevertheless, income inequalities are high and programmes towards better education and food security are not well targeted (OECD 2016). Poor infrastructure is one major constraint in Indonesia, especially in water treatment and transportation. Environmental degradation, mostly related to the unsustainable use of natural resources and land is a big issue for the country (Ibid). In 2001 and 2005 the government promoted decentralisation, where local governments got more autonomy in questions like natural resource management, public services and regulations of businesses (OECD 2016). Although decentralisation theoretically would lead to better understanding of the special needs of a place, the outcomes of this reform are not as expected (Ibid). The differences in GDP per capita are varying a lot between the provinces (OECD 2016). With higher independence in each sub-national government, the differences in each region are highly interesting and important to consider. The province, where I have done my research, Nusa Tenggara Barat is one of the poorest provinces in the country (Perdana et al. 2016).

The governmental administrations are divided into different levels; Unitary state, Province, Regency/City, Sub-district, Village and Sub-village. Provinces, district and cities have their own local governments (Prasertiamartati 2013). There are governmental offices based in the province and districts, so-called agencies that are responsible for different ministry programs, such as forest, agriculture and nutrition (Ibid.). In 2010 the agricultural sector accounted for 15 per cent of the national GDP. The sector employs 42 per cent of the population in 2011 (Riyondoko et al. 2016).



Figure 1. Indonesia with two arrows pointing out the islands of Lombok and Sumbawa, modified by me, source: <https://maps-indonesia.com/indonesia-map-black-and-white>

I have followed the value chain of candlenut, from a small village called Batudulang located on the island of Sumbawa, continuing to Sumbawa Besar (great Sumbawa) and Pancordao and Mataram in the island of Lombok. Both islands form the province of Nusa Tenggara Barat. Batudulang is located in the district of Sumbawa Barat and in the sub-district of Batulanteh close to the district government in Sumbawa Besar (17 kilometres) (Riyondoko et al. 2016). Batudulang is one of six villages in the sub-district of Batulanteh and located in the mountains. The sub-district covers an area of 39 140 ha and has a population of 10 333 persons (Ibid). A high percentage (48, 6 %) of the inhabitants of Batudulang are working on their own rain-fed agriculture land where they have a mix of crops. Farmland or gardens where they grow vegetables, medicinal plants and rice are usually intercropped with candlenut trees, teak trees, coffee bushes and fruit trees. Collection of wild honey from the forest is also an important income source for the villagers (Riyondoko et al. 2016). In 2014 the Nusa Tenggara islands and Bali were producing the highest amount, 7.11 thousand tons (79.87%) of candlenuts in whole Indonesia, followed by Borneo Island, 1.79 thousand tons (20.11 %) (BPS 2014)

My research is conducted with the World Agroforestry Centre (ICRAF) and is part of a research project called ‘Developing and promoting market-based agroforestry options and integrated landscape management for smallholder forestry in Indonesia’ (KANOPPI 2). It started in April 2017 and is planned until June 2021. It is a continuation of the previous project initiated in 2014 called KANOPPI 1 (ICRAF 1). This research project is initiated by ICRAF and partners; the Forest and Environment Research, Development and Innovation Agency, Ministry of Environment and Forestry (FOERDIA); the Centre for International Forestry Research (CIFOR); the University of Western Australia (UWA); the World Wildlife Fund (WWF) Indonesia; Universitas Mataram; Threads of Life; and the Farm Forestry Consortium (FFC). ICRAF is a centre of research working with the guidance from CGIAR, the global research partnership organisation for food-secure future (homepage). The aim of the project is to improve smallholders *“livelihoods through the landscape-scale management of the farm–forest interface with a focus on scaling up the adoption of improved production practices and value chains for timber and NTFPs (non-timber forest products)”* (Perdana et al. 2016). It is closely connected to the Government of Indonesia’s strategic priorities; to increase returns from agroforestry NTFPs, improving value chains and improving sustainable forest management for environmental purposes (Ibid). The project has a specific focus on gender and empowerment of women through identifying management practices, processing and market opportunities. There have not been any gender integrating studies in the value chain of candlenut and in the village of Batudulang, which is one of the sites involved in Kanoppi 1 and 2. My study will complement the baseline study made in Batudulang and on the candlenut value chain starting from this village, with a gender perspective in order to facilitate further interventions within the Kanoppi 2 project.

Agroforestry is a natural resource management system where trees are integrated into agriculture production to sustain and increase socio-economic and environmental benefits for both producers and the society as a whole (Gebrehiwot Sahilu 2017). Agroforestry is considered to be an important key to produce food in an environmentally sustainable way. A

well-managed system can produce a lot of food, both for daily intake and cash crops. It also provides ecosystem services such as water management, the resistance of soil erosion, maintain and improve soil fertility etc. In tropic and temperate regions, the practices have been used for thousand years (ibid). ICRAF Indonesia is working with the improvement of these systems, through research and activities in different regions. One of their aims is to spread knowledge about processing and marketing in order for the farmers to get higher profit from their crops, mostly NTFPs. In this, my research can contribute to a higher awareness of what impacts an agroforestry product, such as candlenut, has on women's and men's livelihoods and how future project implementations can be directed with a gender-sensitive approach. My thesis is related to the Sustainable Development Goals (SDGs) number 5, *achieve gender equality and empower all women and girls* (UN 2018).

The government of Indonesia issued gender mainstreaming decree in 2000 to reduce the existing gender gaps. The purpose was to facilitate policies regarding women's access to fundamental resources such as education, health, employment and social insurance (Surbakti & Devasahayam 2015). Gender gaps are decreasing, but still present in employment and decision-making processes in legislative agencies. Women are also still lagging behind in the reproductive health sector and empowerment. Things are changing but slowly (Ibid.). Family planning programs have been efficient and decreased the birth-rate in the period 1971-2000 from 5, 6 children per women to 2, 3 children per women, which has freed women to take part in productive work (Surbakti & Devasahayam 2015). In the whole country, women's access to education at all levels have increased, but there are provincial differences. Statistics from 2017 show that 14,25% of rural women over the age of 10 years in the province of Nusa Tenggara Barat have never attended school compared to 8,10% of men (BPS 2018). A change can be seen each year, in that both women and men are attending school to a higher extent now compared to 2009. For women, the percentage increase is higher, as compared to men (Ibid).

## 6. Gender, agroforestry and candlenut (kemiri)

I have investigated the division of tasks between men and women in different nodes of the value chain, in order to understand how gender roles and responsibilities are affecting women's participation in the value chain and if they benefit from the candlenut. In this chapter I will present; the production practices and use of candlenut; the candlenut value chain with all actors and how they are interlinked. Further down, in chapter 7. *Gendered tasks*, I continue the discussion about gendered divisions of tasks.

While looking out over the forest covering the mountains I saw a green mass of vegetation, until Pak Hamzah told me that what I saw was mostly candlenut trees. He explained how to recognize the tree and I was amazed that the forest mainly consists of candlenut trees.

Farmers in Batudulang are practising agroforestry systems. They are highly aware of the environmental benefits of having trees intercropped with annual crops, especially since they live in a mountain area where soil erosion can be a big issue if trees are cut down.

Nevertheless, many live on their production and need to have profitable crops that can give sufficient income. Candlenuts are one of the major income sources in Batudulang, and also one of the most important crops to avoid deforestation. Even if it is an important source of income, the price for the nut is very low compared to other crops. Most of the villagers sell the nut directly without processing it and thus the price keeps low. Janakiraman (2011) writes

*"When local people have access to forests, they have a variety of benefits. In many cases, these benefits are at the subsistence level. Using forest products can keep rural people from chronic hunger and extreme poverty. However, the commercial benefits have been slower to follow"*.

In my understanding, they have candlenut as a daily income during the harvest season and this because it is easy to cultivate, harvest and sell. Almost everyone in Batudulang have forest with candlenuts that they inherited or planted on their own. For many, it was so obvious to have candlenuts that they did not even mention it to me when I asked what they cultivate. Pak Adi, a previous head of the village said:

*"...One of the good things I did was to push the villagers to plant kemiri (candlenut) at the same time as the rice. Before people used to leave the fields when they were not productive anymore, now villagers can get a harvest from the fields through candlenuts and environmental problems like erosion is not a problem"*.

The extended planting of candlenuts started in 1987. Pak Adi said that the elders before planted trees as well but not concentrated in one field. I followed a woman to her corn field and she showed me that even if they clean space for corn they always leave some trees to avoid erosion and nutrition- and water loss. Batudulang is upstream of the lowland of Sumbawa Besar and is the water reservoir of the city. Therefore the management of the forest and land becomes not only important for the village but also for places downstream. To keep the water clean it is important that there are trees to filtrate the water, the civil servant from the forest department told me.

Matius, a young farmer and key informant, is concerned about the development if the price of candlenut is not getting better:

*“Because the programme of corn is spread through this whole region, I and my friends think that it is so important to keep the kemiri tree. If the corn is spread more, trees will be cut down and it will be a big problem for Sumbawa. We want to keep the forest. If the corn has a standard price, the kemiri really needs to have a standard price too!”*

In chapter 5. *Background* I have presented the importance of candlenut production in the province of Nusa Tenggara Barat, where I have done my research. Candlenut is a multipurpose crop; it is mainly used for cooking, as a flavour enhancer, thickener and condiment as well as medicinal use (Cunningham et al 2011). Oil can be extracted from the nut and be used for cooking or cosmetics. The process of oil making is easy, but to avoid the strong smell there are some special techniques needed. Matius, the only candlenut oil processor in the village showed me his tools that he got from different organisations.

To use the nut it has to be de-shelled and the shell is very hard. In Batudulang they dry the nut first in the sun or in an oven, then they put them in water for a short time and finally hit the nut against a stone with a handmade tool. In Pancordao they do it differently, they first boil the nut, then crack the shell with a hammer, remove the shell with a small metal tool and finally dry the nut in an oven. These two practises have different advantages and constraints. Two traders in Mataram supply market said, referring to Java since they never buy processed nuts from Sumbawa:

*“Usually the nut from Lombok is wet because they boil it, but the nut from Java is dry, they dry it and then crack them, the Lombok nuts cannot last long, maybe one week, even in one week they will be moulded. It is because they are boiled and they get more water. The Java nuts they can last for a long time, one month!”*

The processors in Pancordao use their technique because of the importance of keeping the nut in a whole piece. The price for a whole de-shelled nut compared to the nuts in pieces is much higher. With the technique they use in Batudulang they manage to keep some nuts whole, but a big share is breaking into small pieces.

Villagers I talked to told me that it is easy to cultivate candlenuts. The only thing they have to do is clean the ground around the trees from vegetation, pick the nuts from the ground when they fall down and take away the fruits around the nut. The cleaning they do manually with machetes and use the vegetation for green manure or to give to their cattle. When planting the trees it is important to have 10-15 meters between them so they can spread out and give a good harvest. After 3-5 years they give harvest and the quantity is increasing with the age of the tree. On the same time as they plant the trees, they plant rice for 2-3 years until the candlenut trees grow big and give too much shade. Sometimes they plant vegetables, ginger and chilli under the trees, but also this is limited to the first years. They plant candlenut and rice before the rainy season in November- December and harvest the nuts from December to June. The biggest harvest of candlenut is in November and December.



## 7. Gendered tasks

In this chapter, I will elaborate on gendered norms, roles and responsibilities in all nodes of the value chain in order to capture the gender dynamics, participation and benefits for women.

### 7.1 Production

It took some time for me to understand that almost everyone in the village was cultivating candlenuts. Some had 7 or more hectares, while others had 1 or less, but everyone was involved in a way or another. People with little land with candlenuts laboured for others with more land. While searching for a division of labour between men and women I met different opinions. Some told me without a doubt that both women and men share the tasks of clearing around the tree and harvesting, not only for their own household but also in general. Others were certain about a division, where men clear the ground and women harvest the nuts. My impression is that women and men more likely share the tasks when they work together on their own land, compared to when they are hired labourers. In this case, women are hired to pick up the nuts and men to clean the grass around the trees, sometimes women can be employed to clean around the trees as well. When a family is having higher income and more fields it is common that they employ people to do time-demanding tasks such as picking the nuts and clearing the ground. The picking is a more frequent work compared to cleaning around the trees; around 7 months per year there are nuts to harvest (even if some seasons are giving more production). Endah and Intan told that they work as labourers every day until 12 pm, mostly to pick up the nuts from the ground. Sometimes they do other labour tasks such as cleaning up the grass, planting chilli and corn. They have done this work since they were 15 years old; it means that they did not graduate from senior high school and that they have laboured for many years. Even if they have some land of their own, to labour is giving them additional income. Endah said *"There is other income, but kemiri is the fastest. After we pick up from the field we can earn money directly"*. This is one of the reasons why many of the farmers do not stock or process their harvest so they can get a higher price. Many said that they have to sell directly since it is part of their daily income. A study made by US-aid on the candlenut production in whole Indonesia confirms this, *"when farmers are in urgent need of cash, they would decide to sell the whole nuts while they are still in the shells at a very low price"* (US-aid 2009 p. 149).

Men mostly do transportation by motorbike from the field to the village, I met one woman transporting with a motorbike. Sometimes the women are carrying the harvest on their head, if the field is close to the village or to the motorbike if the field is far away from the road. Also, men are carrying the harvest but on the shoulders.

The majority of the farmers I interviewed were selling their nuts directly to local collectors that were operating in the village. After harvesting in the field they went to the collectors to sell the harvest, mostly small scale. One function of the local collector was to gather a big amount of candlenuts and sell it to retailers in Sumbawa Besar. Some of the collectors sold the whole nut to retailers and did not process it, some of them processed it further. Both women and men farmers had the responsibility to sell their harvest to the collector; according



to one informant, it depended on who transported the nuts from the field. I, therefore, assumed that more men sold the nut directly to the collector since they transport the nut on a motorbike, but the assumption was partly disproven when some informants told me that even if the men are transporting the nuts, women will sell it once it is in the village.

## **7.2 Collecting, retailing and trading**

Ibu Nadya is one of the first collectors I meet in the village; she sat on some full bags with candlenut and gave me a reserved but warm handshake. Every week she is buying and receiving candlenuts from the farmers in Batudulang. Ibu Nadya is one of two collectors that own an oven to dry the candlenuts in for further processing. The other collector with a drying facility is a man. He is officially the collector I could understand how people referred to him, but his wife is usually buying the nuts when farmers sell to them. When it comes to Ibu Nadya, there is no doubt that she is the collector, her husband is not involved much in the business. In Batudulang there are 5-6 collectors all together, depending on how they define a collector. However, almost half-half women and men are local collectors.

In Sumbawa Besar, I talked to one of the traders that are buying the unprocessed nuts from collectors in Batudulang as well as other villages. Ibu Dira started up the business together with her husband, but when they divorced she continued and he started up a new business trading with candlenuts. Now Ibu Dira and her daughter in law are managing the business together. Every week tons of candlenuts are passing through their stocks and continuing to Lombok. I ask about the number of women and men trading with candlenuts in Sumbawa Besar, first it is not obvious and they have to discuss some minutes, but at last, they give me the numbers, which is almost half-half women and men. For them and people in Batudulang, it is not clear who is supposed to be called the business leader since they argue that most of the collectors and traders do business together, husband and wife. Nevertheless, in many cases, it seems to be either the wife or the husband having a representative role, but there are no signs towards more women or men in Batudulang and Sumbawa Besar.

From Sumbawa Besar, the chain is going on to Lombok. Pancordao is the centre of processing in the whole region. The quantities being processed in this small city are very high. Iman is one of many traders and processors in Pancordao, he is processing on average 60 tons of candlenut per month, even though he says that he is having one of the smallest businesses. He is in charge of the company and his wife is not involved. According to him, there are exclusively men dealing with candlenut businesses in the city, women are involved but only as employees to de-shell the nuts. *“Women mostly focus on domestic work and the men are the breadwinner, the work is too hard for women since they have to move and lift a lot of candlenuts and it is heavy”*.

In Mataram, I went to the supply market to search for people to interview. After talking with some people I found my informants. It was a couple sitting side by side constantly trading with people that were standing in a long row. Candlenuts were not their only goods. They invited me to their home after the working day. When I came there with my translator, it was

more like a castle than a house. It is clearly an indication that their business is going well. When I asked them about the gender roles they said,

*"Usually is the men and women working together, they run the business together, but they are in different sectors. Overall is mostly the men managing it, but the task is divided, the cracking is the women's task, all hard work is done by the man. Women usually do the marketing because of the bargaining, the men have difficulties to bargain when they ask for the lower price they say yes, women are stricter to the price".*

In their case, the wife had responsibility for agriculture products and the husband responsibility for industrial products. This they explained with the women being more detailed and capable of distinguishing the quality of agricultural products. The trader and processor in Pancordao are confirming this *"Women are more detailed and therefore more suitable to manage a smaller business with many different goods"*. While moving down the chain, the supply actors sell the candlenuts to market stakeholders, both in traditional markets in Mataram and to other small markets in Lombok. When I observed the supply market in Mataram I mostly saw women selling candlenut in big scale, also in the small traditional markets, it is dominantly women selling in smaller quantities which was confirmed by the traders I interviewed.

The chain of de-shelled nuts from Batudulang to the traditional market in Sumbawa Besar is shorter. The collectors/processors in the village are sometimes going down on their own to sell directly to traders in the market. Sometimes they sell to middlemen that are coming to the village, and they sell to traders in the traditional market. In the market, there are mostly women working to sell the nuts.

There is one value chain with the shell of candlenut, being sold to Tobacco farmers and used for firewood. I have not put much emphasis on this part of the chain since almost only men are involved and the development possibilities are quite static.

### **7. 3 Processing**

I could hear the sound of cracking, louder and louder when I approached the house of Ibu Nadya. The smell of candlenut and the sound of the old woman, Ibu Linda, cracking the shell with a astonishing skill, are two memories strongly fixed in my mind. Ibu Linda is one of the women involved in the de-shelling of candlenut; from 8- 16 every day she is working as an employee to crack the shells. Ibu Linda said, *"if it is a good day, I can deshell 30 kilos of candlenut"*. In a place like Pancordao, where tons of candlenut are processed every day even more women are involved in the processing. They are employed and work for a salary between 1000-2000 Indonesian rupiah per kilo, which is not much in the context. The trader in Pancordao is employing 150 people, and most of them are women cracking the nut. I visited some of the women working for the trader, they told me that they are landless and only labour on others land and de-shelling the candlenut for income. Candlenut is not their major income, but something they do when they do not have other tasks. When talking to Rahmad, a widowed man, he said: *"After I pick up kemiri I sell it directly, sometimes I am drying it up.*

*Mostly I sell it directly, there is no one that can handle the de-shelling because I am alone".*  
This shows how de-shelling is connected to women.

Before the de-shelling, the nut has to be dried, at least with the practice they use in Batudulang. Like I mentioned before, there are two persons in the village that own a drying facility. They are processing the whole year around since they are not bothered by the rain period. The rest of the villagers are sometimes drying the nut during the dry period, but also during the rain period. Women mostly do drying in the sun, since they are close to the house and can move the nuts if the rain is coming. Sari is frustrated that the drying is taking so much time and energy. If you dry them in the sun it takes 7-10 days, compared to the oven where it takes 3 days and nights, and you always have to be careful to not leave it in the rain, she said. It is very important that the nut is dried enough to be able to deshell it. This is the main reason, as I understood it, why many of the farmers do not process the nut further. Sari and her mother said:

*"it is better to sell the kemiri in form of the whole nut, because we have already dried it up, why we don't crack the kemiri to ose (the nut without shell) is because we are afraid of making it into more fractions and the price of kemiri will be lower, that is why we sell the kemiri with shell. Because of the topography, even if it is in the dry season the rain will fall a lot. Maybe if we have oven we will crack it".*

Some people are drying the nut during the dry period but avoid it during rain period. Ibu Dewi said:

*"If I am stocking the kemiri (candlenut), I am is also processing the kemiri. I stock the kemiri first until the dry season to dry up the kemiri and then I de-shell it. At the dry season, I will dry it up. Now I am not cracking it since I have no oven and it is rain season".*

Arti told me that she tried to dry the nuts in the sun to de-shell them, but the rain came suddenly and destroyed the nuts, it gave them a bad smell to be wet for a long time. After that, she did not want to risk the nuts again and are selling them with the shell. Almost all farmers that I talked to wanted to process the nut further, both de-shelling and making oil. Their biggest constrains was the need for daily income from the nut and the problem with rain. Some expressed a need for having a drying facility such as an oven. Sari wanted to have an oven in the village where all women could dry their nuts. It was clear that women are the one having responsibility for the drying in the sun and that it is a very time-consuming task since they have to guard it from the rain.

Only one man in the village also titled as the champion farmer currently conducts the processing of candlenut oil. He has produced candlenut oil for one year and got help from different organisations in order to produce high-quality oil. Being a champion farmer has responsibilities with it, given by the aid organisations. He is the one learning about the processing and should, later on, spread the knowledge to other people in the village. His wife, Tina, is partly involved in the oil production, she said: *"The pressing of candlenut oil is the responsibility of my husband because we use a big machine as a tool. And then I only help to make into powder and packaging the oil".*

## 7.4 Domestic work

Daily work in the household is a time demanding task and mostly performed by women. They wake up early in the morning to prepare for the family and send the children to school. Dolan (2001) is writing that older children often go to school in cities further away and can therefore not help out in the household. It is the case in Batudulang as well; children entering primary high school have to move to other places. Men are less engaged in the household duties and have more time liberated for income-generating work (productive work). However, women have responsibility for reproductive work (household duties that are not income generating). This is influencing their opportunities of being part of the productive work because of time shortage and need of being close to the home. Tina said: *“I rarely go outside, only to buy fish and veggies in the village...after I go back here (to the house)”*. According to Barrientos, Dolan and Tallontire (2003) women are supposed to be more flexible and move between the reproductive and productive work. It is, therefore, harder for them to get a stable and formal work, they tend to have more informal employment and tasks compared to men.

People I met in the value chain talked about women as being very strong since they have to wake up early to take care of the family and sometimes work during the day. When I talked to the couple in Mataram trading with candlenuts, they told me that the women wake up every morning before the rest of the family, and after that they spend the whole day in the market with her husband. In the evening she cooks and on weekends she does grocery shopping for the whole week. Their son said,

*“She wakes up every morning early, cooking, taking care of children, and also go to the market...that's the power of the women! When she is coming home from the market she is doing the work in the home and sorting the money for my father to take to the bank”*.

I mentioned before how characteristics attached to a person is influencing their working tasks. Here I found one contradiction, work that requires physical strength is connected to masculinity, and on the other hand, women are perceived as strong while doing household duties. What is the difference between these two characteristics of being strong? I will discuss this question further down.

## 7.5 Discussion

Together these different tasks are forming the value chain of candlenut, production, processing and trading and domestic work as an important influencing factor of the value chain. Looking at the whole value chain it is clear that both women and men are represented in many nodes in the value chain. As well as a quite equal share of women and men being in charge of high-income generating businesses. This can be compared to studies where women usually are in charge of farming and small businesses (Bergman Lodin et al 2016; Awona et al. 2002; Ingram et al. 2015). Women are highly participating in value adding steps such as picking, drying and de-shelling. These steps are energy and time demanding and have a lot of potentials to develop in a way where women can benefit in a higher degree than now. In an

article written by Dolan (2001), she writes that men more often are involved in the time limited tasks, such as land clearing and fertilizing. Women are more involved in daily activities that are time demanding. In the value chain of candlenut, this division can be seen as well. Picking, drying and deshelling are tasks that can be performed almost the whole year around compared to cleaning grass and transporting that are limited to some periods and hours.

Women and men work in many cases side by side, but usually with different tasks. These tasks are more or less flexible. Dolan (2001) writes that men generally have more fixed tasks compared to women. Women are more often working in the man-dominated domains than vice versa, as with the task of cleaning grass around the candlenut trees.

There are many attributes connected to women and men that especially arose in this chapter. A woman as being more suitable for dealing with agriculture products is closely connected to the dichotomy of nature and culture (Ortner 1974). Contrary to women, informants said that men are more suitable for dealing with industrial products which are symbolising the mastery of nature. The narrative of women as being strong while managing the household is a way to use language to maintain the construction of differences between women and men as well as the gendered division between reproductive and productive work (Hirdman 1988). The clearest division between women and men is the reproductive and productive work. This division is based on social perceptions of women and men's bodies. The way how women are seen as having an obvious responsibility for the household are reflecting their connections with nature (Ortner 1974).

Even if I argue that division of tasks, in many ways is keeping the patriarchal hierarchy, it does not mean that there always are clear dichotomies and divisions. Arora-Jonsson (2012 p.32) is writing: "*conflicting practises thrive at the same time and in the same place. Gender relations are dynamic and continually in motion*". Gender relations differ in different societies, some allow an overlap of roles while others are more rigid in the division. In the study made by Arora-Jonsson (2012) from rural villages in Sweden and India, there is some overlap in the roles that are seen as desirable and some with a segregation as ideal. She is arguing that none of these can be seen as more gender equal than the other, but it depends on the context. I can see similarities in my study, that these both kinds of gender relations occur and that it depends on the context which one of them can be seen as more gender equal than the other.

## 8. Access to resources

In this chapter I will do an analysis of how gendered norms, roles and responsibilities are affecting women's opportunities to gain access to resources in the community in general. Further analysing what effects access to resources has on women's participation in the candlenut value chain.

### 8.1 Land and credit

In general women have less access to land in Batudulang compared to men. Women do not formally own the land to the same extent as men. To own land formally you need a certificate for the land and this is obtained through applications to district agencies. This certificate is enabling people to use the land freely and to use as collateral to borrow money from the bank. Some informants told me that they own the land together, husband and wife, although it seems to be more usual that the certificate is in the name of the man. Pak Adi is expressing that the head of the household is the man; therefore, he officially owns the land, which is an understanding he is sharing with the majority of my informants. When access to land comes through legal certificate or permits it is called law-based property rights (Ribot & Peluso 2003). When asking my informants, some explained the difference in inheritance between women and men through the inheritance law of Islam, which says that women will have one part and the man will have two parts. The security staff of the village said:

*“It also depends on the son, for example the son allows the sister to get the same as he, he can allow it...it depends on the person. It does not mean that they don't follow the rule of Islam, they just have to know the Islamic law. They say it is ok for me to give more land to my sister. It is possible to give the man and women exactly the same for inheritance”.*

Gender norms and divisions are not only created through the individual interaction, but also interaction of institutions and individuals (Dolan 2001). One example is the institution of religion where norms and dichotomies are transmitted to the community. Without doing an analysis of the Islamic laws.

Women have equal right to own land according to Indonesia's Civil Code. Moreover, the marriage law founded in 1974, legislated the co-owning between husband and wife of things purchased during the marriage. Nevertheless, there are regional differences how these laws are implemented (LANDac 2012). This shows that both women and men have the official right to own or inherit land, even if there are some unfavourable inheritance practices for women. Anyway, the ownership for women tends to be relational, through a husband or male relative. Elmhirst, Siscawati & Sijapati Basnett (2015) argue that the individualised land rights are connected to one household and not individuals, therefore the access and control is allocated to the head of the household, the husband.

Officially everyone can take a loan from the bank, but the requirements to borrow money are to show guarantees in form of a certificate of land or house. As I mentioned before, the husband's name is usually in the certificate of the land. If a women wants to start up

something where she needs capital, she has to go through her husband in order to borrow money. Coles and Mitchell (2010 p. 5) writes,

*“Land tenure is a leverage point not only into acquiring the physical assets for chain activities but also into accessing chain services. Securing public finance, for example, is impossible without collateral or ownership deeds”.*

Two informants explained that women are the one needing the money, even if men are borrowing it. In their perception, it is women starting up capital-intensive businesses and needing additional money. Ibu Dewi told me when I asked if she took a loan for her candlenut business in her name: *“I do not use my name, I never use my name, I use the name of my brother in law. It is at the beginning of the business so I am not brave to take it in my name”* Ibu Ayu said:

*”There are fewer women taking loans, because women join her husband, even if she is the one needing the money she uses the name of her husband on the loan. And then they run the field or the business together”.*

Even if women can get access to credit through their male relatives, they are dependent on the goodwill of the husband, cousin, uncle etc. This creates a barrier for women to start up an independent business. In my specific case of candlenut, I found that women are in charge of candlenut businesses. Sometimes they collaborated with their husband and sometimes they are more independent. This shows that there are possibilities for women to participate in the value chain of candlenut and benefit from increase in value. Even though they may have more barriers to reach this compared to men. Through observations and interviews I could distinguish a difference inside the group of women. Some women had more bargaining possibilities in the household, while others appeared to have less. Women that are supported by their husbands are more likely to have better self-esteem and have the possibility to make independent choices.

## **8. 2 Social networks**

In Batudulang, men have access to larger social networks, outside of the village, compared to women. This was stated both in interviews and through observations. When I asked women and men in the village about who is having the largest network the majority answered; the husband. One possible influencing factor I could distinguish is the difference in mobility between women and men. If something was to be delivered or there was a meeting in any administrative office, men were driving, either motorbike or car, to get there. This is a reflection of the normative rules regarding the use of any motor-driven vehicle. In the village women tend to have more social restrictions compared to the cities, which makes rural women more isolated and less flexible compared to women in urban areas. I met one married woman driving a motorbike in the village and she said that she was an exception. Therefore women in Batudulang cannot create a network outside of the village to the same extent as men can. However, with education these dynamics are changing since both men and women are moving to other cities to study in university. Young women have an opportunity to build

social networks outside the village when they are away. Norms around driving vehicles are also changing and getting blurrier, in cities such as Sumbawa Besar and Mataram many women are already driving motorbikes.

An important factor of changes in access to social networks is the high presence of the internet and social media. In Batudulang the government offered free internet in the local office, this was new for the villagers. Talking with Matius who started producing candlenut oil in 2017, I understood that the internet played an important role for him to market his products since he not yet has a formal company. Moreover, he could collect a lot of information about how to produce the oil. This shows that access to the internet can improve access to information as well. The Internet is also part of the changing dynamics between women and men. I could observe that both unmarried women and men were spending time in the place with free internet. Young girls are getting access to a larger network through internet compared to their mothers. During my two weeks of observations, I seldom saw married women in the area of the free internet. It was more usual to see married men using the facility. This does not mean that married women do not use the internet, many of them, also older women, have mobile data for internet that they can use in their home. This mobile data is slow in the village and therefore there are limitations to what you can access on the internet. Formally women and men have the same access to the internet, but for some reason, women are not using the free and fast internet to the same extent as men. It can be related to women having more responsibility for household duties and that they do not have the same flexibility as men.

What I could see, in general, the whole society has a clear separation of women and men, especially in social interactions. Women and men do not interact much in the social sphere since they are separated by gendered activities. Many times I could see groups of men drinking tea inside or in front of someone's home, as well as women meeting in groups to socialise. More seldom there were both women and men interacting. This is connected to women's possibility to forward ideas and opinions, which I will come back to in chapter 9. *Agency*.

Men having a larger social network in the village are also a reflection of the men being attributed with a role as head of the household and the representative member of the family. While being the representative they have the opportunity to form a larger network compared to women. Moreover, being part of a formal group is influencing people's opportunity to increase their social network, but this I will come back to later.

While looking at the specific case of candlenut, women's lower access to social networks does not seem to cut their possibilities to be involved in processing and marketing. On the village level, one reason for this can be that there are middlemen or traders buying the nuts directly from the village and the women do not have to transport it. Ibu Dewi is giving another viewpoint than the majority when I asked who is having the largest network "*Me! For example, the people want to buy and sell they will call me*". She is a collector and sometimes processing the nut as well. Middlemen from other places are coming to buy the nuts from her



in the village. Ibu Nadja is explaining that if there is an order, her husband will transport, but most of the time the middleman are coming to the village to buy directly from her.

### **8. 3 Knowledge and education**

According to Arti, women in Batudulang are less educated as compared to men. Many of the women only graduate from junior or senior high school. Men are more represented in education compared to women. Pak Hamzah confirms this. Even though men are more represented in higher education, they are also not in abundance. He said *“this is the first batch of young people graduating from university, they just graduated or will soon graduate. The human resources are just on the way to be building up in this village”*. He continues explaining that if a family with daughters and sons has low income, they will first give the opportunity to their sons to enter university.

Knowledge is also gathered through training that is provided by the government or NGOs. Trainings are arranged on different topics and for different purposes. Informants told me that it is usual that trainings are directed to a special farmer group and since women are less represented in these groups they will not attend the trainings. Invitations are sent by mail with a specific name and are usually directed to one member in the household. Putri said, *“Once there was a head of the village; when there were trainings, I really wanted to attend, and I told this directly to the head of the village, but I did not get an invitation”*. Both women and men I talked to explained that mostly the head of the household gets these invitations, which means mostly the men. There is also a difference between men in the village, who gets invited and not. It seems to depend on how long time they lived in the village, their engagement in the community and membership in farmer groups.

Trainings are sometimes directed exclusively to women. I attended a training initiated by the department of nutrition where women got informed how to cook alternative food. The purpose was to diversify the intake of rice since diabetes is a problem in the region. Trainings can, therefore, be gender segregated even if it is not explicitly outspoken. Consequently, women are not getting knowledge about activities that are attached to either farmer groups or masculine attributed task, likewise men do not get knowledge about feminine attributed tasks. In the context of candlenut production and processing, women have less access to knowledge, as communicated in one or two candlenut farmers group, they needed to be part of or benefit from the value chain of the candlenut.

Despite all institutional limitations towards women to participate in knowledge accumulation, many women I talked to tend to be well informed about the price, markets and regulations of candlenut. Putri was one of the women not being part of any group, but she was well informed about candlenut and other products. I could not see a difference in the production, processing and market knowledge between men and women as groups, rather some differences between individuals, often related to the level of education. It is reflecting that knowledge not only is spread through the farmer groups but through other channels as well. Candlenut oil production in the village is still new and concentrated to one household; therefore it was easy to see a knowledge gap among my informants concerning the oil processing, not only among

women but also among other men. Some women expressed their will to participate in farmer groups to be able to learn more about the candlenut oil processing and marketing.

#### **8. 4 Discussion**

Access in *de facto* can contribute to a person's independence, both in decisions and bargaining (Ribot & Peluso 2003). Therefore, the unequal access to formal ownership of land is relevant to recognize. In my research, the structural and relational access to resources has relevance to the discussion and in relation to gender theory. I mentioned that women officially have access to land, but there are barriers made of norms and traditions limiting women's access. Following the discussion from Hirdman (1988), women and men are divided into different domains and are together maintaining this division. Men as the head of the household are based on a patriarchal system, therefore it is obvious for many of my informants that the man is having his name on the land certificate. Even if women have the right to own land there is a silent agreement that men are the head of the household and through that, his domains are the representation and administration. This silent agreement is also called gender contract (Hirdman 1988). Keeping this division of domains is maintaining the patriarchal structures, through legitimizing the men as owner and head of household.

Also in regard to access to social networks, knowledge and education, the division between women and men are relevant to discuss. The gender-segregated trainings I have discussed are maintaining the gender contract between women and men (Hirdman 1988). Being a good housewife and learning more about this domain is crucial to live up to expectations from the society, as well as for men that have the expectations to improve skills for breadwinning. Like I mentioned, men are the head of the household and this is a role attributed to being the representative member of the household. Creating social networks outside the village, therefore, becomes an important task for men as well as being member of farmer groups and attending their meetings. In this division, women do not have the same legitimacy to seek for a social network and be part of formal organisations.

Women's connection to the domestic sphere is influencing their possibilities to access social networks and knowledge. Like I mentioned, women are less flexible since they have the responsibility for the household and cannot be away too long. This is limiting them to create networks through physical interaction as well as through the internet. Moreover, women have limitations in what trainings they can join.

In this part, named resources, I have discussed how gendered norms, roles and responsibilities can influence women's access to resources. Moreover, how access to certain resources can influence their opportunities to manage independent businesses. In the candlenut value chain, access to knowledge is the resource that I have seen, in my empirical material, as a factor of influence. Access to land, credit and social networks are not highly visible as factors influencing women's participation in and benefit from the candlenut value chain.

## 9. Decision making agency

### 9.1 To exercise power in the community

One important factor for having a large network is to be part of informal or formal groups. In Batudulang there are many formal groups like farmers groups, the number varied depending on whom I asked, but around 5-6 groups existed only in the village. They all had different focuses and dealt with different crops. When I asked if there are any active groups for candlenut I got many different answers. A couple told me that they never been part of any farmers group and that it does not exist any. Intan said: *“There is no farmer group for kemiri, only for coffee and honey!”* Endah sitting beside said, *“I don't know if there are any farmers groups for candlenut! I am a newcomer to the village and therefore I don't know”*. Others told me that there is a farmer group dealing with candlenut, but that it is not really active. I found out that there is one group for candlenut oil, where Matius is the leader and he is explaining: *“My farmer's team is working together to bring the candlenut to the market, also sometimes I buy the candlenut from the farmer's group to make oil”*. In the group to make candlenut oil, there are no women involved in the administering organisation, but they are helping their husbands, Matius told me. Since I want to investigate women's possibilities to reap the benefits from the value adding steps in the value chain this is remarkable and important to point out. However, according to my informants, women are not highly represented in any farmer groups regardless of which crops the group is dealing with. This is a common phenomenon in other value chains as well; women are often involved in the production or processing but do not join formal groups (Colens and Mitchell 2010). In this way, they cannot profit from chain management functions such as training and tools (Ibid). Pak Adi said: *“Women mostly work to support their husband with food when he goes to the farmer's group and field”*. This was confirmed by other informants. One other reason my informants mentioned is that only one person in the household needs to be a member of the farmer's group.

Entering formal groups can be a way to gain more power in the community (Sweetman 2013). Therefore I could simply argue for the importance for women to enter the farmer's group in Batudulang as a measure of getting more decision power in the community. Yet, this would not be sufficient since the possibility of exercising power is not bounded to that group. Women and men's opportunity to exercise decision power in the groups will be influenced by their ability to exercise power outside the group (Arora-Jonsson 2012). Even if there were more women in the farmer's groups, they would have to act in an appropriate way according to norms, and would not necessarily be willing to exercise power in the group and therefore one cannot say they have decision making agency in these groups (Ibid). Even though men are more represented in all farmer groups there are some women involved. Nevertheless, when women are involved they do not speak up according to Pak Bisma, from the forest agency. This is something I could confirm in the focus group conducted by Aulia and me. Even if there were more women in the focus group discussion (FDG) the men took the leading role until we asked the women to actively participate. It is therefore not enough with the representation of women in the groups as nominal members, but they have to be

interactive members and take part in decision making, then it can be seen as a means of empowerment (Agarwal 2011).

There are groups for women as well in the village. They are usually formed *ad hoc* to teach or make special things like soap, candles, training for cooking, training for managing the household etc. These groups exist only for a short period of time without continuation. Activities in these groups are directed to women and invitations as well. However, farmers groups dominated by men are sometimes also created *ad hoc*, or activated for a special purpose, mostly to receive aid from the department of agriculture since they need to be a registered farmers group to get any kind of aid. This is including the aid in form of machines and technology. Those that have access to tools and machines can benefit from them (Ribot & Peluso 2003). Many resources that cannot be used can be extracted or transformed with help of technology (Ibid). For candlenuts, the ability to access facilities for drying, tools for deshelling and machines for processing the oil is essential in order to profit from the crop. If women are not part of any farmers group they do not have the same opportunity to benefit from the aid in form of tools provided by the government, which is directed only to farmer groups, according to the civil servant from the forest agency.

There is a women's group, where women plant ginger and turmeric to make instant powder. The group leader explains:

*"The first time I embraced the women to enter in the group I was starting from yard plating in front of the house, planting more and more in the field as well...same women as when we started...but all women and men nowadays they already plant ginger that is giving additional income to them. The women involved in the group are 22 but the one who processing the ginger powder is me".*

Ibu Sukma is talking enthusiastically about the time when there was a women's group in the village. She explained that they had meetings where they planted vegetables in each other's garden and they did other activities together.

To act collectively is seen as a way of creating both freedom to act outside of normative structures as well as creating awareness (Kabeer 1999, 2003). The situation that few women are organized in Batudulang can be seen as a failure of demanding decision power. The creation of a women's groups could be a solution to women's exclusion from politics and formal groups. It is also often assumed that women acting together will lead to solidarity and empowerment over social groups such as age, ethnicity, place, income levels etc. Maybe this cannot be assumed since the borders between the groups of women will not necessarily diminish. However, women in Batudulang were expressing a need for having a women's group and that they would get the opportunity to share their ideas more freely in this group. One question I had with me was, where are the obstacles to creating a group since all women want one? My informants had different explanations; Sari said:

*"Once, when it was a group of women farmer, one becomes the leader and they will work for that woman only...that is why it disappeared, only one person got advantage from it, then they say that it is better to work for themselves. Only the result is spread to everyone in the*

*group the group would not disappear, but the reality is that only one is getting the advantage and then it disappears. It was a long time ago when I was teenager..."*

Ibu Sukma told me that they need one special woman to take action and start the group, but since that woman is busy right now she cannot. According to her, women only sit around in the afternoon and gossip instead of doing something useful. If only women could have the independent capital they could do productive activities like they did in the past, she said. She is referring to the women group in the past, planting vegetables together. I heard from several women, that the most important is to get funding to be able to start up a women's group. Putri said: *"we need funding, small business funding to create a group. I think that if they have some capital we will create a business, it is very easy, here the founding is the problem"*. These voices are showing the complexity of acting together in a heterogeneous group and are important to be aware of. Nevertheless, it can be seen as an opportunity to have differences in a group while acting together (Sweetman 2013). In the chapter, *10. Social change*, I will discuss how collective action can function as empowerment for women in Batudulang.

## **9.2 Positions of decision**

According to all of my informants, women can be elected to become head of the village or secretary, but they never candidate for the position. Endah said: *"because there are no women having higher education...the one who is elected to be head of the village has to have a bachelor certificate "*. The secretary of the village states that:

*"When you are the head of the village or secretary, they (the villagers) always say that what you do is wrong, you have to make difficult decisions. To become a secretary or head of the village does not only require knowledge, you also need to be mobile since this is a bit far from the city....."*.

The reason for women being less flexible is something I have touched upon as well, partly because of their domestic responsibilities and partly because of norms around driving vehicles. If women in a remote village like Batudulang would want to move they have to compromise on their role as a woman. Compared to women in more accessible city areas, even if they have the responsibility of domestic work they can more easily work outside the house and have more mobilization opportunities. One example is the women working in the agency of nutrition or the businesswomen in Mataram, both groups have the responsibility for their household and work outside their house at the same time.

Thus, women are not represented in official positions in the local context. But could they not have decision power through sharing their ideas and opinions to the people in formal positions? The answer right now is no: women in Batudulang do not have any official arena where they can transfer their ideas. I argue that the absence of women as civil servants in the local office is contributing to this. If there would be more women having official positions, the arena would be more accessible for other women in the community. The secretary of the village told me that not many women are showing up in the office, to get help with

applications or give their opinions and ideas. He said that he is mostly interacting with women in wedding parties or traditional meetings. This is related to the lack of social interaction between the genders and how this can affect women's possibilities to get their voice heard.

Putri felt that even if she has a lot of ideas and opinions, there is no place to present them, where should she go? She tried sometimes with important topics for the whole village, but she feels that no one is listening and that it is hard to know where to bring forward her opinions. She experienced that if she only speaks with the villagers randomly there will not be any change, they will not truly listen. This is showing the frustration of not having an organized place where women can give their opinions and feel that their voice is heard and that things can change from that. Later she is expressing that she once was invited to a meeting and that she gave a suggestion about what to ask the government staff about, she said that this is the most important, to get invited so she can give suggestions. She thinks that the problem is that not enough people get invited to the meetings or trainings.

There is a difference between newcomers and the established villagers concerning the possibility to speak up and bring forward ideas. The village secretary is taking as an example how newcomers are building up their life:

*“First the family is living by the husband's father's house and they live there for around three years, then they work on other lands halftime and the rest of the time they can build up their own land with the help and knowledge of the father”.*

This is showing the usual pattern that I have observed as well, the women move to the husband and the son inherits the land. Especially the young women I have talked to, they move to their husband and they do not come from there. Arti is a newcomer and just because of that she is expressing many times that she did not dare to speak up and give her ideas to the community. Putri is also newcomer (she came here 10 years ago), she thinks this is why the local office does not know about her and does not invite her to trainings or meetings. Endah and Intan are explaining similar experiences and referring their difficulties to make their voice heard to their situations as newcomers and that they do not know about the situation in the village. It is important to have in mind that there are intersectional differences within the group of women, as mentioned; the difference between so-called newcomers and women that lived there for a longer time as well as income and age.

Connecting with the issue of starting up an independent business, which I have discussed in terms of access to land and credit, is the possibility to get help from the local office to apply for a small-scale business permission. According to the secretary of the village, everyone can apply for permission to set up a small-scale business, they will help the farmers to write an application to the agriculture department in order to get some support in form of training or machines. He said that they will help farmers that can show their potential and dedication for the business, it has to be farmers that can continue the project not only stop after they got some aid from the government. In the local office they can only facilitate the application to departments, but what they are writing has a big impact on the decision of the department. The importance to show confidence and engagement in order to apply for aid is significant. I argue that; first, women cannot make their voices heard in groups since they are

underrepresented and can therefore not show their needs and priorities for applications to the government. Second, there is no women's group where women can get confidence, knowledge and credibility to show potential, interest and dedication to create a small-scale business. The letter of small business agreements can also be used as a guarantee to borrow money from the bank to set up a business. This is therefore related to the possibility for women to take a loan for their business.

On the other hand, the secretary of the village is mentioning many times that the people working in the local office have to be very sensitive about the people in the village and try to see their needs. They also focus on helping the poor people in the village, and that is not done only through giving them aid but also if other people with more dedication, for example, can get support from the government, and they start up business which will lead to more employment, inspiration and higher wealth for the other people in the village. One issue is that men and women do not frequently do activities together or meet as groups, therefore it cannot be easy for the local government only consisting of men to actually hear the dedication and potential of women in the community.

### **9.3 The exercise of power inside the household**

For almost all informants in Batudulang, Sumbawa Besar and Lombok, it was obvious that women control the money since they are managing the household. One woman explained to me, *"I am getting the money from my husband if he is earning them and if he wants to buy something like cigarettes or petrol he will ask me for money"*. It is clear that the women are doing most of the spending as well since they are responsible for cooking, cleaning and taking care of the children. In some other studies on income control and household bargaining, men tend to have control over most of the income and in many cases spend much of it on their own private goods such as alcohol and other women (Dolan 2001). Why this is not the case in Batudulang can maybe be explained through the social control in the village and the social norms founded in religion about not drinking alcohol. I could understand that if someone did something not acceptable they would be socially sanctioned, especially if it is a family father or mother.

For higher expenses that are not connected to the maintenance of the household, like sending the children to school, husband and wife will sit down together and discuss how to plan for the budget. This was not the case for all my informants since only some sent their children to school. Decisions concerning how to use the land seemed to vary between families. Some informants told that they always decide together, other said they have responsibility for different fields and some said that only the husband is deciding. One woman is having the responsibility and decision power over the fruit garden close to her house since she is the one being home working with domestics. Her husband is deciding over the candlenut production since it is further away from the house. According to Pak Hamzah and Ibu Ayu, they are deciding together whom to sell their nut too, they discuss it in advance. A study from Vietnam is showing that women have the official responsibility for income, but that many decisions on how to spend the money are agreed by both husband and wife (Catacutan & Naz 2015). It is

important to consider that there are differences between the groups of women and their decision making agency in the household and community.

#### **9. 4 Discussion**

In this chapter I elaborate on the possibilities for women to have agency in the community and household and how this is influencing their opportunities to be independent. I questioned if they have possibilities of making their voice heard, both as individuals and as a group. In some situations, women have the power to decide and in some they have less power to do so. In the decision making positions outside of the household, like farmer groups and village office, they are not represented and there are social barriers for them to enter compared to the domestic domain, where they have more power to decide (Kabeer 1999). This is a reflection on the nature-culture division between women and men (Ortner 1974). Women have responsibilities over practicalities connected to the household, like buying food, while men are in charge of politics and administration. These patterns are easy to distinguish, but the hierarchy where culture is superior to nature is harder to see explicit in my material. Many times I heard how strong women are: they wake up early and take care of everything. This can show that household duties are as valued as representative or political duties, which can be the case for many families. What I also have seen in the whole value chain is that household duties usually are seen as something to be done besides other income generating tasks. This can be an expression of domestic work as less valued. On the other hand, the income earned by men is often given to the women for her to spend on the household. This can be an expression of domestic work as highly valued.

Even if all informants told me that women could be head or secretary of the village, no one did candidate for the positions. This can be seen as an expression of lack of self-esteem according to Summerson Carr (2003). It is deriving from an absence of support and experiences of repeated disadvantage (Ibid). The explanations I got, of why women do not candidate for civil servants or become members of farmer groups, reflects on the existence of gender contracts between men and women (Hirdman 1988). For example, through lifting up the importance of women supporting the husband through household duties, gender roles are reproduced. Bourdieu (1972) is stating the concept of *doxa* which is describing how people are embedded in culture and traditions and they are therefore taken for granted. Through my whole material this is present, but in this chapter it becomes relevant in the empowerment discussion. Collective action is a way to create awareness of the context people are embedded in (Cohen 1985). Creating a collective identity is a fundament for action and change. To formulate phenomena and situations in words is crucial to both have a collective identity and acting together (Ibid). When women in Batudulang come together their power to decide in the community can improve, which I will discuss more in chapter 10. *Social change*.

I could also see a pattern where the difference in both decision making agency and access to resources for women and men are connected to their possibilities to be mobile. As I mentioned in the previous part, women's opportunities to socialise outside of the household are limited. I have seen how the connection to domestic sphere is reducing possibilities for



women to build up social networks further away, to be part of farmer groups and get knowledge and to get a higher education. This is what Ortner (1974) is describing; a woman's association with nature is bounding her to the domestic sphere, which is defining her social situation. Compared to the men, she cannot take the same obvious place in informal groups, where knowledge is reproduced since these are connected to culture and the men. Mobility is also connected to gendered norms of driving vehicles like I have mentioned in both *resources* and *decision making agency*. This division is reflecting on the "law of separation" which is legitimising the patriarchal society (Hirdman 1988).

Women controlling the money in the household can be an indicator of them having bargaining power in the discussions between husband and wife in order to decide things (Agarwal 1997). It is also showing that women have more decision power in the domestic domain (Kabeer 1999). However, even if women do have the control over the money they are not free on what to spend on. The control is following with a responsibility to spend it well and to manage the household well; otherwise, there will be social sanctions towards them (Agarwal 1997). I could see this in the way they talk about managing the household, and how important it is for women to manage it well, they have a high responsibility. This can also influence their opportunity to benefit from the candlenut. If there are social norms on what women should spend money on and sanctions from the community if they do differently, do they really have the control over the money? Can they, for example, spend money on building up a business in order to benefit from the candlenut?

## 10. Social change

In this chapter, I will discuss empowerment factors that I have distinguished in the material, within the candlenut value chain as well as overall in the community of Batudulang. What opportunities and constraints are there?

In the chapter, 4. *Literature review*, I summarized findings from other studies concerning gender dynamics in value chains. Some general conclusions are similar to what I have found in my research, but some are quite different. Even if I have focused on where women do have less power and participation in order to see where change is needed, overall the value chain can be seen as quite equal compared to other similar value chains. For example, women do participate in bigger trading businesses; they sometimes have the responsibility for selling, buying and bargaining. Also at village level, women do have positions as collectors or processors that are both social valued and income generating. One reason for this can be that women in Sumbawa and Lombok have more bargaining power in the society in general, compared to other developing countries where studies are done (Agarwal 1997). Nevertheless, I argue that the most important reason why women are having power in different nodes of the value chain is the socially constructed attributes, where women are seen as good in bargaining and connected to the domestic sphere. Many of my informants explained that it is very practical that the wife has responsibility for the collection of candlenuts since they are more often close to the house. Arti said:

*“I want women to not go to the field, because women can get bit by the snake, women should more focus on the domestic and the processing, I want women to make the production of oil. Several women in a group doing kemiri oil together”*. She continues saying: *“I hear the voice of women in the village that many women want to make a group of farmers, especially a group for production kemiri oil, sometimes women go far away to the field and leave their children in the home”*.

The processor in Sumbawa Besar explained that she is half-time managing the shop and trading and half-time working in the household. Ibu Nadya, collector and processor in Batudulang said: *“I enjoy the work. I can arrange the domestic and raise my children but anyways be close to the house.”* Other women have expressed similar suggestions, that women should manage the processing and collecting. My conclusions are also correlating with these opinions since women are in charge of many processing steps already, an improvement in these could empower women. Since women are responsible for the household, being involved in activities close to their household that can generate income could give them an opportunity to be more independent. One civil servant working for the nutrition agency told me:

*“It is important for women to work close to the house, for example in home industry because the husbands money is important to save for domestic, but if there are other things that need money outside the house or other people need help, like relative we can give it from the money that the women are earning... it is very important to empower women on both sides, in domestic and outside the house.”*

This shows how empowerment of women can have a large spread in the whole community. My study is showing that the main constraint for women in the value chain of candlenut is the time demanding tasks connected to the processing and low access to trainings and information. Drying is one of the biggest barriers to processing the nut further. Sari repeated many times that what they need is a drying facility in order to process the candlenut. She said:

*“For example, organisations are making one house for the gathering for women and they can make the kemiri oil. The tools will only be used for the group, not special for just one house. I hope that the local government make a public oven for everyone to use...the group of women farmer could use it. There is a lot of aid here, but just like that, it makes one person have an advantage, makes no fortune for other...”*

I could also distinguish two different ways of ideas on how business should be developed in the village. Some I talked to want to have a shared place where they, for example, women, can process together. Others want to have a separate business that is modern and focused on one product, where everyone is collaborating to grow raw material and selling to that person who is processing and through that, the farmers can get better paid since they get more money selling to the local processor compared to other traders or processors. Pak Hamzah is sharing his idea for the future,

*"I want to make a company of candlenut oil and everyone sell their nuts to me, it is better to prepare a sterile place to produce the oil....not process it in the traditional way because the oil is closely connected to health, so you have to prepare with one place where the oil is produced with bigger and modern facility"*

Matius who is processing oil, wants to teach people how to produce the oil and empower them through this since they will get a much higher price for their nuts. When people start to produce oil in the village he will focus on the marketing and provide services for the villagers how to market their products. This discussion, on how the community could develop their value-adding practices is important. Is a collaboration the right path, where for example all women can collaborate and create a higher value through deshelling and oil making? Or empowerment of some women that can build up businesses to process further?

Even though there are differences in the group of women, for women in Batudulang, acting together could create an arena where they can share ideas, opinions, create common goals and produce income-generating products (Kabeer 2003, Sweetman 2013). Supporting this grass root collaboration can give an important push forward towards empowerment, therefore Sweetman (2013) is arguing that the role of NGOs and the government are crucial. There are two different expressions of collective action in my material. One is the collective action where women are working together to build up a business or use facilities together, in order to improve their income and independence as mentioned before with the oven. The other is the possibility to gain decision making agency in the community and bring forward their ideas and opinions as well as creating a collective identity. Gaining self-confidence as individuals could change the gender dynamics in the community and improve the opportunity for women to candidate for decision positions (Kabeer 1999). Through that, they can have a greater

influence in the community and in the candlenut value chain. Increase in agency could lead to greater access to resources such as social networks, land and knowledge.

*"Gender and development can support feminist movement-building by channeling much-needed resources to women's feminist organizations and grassroots groups provide common marketing for small-scale producers. But beyond economic benefits, membership of a producer group can create bonds between women which previously did not exist, and generate social cohesion and security. Often, women's groups formed around livelihoods may become politicized and become 'claims groups' "* (Heyer et al. in Sweetman 2013 p. 221)

Simultaneously the increase in access to land, credit, social networks and knowledge would affect women's possibility to be part of the decision making in the community and in the village.

A factor directly influencing the participation and benefits of women in the candlenut value chain is the access to formal groups and knowledge. Women do express their will and frustration that they are not getting information or can express opinions. In this, all three factors of empowerment mentioned by Kabeer (1999, 2003) are involved, resources, agency and collective action. They are interwoven and affecting each other. In this discussion, empowerment is not only directed towards the changes in the candlenut value chain but also including the empowerment of women in general in the community. Through increasing the access to resources, decision making agency and collective action women would have more opportunities to be active outside the household and manage independent businesses which can be an indicator of empowerment (Kabeer 1999, 2003). These general changes are connected with gendered norms, roles and responsibilities which are dynamic processes created by the actors involved (Sweetman 2013). I could see changing gender dynamics, for example through access to internet and education. Nevertheless, gendered roles and responsibilities are highly present and do affect women's possibilities to access to the productive sphere.

Improving technology is recognized as one factor of social change (Ingram et al. 2015). I have described that women are employed and involved in the highly manual processing of the candlenut. This is something that is common in other value chains as well, women using low-cost tools to process (Coles and Mitchell 2010). If there are tools to be introduced that are more mechanized it can be an opportunity to reduce the time and energy burden on women. Nevertheless, the outcome can be unfavourable for women. Many studies have shown that when a process of cultivating or processing a female crop is becoming more mechanised and involving technology, the responsibility for the crop is shifting to men (Kiptot 2015). This is something important to be aware of while implementing projects (Ingram et al. 2015).

Following, it becomes crucial that women get involved in the introducing step and can participate in trainings as well as get access to the technology. Both women and men in Batudulang have a big potential to process the candlenut further and increase their income from the nut. First, using their methods allows the nuts to be stored for longer without affecting its quality. Second, producing oil can give them even higher income than selling the

de-shelled nut and the broken nuts can increase in value as well. Matius said, *“I hope that in the future they will process the oil, not sell it in the whole nut, and only sell the oil”*.

The production of oil is just starting up in the village, for now it is only one person doing it. I argue that interventions towards empowerment of women would focus on women’s engagement in the processing of candlenut oil and improvements in both drying facilities and de-shelling techniques. Moreover, there are studies pointing to the power shift from women to men when a crop or product becomes more valuable on the market (Doss 1999). There is a tendency for men taking over responsibility and control over the crop. One study on candlenut in Indonesia authored by US-aid (2015) is confirming this:

*“If income from the candlenut trees increases substantially, however, there may be a challenge from the men concerning women’s control of these funds. It is critical for the project to provide interventions to both women and men to address these power relationships and to ensure that women maintain control of the income resulting from their labour” (US-aid 2015 p.13)*

As conclusion; interventions for empowerment and social change have to be carefully directed with a gender sensitivity, which means there has to be knowledge about who is benefiting from the intervention (Ingram et al. 2015). Technology can be one way to reduce the time burden for women, but at the same time, social-cultural repercussions can result from women getting more benefits. To increase the benefits for women, transfer of knowledge is important through ensuring women’s participation in trainings and education. Collective action and groups is often important to reach increase in benefits for women from the value chain. Support and help from governing organs or NGOs can be crucial in order to create a platform for collective action (Ibid).

## 11. Conclusion

In this study I have investigated women's access to resources and their agency in a community through looking at gender norms, roles and responsibilities. I have highlighted some obstacles as well as opportunities for women to be active outside their household and take part in independent businesses. Women's lower access to land, credit, social networks and knowledge compared to men, are four factors I have analysed. Official access to credit and land is creating independence, as well as bargaining power in the household and community. Access to social networks are interwoven with exercising decision making agency in the community. Knowledge and education are closely connected with the opportunity to have a voice in the community, as well as benefiting directly from information concerning production, processing and marketing of agricultural goods. Women's opportunity to make decisions in the household and the community is differing, women have a strong voice in the domestic domain and less possibility to influence politics and administration. While investigating gender dynamics in the candlenut value chain, access to resources and decision making agency have been important analytical tools to deepen the understanding of what is affecting the gendered division of tasks and how women can benefit to a higher extent from the nut.

Cultivating candlenut in an agroforestry system has environmental benefits as well as social ones if the nut can be sold for enough money. Previous studies have therefore focused on how participants in the value chain of candlenut can improve their opportunities to increase income through quality, processing and marketing. In this study, I have integrated a gender perspective to understand if women and men are participating and benefiting differently from the nut. I have found that there is some division in the candlenut value chain between women and men. Women are to a high extent processing the nut through drying and de-shelling. They are also involved in trading businesses in all nodes of the value chain. The processing of candlenut is time demanding and gives little money compared to the effort. Since women are socially connected to the domestic sphere, women's possibilities to have independent income generating businesses close to the household is, therefore, an empowerment possibility in Batudulang. If trainings, technology and other interventions for processing candlenut are targeted towards women, there would be a possibility for social change. Interventions towards women's acting collectively to achieve both efficiency in the processing of candlenut and to get more agency in the community would as well be an empowerment factor important to consider.

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