UNCOVER THE CONCEALED LINK: GENDER & ETHNICITY-DIVIDED LOCAL KNOWLEDGE ON THE AGRO-ECOSYSTEM OF A FOREST MARGIN

A Case Study of Kulawi and Palolo Local Knowledge in Central Sulawesi, Indonesia

Inaugural-Dissertation

zur Erlangung des akademischen Grades
eines Doktors der Agrarwissenschaften (Dr. agr.)
des Fachbereichs Ökologische Agrarwissenschaften
der Universität Kassel

vorgelegt von

Laksmi Adriani Savitri

November 2007

Gutachter:

1. Prof. Dr. Michael Fremerey
Universität Kassel

2. apl. Prof. Dr. Werner Trossbach
Universität Kassel

Beratender Gutachter:

Prof. Dr. Sediono M.P. Tjondronegoro
Bogor Agriculture University

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SUMMARY

Uncovering the Concealed Link: Gender and Ethnicity-Divided Local Knowledge in the Agro-Ecosystem of a Forest Margin. A Case Study of Kulawi and Palolo Local Knowledge in Central Sulawesi. By Laksmi Adriani Savitri. Under a supervision of Prof. Michael Fremerey as the head of the Committee, and Prof. Werner Troßbach, and Prof. Sediono M.P. Tjondronegoro as members.

This research is a study about knowledge interface that aims to analyse knowledge discontinuities, the dynamic and emergent characters of struggles and interactions within gender system and ethnicity differences. The cacao boom phenomenon in Central Sulawesi is the main context for a changing of social relations of production, especially when the mode of production has shifted or is still underway from subsistence to petty commodity production. This agrarian change is not only about a change of relationship and practice, but, as my previous research has shown, also about the shift of knowledge domination, because knowledge construes social practice in a dialectical process. Agro-ecological knowledge is accumulated through interaction, practice and experience. At the same time the knowledge gained from new practices and experiences changes mode of interaction, so such processes provide the arena where an interface of knowledge is manifested.

In the process of agro-ecological knowledge interface, gender and ethnic group interactions materialise in the decision-making of production and resource allocation at the household and community level. At this point, power/knowledge is interplayed to gain authority in decision-making. When authority dominates, power encounters resistance, whereas the dominant power and its resistance are aimed to ensure socio-economic security. Eventually, the process of struggle can be identified through the pattern of resource utilisation as a realisation of production decision-making. Such processes are varied from one community to another, and therefore, it shows uniqueness and commonalities, especially when it is placed in a context of shifting mode of production. The focus is placed on actors: men and women in their institutional and cultural setting, including the role of development agents.

The inquiry is informed by 4 major questions: 1) How do women and men acquire, disseminate, and utilise their agro ecological knowledge, specifically in rice farming as a subsistence commodity, as well as in cacao farming as a petty commodity? How and why do such mechanisms construct different knowledge domains between two genders? How does the knowledge mechanism apply in different ethnics? What are the implications for gender and ethnicity based

relation of production? ; 2) Using the concept of valued knowledge in a shifting mode of production context: is there any knowledge that dominates others? How does the process of domination occur and why? Is there any form of struggle, strategies, negotiation, and compromise over this domination? How do these processes take place at a household as well as community level? How does it relate to production decision-making? ; 3) Putting the previous questions in two communities with a different point of arrival on a path of agricultural commercialisation, how do the processes of struggle vary? What are the bases of the commonalities and peculiarities in both communities?; 4) How the decisions of production affect rice field - cacao plantation - forest utilisation in the two villages? How does that triangle of resource use reflect the constellation of local knowledge in those two communities? What is the implication of this knowledge constellation for the cacao-rice-forest agroecosystem in the forest margin area?

Employing a qualitative approach as the main method of inquiry, in-depth and dialogic interviews, participant observer role, and document review are used to gather information. A small survey and children's writing competition are supplementary to this data collection method. The later two methods are aimed to give wider information on household decision making and perception toward the forest.

It was found that local knowledge, particularly knowledge pertaining to rice-forest-cacao agroecology is divided according to gender and ethnicity. This constellation places a process of decision-making as 'the arena of interface' between feminine and masculine knowledge, as well as between dominant and less dominant ethnic groups. Transition from subsistence to a commercial mode of production is a context that frames a process where knowledge about cacao commodity is valued higher than rice. Market mechanism, as an external power, defines valued knowledge. Valued knowledge defines the dominant knowledge holder, and decision. Therefore, cacao cultivation becomes a dominant practice. Its existence sacrifices the presence of rice field and the forest. Knowledge about rice production and forest ecosystem exist, but is less valued. So it is unable to challenge the domination of cacao.

Various forms of struggles - within gender an ethnicity context - to resist cacao domination are an expression of unequal knowledge possession. Knowledge inequality implies to unequal access to withdraw benefit from market valued crop. When unequal knowledge fails to construct a negotiated field or struggles fail to reveal 'marginal' decision, e.g. intensification instead of cacao expansion to the forest, interface only produces divergence. Gender and

ethnicity divided knowledge is unabridged, since negotiation is unable to produce new knowledge that accommodates both interests. Rice is loaded by ecological interest to conserve the forest, while cacao is driven by economic interest to increase welfare status.

The implication of this unmediated dominant knowledge of cacao production is the construction of access; access to the forest, mainly to withdraw its economic benefit by eliminating its ecological benefit. Then, access to cacao as the social relationship of production to acquire cacao knowledge; lastly, access to defend sustainable benefit from cacao by expansion. 'Socio-economic Security' is defined by Access.

The convergence of rice and cacao knowledge, however, should be made possible across gender and ethnicity, not only for the sake of forest conservation as the insurance of ecological security, but also for community's socio-economic security. The convergence might be found in a range of alternative ways to conduct cacao sustainable production, from agroforestry system to intensification.

BIODATA

Born in Bandung in October 9th, 1967, Laksmi Adriani Savitri is the first daughter of four children of Mohamad Syahbuddin and Ieke Irdjiati. She graduated from Bogor Agricultural University, majoring in Landscape Architecture in 1991. Three years later married to Yudistira Hayat, on December 11th, 1994 in Jakarta, and has lived in Bogor ever since.

Her professional career began in 1991 by working as a landscape planner for an architectural consultant in Jakarta. Then, she continued the same profession in the Kemayoran Board of Authority from 1992-1997. In 1997, due to her increasing interest and commitment to nature conservation and its embedded social issues, she worked for Wetlands International-Indonesia Programme as the Head of Information, Training and Community Development.

In 2001, through a competitive process she won an award as a Humphrey Fellow in a professional development program called Hubert H. Humphrey Fellowship Program funded by US Department of State. This program has given her opportunities to study and work for a year in Natural Resource Department, Cornell University, Ithaca, New York; Chesapeake Bay Foundation, Maryland; and Industrial Shrimp Action Network, Seattle.

In 2004, she graduated from IPB's Graduate School specialising in Rural Sociology. Before then, from 2003 she worked for the Center for Agrarian Studies in IPB, and the research cooperation program between Gottingen University-University of Kassel, in Germany and Bogor Agricultural University and Tadulako University in Indonesia, namely STORMA (Stability of Rain Forest Margin) which has enabled her to complete her master and doctoral research. In 2005, she was appointedas a Board member of Sajogyo Institute, where she has remained until now.

ACKNOWLEDGEMENT

The thesis from start to finish has been made possible only by the strength that God gives, along with help, cooperation and support from many special persons. I am thankful for the scholarship provided by Russell E. Train Fellowship of WWF's Education for Nature Program. The field work of this study was carried out in the framework of the transdisciplinary research programme 'Stability of Rainforest Margins in Indonesia' (STORMA) funded by the German Research Foundation (DFG-SFB 552). The field research would not have been possible without logistic support from STORMA's coordinating teams in Bogor and Palu.

I gratefully acknowledge full support from Prof. Michael Fremerey, and ISOS (Institut für soziokulturelle Studien) Universität Kassel in Witzenhausen, including Prof. Werner Troβbach and Prof. Sediono M. P. Tjondronegoro for their thoughtful advice. I furthermore thank Momy Hunowu, Ati and Sri for fieldwork assistance; Tari, Oyong and my family in Basuki Rahmat Palu for their kindness support; Bapak and Ibu Nurhasan, Mama and Papa Ori in Bolapapu, also Bapak and Ibu Baharuddin in Sintuwu. Without their trust and support, this study would never have been realised in writing. My gratitude is to all families and friends in Bolapapu, Sintuwu, Toro and Marena who have allowed me to become their learning partner.

I am especially grateful for the strong and continous support from my husband, Yudistira Hayat and the whole family.

For Prof. Sajogyo and my sisters and brothers in Sajogyo Institute, this work is dedicated to you.

CHAPTER 1

INTRODUCTION

PROBLEMS ADDRESSED

The incorporation of local knowledge into natural resource management has been increasingly accepted, since a centralised and expert-led control over nature has not been successful in stopping natural resource depletion, including in Indonesia. According to the Global Forest Watch[1], the country is losing nearly 2 million ha of forest every year, through legal and illegal logging, clearance for plantations and agricultural estates, and fires. Acknowledging the importance of local communities' role as resource managers, the contemporary resource management strategy emphasizes on grassroots approaches, sustainability, empowerment, and participation. The strategy, however, often takes an uncritical approach to local knowledge. One area where this is apparent is in the lack of attention paid to the gender and/or ethnicity-divided nature of local knowledge (Wayland 2001).

Gender oriented research indicates that men and women tend to possess different kinds of knowledge because they have different roles in production activities (Wayland 2001; Kelkar & Nathan 1991; Agarwal 1994a). In many cultures and ethnicities, women have specialized knowledge about farming, healing, and resource management that is unique to them. These differing bodies of knowledge are linked to culturally constructed gender roles. As men and women perform their daily activities, they accumulate knowledge about various topics and develop expertise in differing areas.

The knowledge difference between genders in different ethnicities leads to different bargaining strategies and power relationship in decision-making

[1] http://www.globalforestwatch.org/english/indonesia/overview.html

processes of natural resources utilisation. Hence, resource use and management is a result of renegotiation of intra- and inter-household (and gender) based on factors such as region, ethnicity, socio-economic standing and age (Jewitt, 2000). Jewitt further suggests that it also glosses over the uneven distribution of environmental knowledge, frequently resulting from inequalities in land ownership or resource management systems which influence people's ability to utilise or expand their knowledge bases.

The inequality is furthermore reflected by the decision-making process in resource use, which is not always produced as a result that is inclusive to women or certain ethnic group participation. Because they are not part of the decision making process, their knowledge that could have provided a counterweight to the dominant knowledge is neglected. In effect, community's socio-economic and ecological security could be at stake. In the context of shifting mode of production, where knowledge about subsistence production is being regarded as less important than petty commodity production, deforestation often represents the result of cash crop domination.

The West African sub region, for example, is host to the number one world's main cacao producing countries, including Côte d'Ivoire, Ghana, Cameroon and Nigeria. These countries are undergoing major deforestation processes through progressive conversion of forests into cacao fields (Ruf and Zadi, 1998, Padi and Owusu, 1998 in Asare, 2006). Indonesia is not an exception. Ruf and Lançoln (2004) stated when cacao has widely adopted as a cash crop in 1980s, cacao expansion in Indonesia sacrificed the existence of forest cover, dry-land farm, fallow land, and fruit trees. Moreover, it shows a tendency to convert wet-rice fields, which might lead to nationwide food insecurity. Data from Agricultural Census in 2003 show that rice conversion for cash crop plantation has reached almost 200.000 hectares in Indonesia.

Agriculture commercialization through cacao production has also contributed to the social formation of landed and landless farmers in Sulawesi (Li, 2002 a), which may indicate an increase of poverty. Furthermore, cacao expansion has triggered the deepening of Green Revolution through intensive production inputs use, such as fertiliser and pesticide, in the upland agricultural system (Ruf and Lançoln 2004).

The widening socio-economic gap due to poverty increase, substantial threat to food security, and massive deforestation are problems that need essential investigation from the decision-making aspect, particularly at the household and community level. In such a context, many studies have touched on the issue of gender, knowledge, and power in different ethnicities (Shiva 1992; Kelkar & Nathan 1991; Jewitt 2000), also the compelling phenomena of gender and agrarian change (Agarwal 1994; Razavi 1994; Saptari & Holzner 1997). Taking agrarian change as a context, my research looks into rice and cacao production phenomenon in Central Sulawesi as a focus on analysing knowledge, gender and power constellation within communities of various ethnic groups.

The study describes gender and ethnicity differences in how knowledge is obtained (acquisition), redistributed (dissemination) and how local knowledge on rice farming and cacao production is utilised within different communities that are assumed to have undergone different processes of shifting mode of production.

STATE OF THE ART

Local Knowledge and Natural Resource Utilisation

The idea that "knowledge matters" has become a mainstream in the development strategies (Geiser *in* Flury & Geiser 2002). However, to come to this point, knowledge has been categorised and ranked at least based on two epistemological grounds. Firstly, **tacit knowledge** that is deeply rooted in action,

procedures, routines, commitments, ideas, values, emotions, subjective insights, intuition, and hunches, which are highly personal, and hard to formalise (Little et al. 2002). Some researchers put local knowledge in this category, as Li (*in* Ellen et al. 2000) cited Giddens' perspective: "everyone has practical, usually tacit knowledge of their social and physical environment, a competence reflected in 'knowing how to go on' in the routine activities of everyday life, and the capacity to improvise and innovate when necessary". Secondly, **explicit knowledge** that can be expressed in formal and systematic language, and shared in forms of data, scientific formulae, specifications, manuals, and such like, easily processed, transmitted and stored. Western knowledge is epistemologically viewed as explicit knowledge (Little et al. 2002).

The dichotomy between local/traditional/indigenous knowledge and western or scientific knowledge has made scientific knowledge more valued knowledge over local knowledge. In natural resource management, this perspective has displaced the important value of farmers and rural people knowledge in this field. It is commonly known that indigenous peoples throughout the world, occupying different agro-ecological zones have generated vast bodies of knowledge related to the management of their environment. Such knowledge is characterised as: a) linked to a specific place, culture or society, b) dynamic in nature, c) belongs to groups of people who live in close contact with natural system, d) contrasts with "modern" or "Western formal scientific" knowledge (Studley, 1998).

Appleton et al. (1995) describe local knowledge as a knowledge generated by communities overtime to allow them to understand and cope with their particular agro-ecological and socio-economic environment. Appleton et al. go further by emphasizing that local and western scientific knowledge are sciences generated and transformed through a systematic process of observation, experimentation and adaptation.

Like other scientific systems, local knowledge systems develop technology and management practices to improve the quality of life of people. However, local knowledge systems differ fundamentally from those based on modern science and technology in that they are managed by users of the knowledge, and they are holistic. Whereas science seeks to theoretically separate its knowledge from the culture in which it is produced, local knowledge remains inherently associated with, and interpreted within the specific culture in which it is produced (Fisher, 2000). Although both bodies of knowledge are structured by systems of classifications, sets of empirical observations about local environments, and systems of self-management that govern resource use, they differ in their capacity to deal with local problems and in the degree to which they are accessible to the members of the social group charged with resource management and production (Fisher, 2000).

However, beyond this dichotomy, Little et al. (2002) emphasizes that knowledge is created through interactions between tacit and explicit knowledge, rather than from tacit or explicit knowledge alone. Thus, instead of belonging to a different category and rank, both local knowledge and scientific knowledge are created from, and consist of, tacit and explicit knowledge. Contemporary development researchers even indicate that such dichotomy has misled the development perspective (Chambers 1983; Agrawal 1995; Long 2001), because knowledge emerges as a product of the social interaction and dialogue between specific actors and actors' lifeworlds. It is also a joint product of the encounter and fusion of horizons (Long 2001) as it is created in the interaction amongst individuals and organisations (Little et al. 2002).

Based on those statements, local knowledge is not constructed by a single knowledge system. It is an end product of knowledge interfaces, including an interface of gendered knowledge. To sum up, it is generally accepted today that different (groups of) people can have different knowledge regarding natural

resources, the variables defining the specific nature of resources in a given locality, and the way these resources should be used (Geiser *in* Flury & Geiser 2002). Local knowledge, then, defined in this study as a system of knowledge comprises locally stored experience passing down and adapted from generation to generation, as well as knowledge acquired from external sources and transformed into locally meaningful bits of information (Fremerey, 2002).

The role of knowledge regarding natural resource use should be studied as 'contextualised', and as only one dimension that impacts people's practice (Geiser *in* Flury & Geiser 2002). Although knowledge and actual practice are linked by ways of knowing (Little et al. 2002), 'coping skills', and motives (Geiser *in* Flury & Geiser 2002), but the structural and institutional context may strongly influence the use of skills, and farmer's motives in resource utilisation. For instance, farmers can 'choose' whether they want to produce to meet subsistence needs or market demands, or both. They can also choose whether to apply certain knowledge, or certain skills, regarding cultivation practice. However, such choices are determined by farmers' motives, and these motives are influenced by the prevailing structural and institutional context, such as landowner decisions, household needs priority, state laws, market mechanisms, etc.

If we use Foucault's (1994) line of reasoning about how knowledge can transform 'nature' into 'natural resources', we need to see that "man, in his being, can be concerned with the things he knows, and know the things that, in positivity, determined his mode of being". Therefore, the ecological process is not a mysterious domain, which human knowledge works to explain. Instead, it is a historical artefact of expert management that is largely constructed by techno-scientific interventions, the intensification of resources, the simulation of spaces, the incitement of discoveries, the formation of special knowledges, the strengthening of controls, the provocation of resistances, which all can be linked to one another that produce 'the empiricities' of farmer's knowledge. This implies

that what farmers have in their knowledges to construct their modes of being, is not merely a **technical knowledge** on how to plant, what commodities, when to sell, etc.; but also an **institutional knowledge** (e.g. power relation, state laws, market mechanism, where to find a support, etc.), as well as **strategic knowledge** on how to influence wider structures or how to access institutions (Geiser *in* Flury & Geiser 2002).

All of those knowledge types ,embedded in their institutional and cultural context, are assets that become a capital for the farmer, when it is judged as valuable. Often times the value is determined by the economic gain or productive forces that can be attained from such knowledge. This is the point where knowledge gives the economic power to the possessor. As Luke (1999) cited Foucault that '"knowledge formation helps to steer power formation, like decision-making bureaux of liberal democratic states and capitalist firms. There can be no possible exercise of power without a certain economy discourse of truth which operates through and on the basis of this association".

To determine resource utilisation, farmers and other resource users need power in the sense to control resources and a capacity to act, with a goal to ensure their livelihood security (Geiser *in* Flury & Geiser 2002). In these terms, economic power may become the driving force behind modes of resource utilisation practice. Yet, farmers need to accumulate and distribute technical, institutional, and strategic knowledge to gain control in the decision-making at the household and community level.

Gender, Ethnicity, Power and Valued Knowledge in Resource Utilisation Practice

Gender is a system of social practices within society that constitutes people as different in socially significant ways and organises relations of inequality on the basis of the difference (Ridgeway & Smith-Lovin 1999). The continued, everyday acceptance of the gender system requires that both people's experiences and

widely shared cultural beliefs confirm for them that men and women are sufficiently different in ways that justify power differences and privilege. Gender is distinctive from other types of inequalities, however, in that its constitutive cultural beliefs and confirmatory experiences must be sustained in the context of constant interaction, often on familiar terms, between those advantaged and disadvantaged by the system (Ridgeway & Smith-Lovin 1999).

In his structuration theory, Giddens (2001) explains that social structure and human action do not stand in opposition to, but rather presuppose one another. Departing from 'duality of structure' Giddens defines power as implicated at all levels of social life, from the level of global cultures and ideologies to the most mundane levels of everyday interactions. Therefore, gender differences are rarely neutral – in almost all societies, gender is a significant form of social stratification. The prevailing division of labour that is produced from gender interaction has led to men and women assuming unequal positions in terms of power, prestige and wealth (Giddens 2001).

Even in a relatively egalitarian gender relationship in South East Asian community, Li (1998) evidenced an inequality since South East Asian women lag behind men in power and prestige, which derived from the activities women engage in or not. The economic activities that women engage in signify weakness, but not power. The real power found in spiritual domain that men easily access. In this case, women's knowledge in economic domain (e.g. being a trader) does not give a privilege of power, since the authority comes from a spiritual domain (e.g. being a healer).

According to Atkinson et al. (1990), in island Southeast Asia, to understand gender, we must understand local ideas of power and prestige. So, we need to understand how men and women defined and mapped onto the prestige and power system. Various culture and ethnicity in Indonesia constitutes different context of gender norms and interaction. Keeler's research (in Atkinson et al.

1990) found that Javanese women could manage economic resources and social relations, yet achieve less prestige than men achieve. In other hierarchical ethnic group, women who are of high status by birth outrank men who are of low status by birth, whether by material or symbolic criteria (Atkinson et al., 1990). On the contrary, Atkinson also found that in Wana culture, the value of human 'sameness' is little affected by male-female difference. Clearly, ethnicity is an important element in identifying power inequality within gender system.

Gender/ethnicity context of unequal power also extends to the possession of knowledge. For instance, according to Shiva (1992), Indian women possess greater agro-ecological knowledge than men do, and act as major agricultural innovators, as well as being the main 'selector and preservers' of seed. In contrast, Kelkar and Nathan (1991) found that even in areas like Jharkand where gender relations are significantly more egalitarian than in plains Hindu society, men not only possessed better-developed ecological knowledge, but also are primarily responsible for agricultural decision making.

The possession of certain knowledge paves a way to a status and authority. Therefore, certain bodies of knowledge come to be privileged over others because of the power adhered to such knowledge (Foucault 1976). As described by previously mentioned findings (Shiva 1992; Kelkar & Nathan 1991), agro-ecological knowledge in an agricultural community is a privileged or valued knowledge, since by mastering such knowledge the possessor is able to hold a certain degree of control over their livelihood. The research further demonstrates that local agro-ecological knowledge is gender divided. Thus, using this line of reasoning, when valued local knowledge is possessed by the privileged gender, it will automatically bring more power to the possessor, and less power to the Other.

Gendered Knowledge and Decision-making

In a process of acquiring knowledge in resource management, Agarwal (in Visvanathan et al. 1997) states that knowledge about nature is experiential in its basis, the division of labour, property and power which shape experience also shaped the knowledge based on that experience. She further suggests that women's and men's relationship with nature needs to be understood as rooted in their material reality, in their specific form of interaction with the environment. In this conceptualisation, therefore, the link between women and the natural resources can be seen as structured by a given gender and class organisation of production, reproduction and distribution.

Jewitt's finding in Ambatoli, India (2000) evidenced the unequal distribution of knowledge between genders, particularly agro-ecological knowledge. This inequality has put women outside the production decision-making arena, because the degree to which Ambatoli's women can develop agro-ecological knowledge is dependent on how far their husbands and parents-in-law allow them to contribute to the field-based agriculture. This circumstance automatically puts the control of production decision-making in men's hands, because they have a direct access to the land and resources, which widely opens the opportunity to accumulate agro-ecological knowledge. Because they have the knowledge, they gain the expertise that gives them an authority to make a decision on agricultural production.

In different culture and ethnicity, men and women's participation in household decision-making also varied. Pudjiwati Sajogyo (1983) findings in her research about Javanese men and women authority in household decision-making shows that women do not overtly hold authority, but their power to influence decisions is covertly exercised in intra- and inter-household decision-making.

When the authority to decide is at hand, the power to exclude or include others follows. In the context of agro-ecological knowledge as a valued knowledge, the decision either to plant or not, which commodity to plant, how many labour to use, where to sell, etc., are made by the farmer who certainly has the expertise and, therefore, the authority to decide, be it as a man or a woman. In the process of decision-making at the household level, as an expert, he or she will have the power to include or exclude other household member from the process. As Guyer (1980) points out that household is not an undifferentiated grouping of people with a common production and consumption function, but more of systems of resource allocation where the pattern of decision-making varies based on culture.

Decision-making is part of household strategies, and decisions are made with a collective good in mind, other household members must accept those decisions and carry them out. Individuals must sublimate their own wishes for this larger goal (Wolf *in* Visvanathan et al. 1997); personal autonomy is subsumed under the constraints imposed by family needs (Fernandez-Kelly, 1982). Since few family systems operate in democratic fashion, household strategies necessarily embody relationship of power, domination and subordination (Wolf *in* Visvanathan et al. 1997).

When a decision making of production and resource allocation at the household level excludes the needs and priorities of individual members, which in many cases are the needs of the female members, the inequality is to be seen as acceptable in many cultures. For example, in rural Sundanese culture, the best food is served for the father and children, education is prioritised for the sons, and girls tend to be married at a young age. However, many researchers assert that rural women are in fact much less accepting of gender inequality in their perceptions and understanding than their overt behaviour patterns suggest (Agarwal 1994b). The appearance of compliance need not mean that women

lack a correct perception of their best interest; rather it reflects a long-term survival strategy for their future interest; as Agarwal (1994b) emphasizes that compliance need not imply complicity. Therefore, it is important to identify the existence of the power struggle in the household decision-making process, because it can suggest that not all suppressed sides are powerless, since resistances against domination can take many forms. More importantly, the struggle itself might be the key to ensure livelihood security and sustainability.

Furthermore, households usually belong to other corporate groupings, such as neighbourhood, kinship, church, etc. These relationships carry with them patterns of access to resources, and obligations which affect decisions about agricultural production. It is this patterning which is referred to by the term 'inter-household' (Feldstein & Poats 1990). In the inter-household relationship, certain arrangements concerning access and utilisation of resources become institutionalised, and then accepted as traditions and norms, like inheritance system. In many traditional communities, inheritance system contributes significantly to the pattern of access and control of natural resources (e.g. paddy field, cacao plantation, *Agathis sp*. tree that produces resin, etc.). For example, in Kulawi community inheritance system is gendered-defined; it distinguishes inherited property to men (sons) and women (daughters). The daughter's part of inheritance is still assets, such as the house including all things inside, paddy field, gold, and *mbesa,* while dry-land farm, *Agathis* trees in the forest, and cattle are son's part of inheritance. Thus, the cultural norm has already determined the access of men to the forest and dry-land farm from the outset (Savitri 2004).

Clearly, gender interaction is an arena where a face-to-face encounter of social actors with different gender, interests, resources and power occur. As Foucault (in Luke 1999) asserts that "every human relation is to some degree a power relation. We move in the world of perpetual strategic relations". So, when looking for power, Villarreal (in Long 1992) suggests that we should see struggle,

negotiation, and compromise. Power is not only about a capacity of individual to impose his or her own will upon others, but also the capacity of 'the victim' to response upon such pressure; as Foucault (in Luke 1999) explains, there are no relations of power without resistance, and it is indissociable from contestation and struggle. In terms of action, Agarwal (1994b) believes that such concepts would call for a struggle over both resources and meanings. It would imply grappling with the dominant groups who have the property, power, and privilege to control resources, and these or other groups who control ways of thinking about them, via educational, media, religious and legal institutions.

Social relations of Production and Knowledge Interface

The central notion of actor-oriented perspective on knowledge is *knowledge interface***.** Long (2001) uses the term 'interface' as a description of the process of merging and the combination of actors and perspectives is involved in social interface, which through accommodation and conflict generate newly emergent forms and understanding. Hence, social interface is defined as critical points of intersection between different social fields, domains or life-worlds, where social discontinuities based upon differences on values, social interests and power (Long, 2001). Interface analysis aims to elucidate the types of social discontinuities present in such situations and to characterize the different kinds of organisational and cultural forms that reproduce or transform them.

In the context of agro-ecological knowledge, social relations of production can serve as an arena where the interface of local agro-ecological knowledge between different gender occurrs. Gender differences in the farming system are rooted in social organisation and are supported by cultural beliefs and values. We also know that, in many cases, despite the persistence beliefs about what people do or should do, gender roles are in flux (Feldstein & Poats 1990). This understanding has encouraged recognition that division of labour in farming

system is socially or gender defined, not sexually determined. Within this context, legitimation, power and authority are factors that interplay in such arena, because households are systems of resource allocation (Guyer 1980) where decision-making varies based on culture. In some places, households fit the standard model of single decision maker or benevolent dictator. In other areas, household decisions are shared; consultation takes place between particular members or all members (Feldstein & Poats 1990). And in other places, the degree of participation of some household members in enterprises controlled by others results from internal bargaining (Jones 1984). In short, the form of household and patterns of decision-making cannot be assumed. What we face is complexity, not homogeneity.

Furthermore, because bodies of knowledge are always embedded in a certain context, the locally situated agro-ecological knowledge is always integrated to its local socio-economic, political and cultural, as well as biophysical context. One of the most relevant contexts that may dialectically shape and is reshaped by the social relations of production is the mode of production. Yet, giving this as a context, the mode of production itself is part of a wider economic and political setting at the macro level.

In a context of local politics, women are rarely represented in the village decision-making regarding resource use. Although in many cases, even the village institution itself is not represented in the decision of resource utilisation that is often determined by the suprastructure institutions, such as the forestry department or national park authority or even the intervention of international institution in development project, like in a case of Gambia wetland project (Carney *in* Peets and Watts 1996). Irrigated rice development in Mandika, Gambia, has undermined women's customary access to rice land for income generation while enabling male household heads to capture the surplus value. The Gambian state intervention, which was supported by IFAD (International Food

and Agricultural Development), had ruptured the relationship between women's knowledge system and agronomic expertise that had regulated wetland cultivation for centuries. This case shows a clear impact of women's exclusion in the agricultural production decision-making process at a macro level, which creates gender conflict that produced repeated delays and lower yields of Gambia's rice production.

Clearly, the production decision-making process, negotiation, and compromise often take place in the asymmetrical relationship. Moreover, the role of development agents in inducing and/or endorsing new meanings towards certain commodity or techniques or institutional arrangement, might also be decisive in such relations. Therefore, the role of either government agencies and/or non-governmental organisations (NGOs) could be vital in such a framework.

CONCEPTUAL FRAMEWORK

Knowledge is Power

Departing from the interrelation between gender, knowledge, and power concepts, the focus of my study is placed on the social relations of production in rice farming and cacao cultivation. I concluded that social relations of production is the arena where the interface of gender and ethnicity-divided agro-ecological knowledge assumed to occur. Then, rice field, cacao plantation and the forest are the agro-ecological contexts, where the shifting mode of production from subsistence to petty commodity articulates the definition of valued knowledge.

Taking Long's actor-oriented perspective, my research approaches production of knowledge from micro experiences of men and women on the everyday basis of gender interaction that is framed in ethnicity. I perceive gender

relations of production as a reflection of men and women's knowledge in farming technical know-how, as well as social knowledge in organising farm production. Gender division of labour, landowner and tenant relation, landlord and labour relation, kinship and reciprocity that constitute the relations are some of many forms of farmers' social knowledge.

Farmers' forms of interaction with external or supra-rural institutions, either as a representation of government (State), private sector (Market) or non-government institutions (Civil Society) are regarded as reflections of farmers' strategic knowledge.

As gender and ethnicity are used to differentiate actors, the embedded concept of power in gender/ethnicity relations is unequivocal. Gender/ethnicity interaction constitutes a power relation. That is where the triangle of knowledge-power-gender needs instruments of Long's interface analysis, Foucault's conception of power, and feminism to reveal the negotiated force field.

Long (2001) uses interface analysis to reveal the 'multiple realities' of intervention, as well as the struggles that arise out of differential perceptions and expectations toward development projects among the actors involved. Intervention[2] in Long's definition comes with a vertical notion: from the state to the peasants as a planned intervention. My research attempts to decentre the notion of intervention. Away from the mainstream, development intervention - in my research term - does not exclusively deliver through interactions between the development agent and the farmers. It also takes the form of diffusion of innovation where one farmer becomes an agent that enrols other farmers to his/her 'project'. My research, therefore, uses interface analysis to deconstruct a 'perceived-to-be egalitarian fusion of horizons', so that is seen for what it is – namely, a socially constructed and negotiated process.

[2] Intervention is defined as practices to control the pattern of local economic and political development (Long 2001: 38)

Interface interactions presuppose some degree of common interests, but also have a propensity to generate conflict due to contradictory interests and objectives or to unequal power relations (Long 2001). Choosing interface analysis means incorporating power to highlight not only the mechanism of knowledge construction, but also how knowledge constitutes power. Foucault (2002) asserts that in the construction of knowledge there are 'rules' that defines truth, and such rules are formed by external power, which are located outside the knowledge itself. When it is accepted as the truth, it is valued as knowledge. The challenge is to discover the external power that construes the privilege embedded in knowledge, as well as to understand how such privilege is powerful to control knowledge dissemination or accessibility to this privileged knowledge.

Since the interface is the arena where negotiation, compromise, and strategies take place in order to gain legitimation, authority, and power over resource use (Long 1992), then my study emphasizes gender interaction framed by ethnicity, where technical, and social knowledge of subsistence and petty commodity production is constituted in a context of '*Revolusi Cokelat*' in Central Sulawesi.

Feminism and Poststructuralism

Feminism asks concrete questions about social injustice in gender debate. Feminist inquiry is distinguished by analysis of the centrality of gender in power relation; it has shifted from 'working on women' to 'theorizing gender' (Maguire in Reason and Bradbury 2001). My research uses gender not only as a lens, and as a way of knowing, but also as a way to see the reality of men and women's knowledge encounters. Therefore, feminism is important to sharpen the analysis of social injustice at all level and dimension, including inter-ethnic relations.

Foucault offers an interpretation of discourse that is not confined merely to text, but focuses more on the field level where thoughts are practiced, what he

calls ‘discursive practice’ (Foucault 1991). Discursive practices point out that the speaking subject’s statements derive from the practical domain where it is situated in temporal, contextual, and relational fields. The intersection between feminism and poststructuralism, therefore, provides feminism with an analytic and critical tool to construct a relation between experience, present practice and knowledge.

Feminism embraces experiences as a source of legitimate knowledge (Maguire in Reason and Bradbury 2001). In my research, women's and men's experiences -as discursive practices- reflect their knowledge, and vice versa, knowledge constructs men’s and women’s experiences, including the agro-ecological knowledge. In discursive practice, all practice is disciplined and regulated. It takes form as cultural 'statements' expressed in language, material objects or social practice. Feminism offers a perspective to identify, then, understand, how knowledge, material objects and social practice convey injustice. Injustice social relations may not only affect the position of subordinate party, but it may also impinge on a wider scale of deprivation. Such connections might not be discovered, if we do not put a soul of feminism into the gender analysis.

Poststructuralism assists feminism to shift from analysing power in social structure to analysing it in discursive domain. Foucault’s power concept enables feminism to analyse power in ‘day by day politics’ of gender relation. Therefore, negotiation, struggle, and resistance are central in my research in order to avoid a deterministic approach of power in term of domination and subordination. Power is to be seen as a potentially positive or enabling force. Foucault argues that power is not a zero sum game between powerful and powerless, but a negotiating force field between the powerful and less powerful. Power is not centralized, but located everywhere. Power invites resistance, and resistance is a form of power, which can be overtly or covertly expressed. In this sense, power

means relational power, it does not inhere in institutions or persons, but is practiced in a day-to- day social interaction.

Putting this power concept in the mode of production analysis, we would find what Moore (1973) called as 'semi-autonomous' field of action, where the co-existence and interpenetration of different type of relations of production occurs. Within this 'semi-autonomous' field we are able to explain how and why the persistence of rice as subsistence agriculture still dominant in a powerful domination of cacao as a commercial commodity.

GUIDING HYPOTHESES

White (1989) emphasizes that agrarian change is not only about whether some peasants become richer than others, but it is also about the changing kinds of relations between them (or between peasants and non-peasants, including extra-rural groups). My previous research in Bolapapu, Central Sulawesi (Savitri 2004) found that when the mode of production has shifted from subsistence to petty commodity production, which is from rice to cacao farming as part of cacao Revolution or '*Revolusi Cokelat*' (Sitorus 2002), the pattern of social relations of production tends to shift from women to men's domination, since rice farming is women's and cacao is men's domain. Consequently, women's knowledge in rice farming is not a valued knowledge anymore, as the definition of value has shifted from subsistence to market value. As a result, the knowledge about rice farming is undermined, whereas this knowledge could be the key to forest conservation.

Rice farming in intensive need of continuous water supply constructs a direct link to the existence of forest cover. The fact that some women in Bolapapu responsible for maintaining rice farming are well aware of this hydrology link; this could lead to a hypothesis that women hold the knowledge that link the importance of the forest to their livelihood security as well as the sustainability of

the forest margin. However, since such a link is not visible in cacao farming, which is men's domain of dominant knowledge, it can be hypothetically concluded that in Bolapapu the interconnectivity between rice field and the forest is somewhat concealed, which would bring further cacao expansion to the forest.

Assuming that agriculture commercialisation process enters at a further point and pace in Sintuwu, this multiethnic community may response to rice-cacao-forest linkage differently. Hypothetically, due to domination of cacao market value, rice farming is not able to reveal its interest in forest conservation, which might lead rice farmers to agree to convert or sell their rice fields for cacao plantation. In addition, further forest conversion could be unstoppable. In this case, rice dependent gender and ethnic groups will stay longer in poverty or less powerful position, unless, cross-ethnic and gender knowledge diffusion is given a space.

Overall, crop commercialisation will dominate household and community level decision-making in determining land use change, regardless of gender and ethnicity. However, to mediate market power with conservation, sustainable cacao farming may reconcile differences in defining farmers' socio-economic security and ecological sustainability.

At the knowledge level, dominant decision hypothetically reflects dominant knowledge, which will be manifested in the land use composition. The decision of rice and forest conversion to cacao plantation is a statement of cacao production as a market valued knowledge. When cacao knowledge is valued higher than others, it will leave knowledge about rice production and forest ecosystem as a less-valued knowledge. This constellation will depict a less powerful position of rice knowledge holders.

As gender and ethnicity embedded, dominant and less dominant ethnic groups are to be placed in the arena of imbalance power/knowledge interface. Power invites resistance. Lesser gender and ethnic group position resist

domination by pushing various forms of struggle in order to create a negotiation space. Through cross-gender and cross-ethnic negotiation, a link between dominant and less dominant knowledge can be uncovered.

RESEARCH QUESTIONS

Addressing the above problems, the process of inquiry evolved around four major questions, i.e.

1. How do women and men acquire (i.e. what the mechanisms developed to obtain information), disseminate (i.e. what is the redistribution of knowledge), and utilise (i.e. what is the knowledge manifested in practices) their agro ecological knowledge, specifically in rice farming as a subsistence commodity, as well as in cacao farming as a petty commodity?
    a. How and why do such mechanisms construct different knowledge domain between gender? How does the knowledge mechanism apply in different ethnics?
    b. How does it impinge on gender and ethnicity based relations of production?
2. Using the concept of valued knowledge in a shifting mode of production context, is there any knowledge that dominates others?
    a. How does the process of domination occur and why?
    b. Is there any form of struggle, strategies, negotiation, and compromise over this domination? How do these processes take place at a household as well as community level?
    c. How does it relate to production decision-making?
3. Putting the previous question in two communities whose different point of arrival in a path of agricultural commercialisation, how do the processes of struggle vary? What are the bases of the commonalities and peculiarities in both communities?

4. Assuming that those processes do vary, depending on its mode of production, how do the decisions of production impinge on rice field - cacao plantation - forest utilisation in the two villages? How does that triangle of resource use reflect the constellation of local knowledge in those two communities? What is the implication of this knowledge constellation to the cacao-rice-forest agroecosystem in the forest margin area?

OBJECTIVES

In essence, this research is a study about knowledge interface that is aimed to understand knowledge discontinuities, the dynamic and emergent characters of struggles and interactions within a context of gender system in different ethnicity. The knowledge discontinuity is placed in the phenomenon of shifting mode of subsistence to petty commodity production in order to generate understanding about the impact of crop commercialisation toward land use change in the forest margin area.

In detail, the research is meant to reveal the power/knowledge inequality based on gender and ethnicity that drives the process of decision-making in the household and community level with regard to subsistence and cash crop production. Furthermore, the comprehension of power/knowledge inequality is expected to generate deeper understanding about the process of deforestation and rice fields' conversion in the domination of market-valued knowledge. Being able to produce better knowledge about the phenomena of cacao Revolution, a means of converging socio-economic and ecological security is likely to be to be discovered and realised.

CHAPTER 2

METHODOLOGY

'All social reality is micro experience;
but there are temporal, numerical, and spatial aggregations of these experiences
which constitute a macro-level of analysis' (Collins 1981:99).

RESEARCH PARADIGM

As this is gender oriented research, my aim is to balance the perspective in order to avoid gender bias. Feminist scholars believe that most of conventional social research tends to view social reality through the eye of men, and often neglect the potential difference that might be found in women's perspective (Amal *in* Ihromi, 1995).

To accommodate such research, a critical theory in a more interpretative approach, or conversely put, an interpretative study in a more critical perspective (Agger, 2003) is used as a paradigm for this study. By using interpretative approach, I expect to understand men's and women's construction of their agro-ecological knowledge. The critical theory will keep me from falling into relativism in interpretivist thinking, but will allow me to accep the subjectivity of the known while recognizing my own subjectivity as the knower. In this sense, local knowledge, particularly agro ecological knowledge as a social reality being studied is presented as a reality constructs co-operatively both by the owner and the researcher. Hence, it is produced as a result of subject – subject relationship between the researcher and the research subject (Denzin and Lincoln, 2000).

Consequently, during the research process it is important to note that my subjectivity as the knower may influence the known, but also their subjectivity may alter my perspectives toward many aspects, especially on gender norms, reciprocity values, and inter-ethnic relation. In a Kulawi women workshop that I

was invited to as a speaker, and then asked to be a facilitator, it is inevitable that I communicate my standpoint on women's position in decision-making process at a household level regarding land resource use. I proposed that women have equal rights to those of men to voice their thoughts in the use of their land. One response came to question about the right, as in her belief women are destined (Ind. *kodrat*) to obey men, because man is the head of the house (Ind. *kepala keluarga*). This leads to a discussion of what *kodrat* is. I assert that *kodrat* is something that we as human will not be able to change, e.g. it is women's *kodrat* to be able to become pregnant, give birth, and breast feeding her child, but it is not at all *kodrat* to be in total control of our husbands to do or to decide things in our household. Men's position as the household head is defined by cultural or religious norm that is prone to changing. I present examples to support my argumentation. They listen to my argument, and no other responses follow afterwards. But, in the next session when we asked them to write about problems women face in a household and community level, some notes emerge as follow:

> *Ketika suami/kaum laki-laki merasa/menganggap dirinya sebagai kepala keluarga maka dia katakan kalau kaum perempuan itu/istri tidak berhak mengambil satu keputusan. Disinilah saya merasa tidak ada keadilan* (When a man considers himself a household head, he says that women or wives do not have a right to decide a thing. This is where I feel there is no justice).
>
> *Kadang laki2 selalu ingin menang sendiri, kurang keterbukaan (tertutup), sering mengatakan bahwa perempuan tidak punya untuk mengambil suatu keputusan* (Sometimes men always want to win, not so openly (keep things to themselves) and often say that women are not able to take decisions).
>
> *Perencanaan dalam rumah tangga tidak dirunding bersama. Sesudah ada resikonya baru seorang ibu terlibat* (Household planning is not discussed together. When a risk emerges, the wife then has to be involved)

Reading these notes really shakes my consciousness that injustice in gender relation is not merely a concept, but a hard reality, even in a community that is

perceived to be egalitarian in comparison to many other ethnic groups in Indonesia, e.g. Bataknese, Balinese, or Timorese. This is where I found my confidence that I cannot perceive what appears to be egalitarian as justice in gender relations. Feminism, therefore, brings me to an understanding of local knowledge reality in Bolapapu and Sintuwu communities.

RESEARCH METHODS

Research Strategy

Since the study focuses on the contemporary phenomena of men's and women's agro-ecological knowledge dynamic, a case study is regarded as an appropriate strategy for this research. This approach is suggested as appropriate by Yin (1997) to respond to questions of how and why, which are also the questions asked in this study; and to be used when the researcher has a very small probability to control the events or phenomena being studied.

Gender and ethnicity were used as differential variables of knowledge, as it is recognized that the individual approaches towards understanding, assessing and promoting organisational learning processes differ considerably (Amini, Fremerey, Wesseler, 2002).

Gendered local knowledge constellation in two villages in Central Sulawesi, i.e. Bolapapu (in Kulawi Valley), and Sintuwu (in Palolo Valley) was taken as cases that frame this research. The term 'case' also refers to many households in Bolapapu and Sintuwu that present patterns and variability of knowledge construction through discursive practices of rice and cacao farming social relations of production. According to Miles and Huberman (1984) 'multiple site-studies will allow one to look simultaneously at several settings and to get enough variability to increase explanatory power of the study as a whole'. A comparison will not be the term used for constructing such frame, since critical interpretative paradigm stands on plural realities, while at the same time undermines what

appears naturals, and questions what appears obvious (Kincheloe & Mc Laren *in* Denzin & Lincoln 1998). Identifying peculiarity and similarity through documentation and analysis of the various meanings that construct concepts such as 'authority' or 'expertise' in different socio-economic, cultural and spatial context are terms that I have used in this study.

Bolapapu and Sintuwu are chosen as research sites based on their unique community character that highlights the importance of ethnicity and traditions as differential element of knowledge constellation. Those communities are also undergoing a process of agricultural commercialisation where each of them may walk along in a same path, but experience different processes.

Based on actor-oriented perspective, the field research focuses on men and women as individuals and groups, at the household and community levels. Individual, household and community become the units of analysis. In terms of individual and household analysis, children's thoughts and perspectives also contribute to my understanding of knowledge application and dissemination about the agro-ecosystem triangle of rice, cacao and the forest.

As Long indicates in his research in Central America (1992), the actor-oriented approach -due to its root in anthropological method- requires an adequate length of time to be spent with the research participant. I stayed with Bolapapu's better-off aristocratic family for two months in February to December 2004. Then, when I came back in March 2005, I moved to stay in Boya to release myself from the neighbourhood cluster of the aristocrats in order to be ale to grasp the Other's construction of social reality. Boya is a hamlet of Bolapapu located at the border of the neighbouring village: Namo.

I stayed for 4 months with two families. One family is the family of the former Bolapapu village head, whose kindness was impossible to refuse, as I would offend one of the most recognised aristocratic families, including those who previously hosted me. So, my intention was not fully achieved, but, from time to

time I would find reasons to justify my stay with the Other family, who is also an aristocratic descendant, but socio-economically less fortunate than the first family. By choosing this position, I learned greatly about Kulawians' social communication norms and mode of inter-class interactions. I certainly have undergone the trial and error of 'encoding-decoding' process, and mistakes were taken place, but I was saved by their tolerance for 'the beginner's' mistake. I have entered a zone of what Park (in Reason and Bradbury 2001) called as 'an illocutionary force of language' that is performative at a practical and affective level, where meaning can only be grasped when mind and heart are one.

In August and December 2005, I stayed in Sintuwu in a home of Bugis family. My 'host-father' is the head of village council or *Badan Perwakilan Desa* (BPD). In this multi-ethnic community, Kailis usually hold the key of formal positions due to their claim as native settlers. My host-father seems to be an exception.

Living with three different families in two cultural settings have given me many experiences of different rules and norms, and had put me in various 'roles', whether a role that I made or the role that was given by my host-families. I experienced to be a guest, a family friend, a relative, a daughter, even a grand-daughter. My relationship with the household 'cases' also placed me in many roles, i.e. a student, a researcher, 'my daughter's friend', a best friend, 'a child of us'. Making a role or taking what is given shows that inquiry is a process of social interaction. It sets a base for affectivity and reciprocity of perspective (Denzin & Lincoln 2003).

Data Collection Methods

As qualitative research is a multi-methods study, in-depth interview of men and women in groups and individually, and active participation of myself as a participant observer are applied to construct a deeper understanding of the basis of gender division of labour and decision-making process in

Bolapapu/Kulawi and Sintuwu community. This inquiry process involves 10 households in Kulawi and Sintuwu, from whom I gained understanding about variability of gender and ethnicity relation, agro-ecological knowledge, and household decision making; and more than 30 informants from whom I learned many aspects of farming activities from the past to the present, as well as gender norms embedded in it.

Interview, which was conducted as a dialogue, becomes the main method of this inquiry process. I prefer one on one conversational and interactional interview than group discussion, because conversation builds relationship and interviewing itself is based on relationship. In this interaction mode, I assigned myself to a role or taking what is given as the relationship grows. Therefore, I never visited or met my respondents only once, as I belief that "Every interview….is an interpersonal drama with a developing plot" (Denzin & Lincoln 2003).

Dialogical interview and participative observation often becomes an inseparable method. To be a participant observer, a conscious adoption of situational identity is required (Denzin & Lincoln 2003). When my relationship with the research subject developed into friendship or parent-daughter relation, it was not only the result of our conversation, but also from our interaction in which I participated in their daily activities: from the kitchen to the rice field or from having a tea in their veranda to discussing cacao diseases in their farm, while assisting the wife splitting the cacao fruits and taking out the beans.

Any interview conducted in that situation will produce an outcome that is contextual to our relationship. I was only a student when I visited and interviewed the sub-district head (Ind. *Camat*) and produced general information from such a formal interaction, such as the general condition of poverty in the sub-district, inaccessibility to certain places, the future development plan of the sub-district, and so on. But, after I also suggested some propositions for cacao farming intensification to increase income as well as to avoid expansion, he assigned a

role of consultant to me in the next several meetings that we had. When the governor of Central Sulawesi decided to visit Kulawi sub-district, for instance, the headman asked me to 'coach' the Kulawi women's representative or spokesperson on what and how to speak before the governor. A task that I turned into facilitating this spokesperson to express what most women in Kulawi would want to say about their conditions and their urgent needs that must be sufficed.

Women and men group meetings that I involved during the whole inquiry process may have to be differentiated by the nature of their and my participation: a meeting where I came on their invitation, and the one that they came as a response to my invitation. I was invited to a village-planning meeting as an observer, but from time to time, they also asked my opinion, which I responded to the best of my knowledge or with an honest answer whenever the questions were out of my knowledge or I answered with provoking questions to generate ideas from their own.

The same mode of action was also applied in the meetings with inter-village government apparatus forum, *adat* council-village leaders' discussion on new sub-district establishment, village leaders-NGOs meeting to discuss collaborative projects, and cacao farmers' group meetings. As for the latter meeting, I attended once in Namo and the second one in Sintuwu. In Namo, I was invited as a facilitator where I applied an appreciative inquiry process, so they were able to recognise other farmers' key of success, and their own 'small' or 'big' successes in dealing with cacao farming. In Sintuwu, I was present to learn about their group revitalisation process. An extension worker was invited to facilitate this meeting, and they asked me to give some motivational inputs for group reactivation. Yet, in various group meetings, various roles are offered and performed.

A slightly different mode of action and role-making were required when I attended the Kulawi women workshop in Marena, a hamlet of Oo Parese village

in Kulawi. I was invited as a speaker, and then the role developed into a facilitator. This was an event where seeds of change were spread, a real transformative moment for us or at least for me.

There were only two group meetings that I intentionally arranged. These meetings are part of analysing children's perception through essay-writing method. As writing is an adaptation to ethnodrama or children theatre method, it requires a feedback from the adult toward their children descriptions about the topics, or in my case is about the agro-ecosystem triangle of rice field, cacao farming and the forest. Firstly, I asked my host-father –the former Bolalapu head village- to invite everyone in Boya who was interested to discuss the topic. Twenty to twenty five persons came, but all were men. This situation was predictable, but I wanted to see whether it happened, and it happened. So, I arranged another meeting, which I asked my host-mother of Other family to invite women only. It was a rainy evening, but about twenty women came.

The triangulation method of interview, observation and document review is employed to control the consistency and saturation of information, especially in making a connection between what people 'know' and what people 'do'. Friedman (in Reason and Bradbury 2001) suggests that what people 'know' should be regarded as hypotheses about reality rather than as facts. In this sense, participative observation serves as a means to understand which hypotheses realise as facts. When the 'reality' occurred in the past, I used document to find facts out of my respondents' hypotheses of reality. The latter is only applied to actions and facts in the immediate past or about 5 years back. For the story about Kulawi aristocratic community in the far past, I don't have another choice except using information from other researchers (Kaudern 1941, Garang 1985) and asking one elderly to another with the same questions over and over.

The depth of qualitative data as generated from the above mentioned methods was also supplemented by a small survey to generate more general

information in the aspect of household decision making. As we all know that this aspect could be a very personal process that may contain high variation, but there are common shared-values set by cultural as well as religious norms, not to mention socio-economic motives that may provide a backdrop to household decision-making. Taking this to justify the need of a household survey, I expect to attain a more general idea about household decision-making tendency, especially with regard to rice and cacao farming.

Thirty persons in Bolapapu were interviewed. The interviews were conducted by two women who were native settlers of Bolapapu, born and raised in the village. One was a single woman, and the other married with one child. They both are categorised as coming from a noble family. I asked them to involve in this research, because I am aware of my limitation as an outsider. I may already know well 30 households in the village, but asking about their personal life, especially touching the issue of husband-wife relation could be considered as rude (Ind. *kurang sopan*). Therefore, help from a friend is needed.

Ati, Sri, and I have developed personal relation to the point of trusting each other. This trust is built through daily interaction that erodes suspicions and confusions about what I am trying to do in their village. At the same time, we also developed understanding about each other life. Based on this, their social positions, and the nature of the questions, Ati and Sri are welcome in any household they might want to visit.

I asked them to choose 30 respondents who live in 3 hamlets in Bolapapu. I also discussed whether in choosing respondents they would first consider closeness based on family relation, so they would not have a certain social gap to deliver personal questions to the wife or the husband. They stated that almost all in this village are related, so blood-relatedness is not the factor, but they define the respondent's criteria as: 1) the families who are real farmers that go to their field daily and only live from their produce, 2) they own rice and cacao field, so

they have the knowledge to answer the questions. Based on their criteria the respondents were purposely chosen.

Taking families as a focus of my research eventually will raise the question of children's position. Women and children are usually side-by-side as the Other in patriarchal society. Therefore, the nature of my research requires listening to the children as well, particularly about their perception about the forest, rice field, and cacao plantation. As children absorb information from their environment (teachers, friends, families, self-observation, etc.), it is also assumed that their perception will also be coloured by how they were taught by their parents to treat and perceive rice field, cacao plantation and the forest.

However, interview may not be the most appropriate method, considering the limited time that I had to develop rapport with all levels of community. An indirect data collection, such as children theatre, that was already applied by LAGSUS (Language, Gender, and Sustainability) research program[3] in Lore Lindu area has stimulated ideas for my method with children.

Based on my understanding of Kulawi performing arts, the art of theatre performance is not familiar to their culture. Role-playing in present formal schooling or theatrical art as extracurricular activity at elementary level is not known. At the middle school level, when teenagers already take part in church activity, they may organise a theatre performance as part of religious event. Considering these circumstances, firstly I needed a contextual momentum where children could perform some skill that could reveal their thoughts and feelings about rice field, cacao and the forest, but most important was to choose a media to approach children with ways they are familiar with.

The momentum arrived when a German student from Kassel University, Jörg Schumacher, visited the village to learn about the environmental education program in rural schools in Indonesia. He needed to learn how children attain

[3] LAGSUS is a research program conducted by German scholars to assess the role of language and gender in development project, which takes place also in Lore Lindu in the period of my research.

knowledge about the natural environment, whether from school or from other sources. Recognising that his needs might be in congruent with mine, we agreed to merge both. After some consultation with the teachers and observation of several events, e.g. art contests and sport competitions to commemorate Indonesia's independence day that Bolapapu children familiar with, we chose an essay-writing contest as a media to approach children. Rather than verbal interviews or theatrical performances, Bolapapu children are probably more comfortable to express their thoughts by writing, especially to a stranger. Through writing, we expected to be able to understand their thoughts and perception about the forest.

With teachers and headmasters' permission and assistance, we arranged an essay-writing contest for 6th grade elementary school children in two schools. Why only 6th grade children were involved? We tried to accommodate a fact that only 6th grade children have already received essay-writing lessons. Why were only two schools chosen? There are two government-owned schools in Bolapapu that were unintentionally differentiated by the social economic standing of the parents and the quality of the teachers. It was unintentional because it was not built intentionally to serve certain class of people, but now established as it is due to schools' proximity to the settlement. Unfortunately, the settlements are socially divided[4].

One school is located in the area where better able families live, which is part of Bolapapu village that is known as Kulawi kota, and the other is in less-able neighbourhood or called as Boya. The first school received adequate financial support from the parents, which enable them to organise many extracurricular activities that provide children with a fertile ground to grow. However, the other in Boya, let alone organising extracurricular activities, they have to deal with insufficient education facilities. Unexpectedly, such contradictory conditions are

[4] The settlement is socially divided due to the history of Bolapapu as aristocrats' (*maradika*) place of living, while common people (todea) inhabited Boya.

reflected in the level of children's fluency to organise and express their thoughts in writing. At the end, we received information on children perception from those who represent two different social economic classes in the community.

Each 6th grade class in both schools consists of 40 children, so we received 80 essays. Then, after consulting the teachers, we set criteria for a winning essay, i.e. 1) readable handwriting, 2) fluency in expressing thoughts: the use of word, the order of sentences, and the vastness of elaboration. We selected three winners for each school, and the winners received gifts. Schumacher and I ended up with six papers to be analysed for our own respective purposes.

Secondary data was gathered through document reviews on related events, such as village discussions (public meetings, extension programmes, etc.), village agreements concerning resource management, reports about training and workshops for villagers organised or facilitated by extra-rural institutions (NGOs, universities, government offices), particularly on agriculture and conservation aspects that were conducted in Bolapapu and Sintuwu dating back five years.

Data Analysis Method

Qualitative data analysis, in brief, includes data reduction, dialectical process of data classification based on the conceptual framework, and a concept building based on specific information; then, analysing the dialectical connections between each classification (Dey 1993). Based on the major research questions, types of data and information that were collected focused on six topics, i.e.

a) technical, institutional and strategic knowledges regarding rice and cacao farming, including the ecological interconnectivity, possessed by men and women in various social standing, and ethnic groups within the community
b) the mechanisms of acquisition, dissemination and utilisation of those

knowledges within each type of gender, between gender, and cross-ethnicity

c) the process of decision-making regarding rice and cacao production at the household level
d) the production decision-making processes at the community level
e) the decisions about agricultural production that are reflected in the biophysical landscape or land use composition
f) the implication of these decisions to socio-economic and ecological security at the household as well as community level

After 6 months in the field, data analysis began with transcribing recorded interviews, typing and saving all written research notes to digital files. The notes are chronologically set and based on the names of the respondents and informants. From interviews with respondents and informants, I categorised the information into 14 topics and put all information according to the topics. Finding connections between topics is done with the assistance of conceptual framework, reflection of the topic, including inputs and feedback that I received from research participants during research results presentation done in September 2005. As for qualitative data analysis generated from the small survey, simple tabulation is applied in order to highlight the major type of decision-making process in rice and cacao production.

Gender analysis is employed to sharpen the observation of differences and inequalities in order to relate it to the mechanisms of knowledge acquisition, dissemination and utilisation. It focuses on differences and inequalities in the access to and control of land and other agrarian resources, decision-making processes and tasks execution in agricultural activities, as well as household resource allocation. Ethnicity is also another element that was found to differentiate the process of agro-ecological knowledge accumulation and dissemination.

Gender relation analysis covers (Poats 2000): a) definition of gender roles within the context; b) determination of how the roles influence the division of the work force and local knowledge; c) analysis of the differentiated values allotted locally to roles and knowledge; d) analysis of differentiated access to different resources, benefits, services and capabilities of decision-making owing to differentiated evaluation; e) analysis of the power and control relations resulting from a differentiated evaluation of work and access that supports maintaining existing relations and gender roles.

For inter-household gender analysis, a focus is put on household structures and relates the differences to the intra-household decision making process whilst taking into account differences on socio-economic class. The analysis also goes further by considering household as part of other corporate groupings (neighbourhood, kinship, church, etc.), where access to resources (e.g. inheritance based on sex or seniority), and obligations related to decisions about agricultural production are defined. This means that the process of decisions-making about natural resource utilisations and management at the village level, which includes the use of the rice fields, cacao plantations and the forests is also analysed.

To gain an understanding of knowledge dynamic, this study also analyses the struggle over meaning of rice and cacao farming between gender as social actors, which are assumed to have experienced and be part of a process of domination.

Satellite imagery analysis is also employed to identify the extent of cacao and coffee plantation penetration into the forest. It may depict the enactment of knowledge in relation to the meaning-making of socio-economic security.

Delimitations and limitations

In term of data collection and analysis, this research analyses gender and ethnicity social relations at a knowledge level. To reach such abstraction, the inquiry goes into praxis level. "What we know is not always what we do". Many elements mediate knowledge to become praxis, but this research does not explore factors that are decisive for knowledge enactment. Therefore, this research limits knowledge to knowledge that is manifested in praxis. In other words, I use a formulation of "what we do is what we know" to delimit scope of knowledge that is discussed here.

Departing from such delimitation, being a participant observer is the main method chosen for data collection. This method is complemented by in-depth interview as well. Taking these two methods for data collection, generalisation of cases taken from two different communities is not possible. Data and information produced are oriented to depict the depth of the reality. A small survey is employed to get a grip of a wider understanding, but it does not stand up to generalising the findings outside its local context.

CHAPTER 3

RICE & CACAO FARMING IN INDONESIA: CO-EXISTENCE OR ZERO-SUM GAME?

AGRICULTURAL REVOLUTION IN LOWLAND AND UPLAND INDONESIA

Rice Intensification: Low-land Green Revolution

Concentration on rice production has actually started from the Dutch colonial (occupation) period. The creation of *Departement Van Landbouw* or Department of Agriculture in 1905, and followed in 1910 by the establishment of *Landbouw Voorlichtings Dienst* (Agricultural Extension Bureau) that was transformed into provincial agricultural offices in 1921 and had initiated a planned intervention of rice intensification (Kasryno et al. 2003).

In the post-independence era, the national program of agricultural intensification started in 1948 with the commencement of 'Kasimo Plan' and the establishment of Village Education Centres (Ind. *Balai Pendidikan Masyarakat Desa*) as a centre located in the village where agricultural extension and education were delivered. In 1949, this initiative was combined with 'Wisaksono Plan' to become 'Special Welfare Plan' (Ind. *Rencana Kesejahteraan Istimewa*). Multiplication of high quality variety, irrigation construction and improvement, application of chemical fertilisers (Nitrogen and Phosphate), pest and disease control, as well as soil conservation became an integrated effort to increase farmers' capacity and land productivity. This plan was initiated in Java and concentrated in lowland agriculture, especially on rice.

The focus on rice intensification continued in 1957 through the implementation of '*Padi Sentra*' program. This program was aimed to introduce a technology called as *Panca Usaha Tani*, which contained farming management techniques focusing on 5 aspects, i.e. 1) water provision, 2) the use of high

yielding varieties, 3) adequate fertiliser application, 4) integrated pest management, 5) appropriate cultivation technique.

Two years later, in 1959, a 3-year program was created to achieve rice stock self-provision. This program was coordinated by a newly body called 'Operational Command on Welfare Movement' (Ind. *Komando Operasi Gerakan Makmur*). However, this program failed to meet its target due to a weak coordination and technology innovation, insufficient financial support, and many other reasons -not to mention political upheavals that took place at that moment.

Strong technology support in rice production came into realisation in 1963 when Bogor Agricultural University applied its research and gave demonstration on mass technology of rice cultivation. This technology was also strengthened by the invention of modern rice varieties produced by IRRI (International Rice Research Institute) in Los Banos, The Philippines. Along with the introduction of extension program called BIMAS (Ind. *Bimbingan Massal*) meaning 'Mass Guidance', a provision of modern high yielding rice varieties, chemical fertilisers and pesticides, and government's guaranteed credit for farmers were channelled to millions of individual farmers in Indonesia especially those in Java. The First wave of Green Revolution in Indonesia has begun.

From 1969 to 1982, Indonesia's rice production rocketed from 10,6 million tons with 2 million tons deficit in 1969 to 22 million tons with a surplus of 4 million tons in 1982[5]. In 1983-1984, when Indonesia stated to reach its rice self-sufficiency level, the production increased 8% in that year. Unfortunately, Sajogyo (1982) points out that the sweet fruit of rice modern technology was only harvested by the upper stratum Java farmers who owned 1 hectare of land or more. They were closer to village government bureaucracy and through this channel able to access credit and supply of modern inputs. The capital rich farmers had

[5] Source: Rice Production data from Indonesia Statistical Bureau (BPS)

increased their assets and power, and had attracted more indebted-labour[6]. Consequently, from 1973 to 1993 the percentage of less than 0,5 ha agricultural landholders increased, while their average holding decreased as shown in Table 1. On the contrary, the number of landholders above 5 ha decreased, while average holding increased to almost 12 ha.

Moreover, in 1993 the percentage of peasant farmer households in Java was around 69.8%, and in 2003 increased to 74.9%. In outer Java, in 1993 the percentage of peasant farmer households was 30.6% while in 2003 increased to 33.9%. These facts depicted a polarisation of landholding structure: more farmers had to cope with decreasing landholding, while smaller number of farmers accumulated more land.

Table 1. Agricultural Landholding Distribution From 1973-1993

No.	Agricultural land holding (ha)	Land distribution					
		1973		1983		1993	
		% agricultural land	Average holding (ha)	% agricultural land	Average holding (ha)	% agricultural land	Average holding (ha)
1.	< 0,5	45,6	0.26	40,8	0,26	48,5	0,17
2.	0,5 – 1,99	42,8	0.95	44,9	0,94	39,6	0,90
3.	2,0 – 4,99	9,4	2,78	11,9	2,72	10,6	3,23
4.	> 5	2,1	9,45	2,4	8,11	1,3	11,9
➢ Total agricultural land holding (mill. ha) ➢ Total areas (mill. ha) ➢ Average holding (ha)				15,9 16,7 1,05		17,9 15,4 0,74	

Source: BPS, Agricultural Census 1993, B1 Series

Green Revolution in lowland area did not only produce polarisation, but also failed to sustain the surplus state. The year of 1985-1986 marked the declining stage of rice production in Indonesia. This is signified by the diminishing production rate from 8% increase in 1983-1984 to only 1,78% in 1985-1986, and that trend was followed in 1988 with an increase of only 1%.

[6] Peasant farmers who own mostly under 0.25 ha and have debts to the capital-rich farmers. They repay their debts by working on the farms of the money (or rice) lender (Sajogyo 1982).

According to Tata (2000) and Kasryno et al. (2004), there are several explanations for this declining rate: 1) the agricultural sector had to compete with the flourishing growth of industrial and new settlements area development, resulting in a huge rice field conversion; 2) market liberalisation forced the state's decision in handing over rice field expansion to the market mechanism, which automatically lowered the state's investment in land clearing for paddy fields.

The increase of rice fields expansion, which shows a positive rate from 1981-1999 was overridden by a faster pace of their conversion in 1999-2002. Arifin (2006) and Sitorus (2006) stated that rice field conversion has reached an alarming stage, while newly open rice fields only increased 50,000 ha per year, but the conversion rate was running in 64,000 ha per year. Table 2 below also shows that a positive expansion during the era of rice stock self-provision followed by a higher deficit in the next period.

Table 2. Rice Conversion and Expansion in Indonesia from 1981-2002 (in hectare)

Region	Conversion	Expansion	Net	Rate per year
1981-1999				
Java	1,002,055	518,224	-483,831	
Outer Java	625,459	2,702,939	+2,077,480	
Indonesia	1,627,514	3,221,163	+1,593,649	**+88,536**
1999-2002				
Java	167,150	18,024	-107,482	
Outer Java	396,009	121,278	-274,732	
Indonesia	563,159	139.302	-432,857	**-141,286**

Source: BPS, Agricultural Census 2003

The alarming circumstance is also indicated by an increasing volume of rice import every year starting in 1995, from average of 1.5 million tons during 1995-1997 to 3.3 million in 1998-200[7]. However, rice import is not only a question of rice stock provision, but also a politically loaded decision. The achievement of a self-provision stage has always been an indicator of success for the ruling regime, which may present a ticket to the next ruling period.

[7] Source: BPS, Indonesia Statistics various years

Husein Sawit[8] -a researcher from Centre for Agricultural Policy Socio-Economic Analysis, Ministry of Agriculture- stated that rice import data are very contestable, since the Statistical Bureau (BPS) retrieved their data from the Customs office, while rice smuggling as a fact is widely known. The Rice Report (TRR) data take their sources from exporting countries, which justify their higher level of reliability. The data from BPS show 41% and 63% difference with TRR data (see Table 3.).

Table 3.Rice Import Volume: Government Institution (BPS) *vs.* International Agency Version (TRR)

Year	Average/year (BPS)	Average/year (TRR)	Margin (%)
2000-2003	1,308,600	2,340,002	- 41
2004-2005	205,500	554,500	- 63

Source: BPS, Indonesia Statistics 2006 and The Rice Report (2006a, 2006b)

Both versions of rice import data, however, signify the importance to boost rice production by either rice field intensification or expansion. However, as shown in Table 2, the pace of rice conversion has been faster than rice field's expansion. The conversion is seemingly unstoppable due to the ambition to create the image of a 'modern' country. High-rise buildings and various forms of industrial development were marked as Indonesia's successful development, which often occurred at the expense of agricultural areas and rice production. In outer Java, the highest conversion rate is from rice field to estate crop plantation (see Table 4). In Java, the conversion is for housing, as a logical consequence of highly populated area-.

[8] in an article of Food Bulletin, April 2006

Table 4. Rice Field Conversion from 1992-2002 (in thousand hectares)

Utilisation	In Java	Outside Java	Indonesia
1. Non-rice agricultural land	36.4	**196.3**	**232.7**
2. Housing	**98.0**	63.8	161.8
3. Industry	16.1	11.1	27.1
4. Business area	10.3	37.8	48.1
5. Other uses	6.4	87.0	93.5
TOTAL	**167.2**	**396.0**	**563.2**

Source: BPS, Village Potency from Agriculture Census 2003

Modernization assumes agriculture as a traditional sector, which signifies backwardness. Such reason justifies government policy, especially during the beginning of the New Order era in 1970's, to industrialise the agricultural sector by granting land concession for private sector. Private companies were expected to build plantation under the economists' assumption of 'trickle down effect'. Plantation offers twofold solution: it represents modernisation, as well as means to lever peasants' welfare.

From only 4 plantation projects in 1970, it grew to 83 projects in 1980 (Bachriadi et al. 1997). Oil palm project rose to the highest. From 1967 to 1997, the oil palm sub-sector increased twenty-fold in terms of planted area (from 106,000 ha to 2,516,000 ha), and crude palm oil production increased 12% annually (Casson 1999). In 2002, from total 3,7 million hectares oil palm plantation, 69% owned by companies either private or state-owned[9]. Divided into 6 primary export commodities (rubber, tea, oil palm, cacao, coffee, sugar cane) the total plantation area in Indonesia covers almost 10% of total cultivated land in Indonesia, of which 37% of the plantation is privately owned. Does this make a significant rise in peasant farmers' welfare and progress to 'modernization'?

From 1984 to 1992, the wage of plantation labour only reached 91% of minimum physical requirement for living (Bachriadi et al. 1997). In a 10 years span,

[9] Source: Estate Crop Statistics 2003, Ministry of Agriculture

agricultural labour wage has never reached more than a quarter of non-agricultural labour's wage (see Table 5).

Table 5. Income level of agricultural and non-agricultural labour 1993– 2003 (Rp/year constant price 1993)

Period/year	Agriculture	Non Agriculture	Ratio Agriculture and/Non Agriculture
1993-1997	1.656.886	7.054.242	0,23
1998-1999	1.653.568	6.356.905	0,26
2000-2003	1.673.812	6.955.986	0,24
2000	1.627.685	6.708.731	0,24
2001	1.682.225	6.753.018	0,25
2002	1.690.718	7.021.665	0,24
2003	1.694.619	7.340.531	0,23

Source: BPS, Agricultural Census 2003

The launching of Nucleus Estate and Smallholder Scheme as advised by the World Bank did not offer a solution either. This program created production forces dependency to the nucleus company. Such situation had put farmers in a very fragile position, since only farmers who owned 2,5 hectares or more that would receive significant benefit (Bachriadi et al. 1997). Eventually, peasant farmers were always left out from the 'trickle down effect'. This situation depicts of what Sajogyo had found in rice intensification in Java, which was named as 'modernization without development'. Thus, instead of bringing Indonesia to modernization, rice conversion to estate crop plantation has replayed the phenomenon of 'modernization without development' in Indonesia's agricultural sector.

Lowland Green Revolution in Indonesia with the main goal to feed the nation, had set rice as a targeted commodity, and chose Java island as the main stage. After 40 years of Green Revolution, we faced severe rice field deficit, deteriorating environment due to intensive use of fertilisers and pesticide, and the most alarming social effect: unstoppable aggregation of rural peasant farmers along with unsolved agrarian conflicts. The combination of those factors had diffused 'shared poverty' from rural to urban setting. 'Shared poverty', in this case, contains a far meaning from Geertz' conception, it does not refer to a

moral foundation to share limited resources, but points to spreading poverty caused by limited access to resources. Rice and estate crops plantation have entered an adversary arena, where peasant farmers in both corners have to perform a harder struggle in order to defend their subsistence, and to gain further above the subsistence level.

From Food Crop To Estate Crop: From Green to 'Brown' Revolution of the Upland

Indonesia's upland ecosystem is characterised by dry-land farming system due to water and fertile soil deficiencies that put wet-rice cultivation out of the picture. Bali is an exception due to its farmers' ability to develop an adaptation mode that had engineered wet-rice ecosystem in their upland. What needed to be distinguished between farming in Java to outside Java upland agro-ecosystem is a wider and longer practice of shifting cultivation technique in the subsequent region due to lesser population pressure. Nonetheless, upland's association to the forest had often put the area in conflicting interests between nature conservation and agricultural livelihood.

The previous facts of rice conversion that pointed to the transformation of rice field into estate crop plantation, especially outside Java, bring us to a phenomenon of Green Revolution in upland Indonesia. The similar mode of rice intensification was applied as well. However, rice intensification in the upland areas faced pitfalls. Except for corn and maize, other food crop intensification failed to attract farmers' interest due to its low price, intensive need of inputs and labour which is hard to meet in low-density area beside many other complex factors (Lançon in Ruf & Lançon 2004). This is the point where the upland agricultural revolution shifted from food crop to estate crop and automatically displaced food crop fields. Why is this a decisive point?

Lançon (in Ruf & Lançon 2004) argued that for upland farmers, if markets were able to provide food for them at an affordable price, food crops would not

attract them to invest more than they used to. This means that any crop that is appealing to them will have to show good market price, low risk, low labour and other production inputs. Such criteria have already been met by cacao and coffee where there has been spontaneous system adopted even without any structural intervention program.

In Java, a most important momentum of agricultural expansion to the upland occurred in 1860 and 1925 (Allen 1993). People's attempt to avoid land-tax, especially irrigated ones in lowland area, as well as colonial government effort to expand plantation areas had triggered a penetration of agricultural intensification to the upland. However, upland development in Java has never been a focus of government's attention until 1980 when a specific program of Upland Agriculture and Conservation Project was launched. Nevertheless, its initiation was based on the interest to maintain lowland productivity through water and soil conservation of the upland.

In the outside Java regions, agricultural expansion occurred for the sake of national export target (Li 2002), evidenced by a conversion of 3 million hectares of land into export commodity plantation during 1971-1986 (Li 2002a). Despite this planned intervention, Dove (1985) asserted that upland people initiative in cash crop planting, which is integrated with their dry-land farming, has been practiced by upland farmers even before the colonial period. Colonial administration despised this fact, since shifting cultivation, along with its slash and burn technique was seen as a disordered agriculture, too mobile and too scattered to control. Hence, they tried to apply a Javanese's style of wet-rice cultivation (Ind. *sawah*). Henley and Colombijn (1995) quoted in Li (2002a) describe it as follow:

> When an innovation is finally implemented….local people often have already seen its benefit before the Dutch even realise it. Coffee cultivation in Minahasa and West Sumatera, for instance, is initiated by the locals. Dutch intervention only brought a decline in profit, and exerted higher oppression to shift the system of production from

mix dry-land farming and house garden to monoculture plantation that disturb subsistence agriculture, not to mention causing soil erosion.

Dutch colonial governments successfully implanted the image of monoculture plantation and wetland rice cultivation as a symbol of more civilised society. This hierarchical concept that prioritised *sawah* and monoculture plantation, as well as a tendency to slash and burn, as the main cause for forest damage, failed to recognise the most suitability of dry-land farming combined with small scale cash crop cultivation in upland agricultural system. When a cash crop is still planted as part of house garden or forest garden it is aimed to provide cash needs only, and not intentionally aimed at accumulation. In this case, food crops and estate crops are used to complement each other at farmers' subsistence level.

In the New Order era, estate crop production was seen as an entrance to agriculture industrialisation, as mentioned before. There were two ways chosen to create the industrialisation scenario: 1) to distribute concessionary land rights (Ind. *Hak Guna Usaha* or HGU) to private companies in order to boost plantation expansion; 2) to establish a Nucleus Estate and Smallholder Scheme (NES) supposedly opening peasant farmers' access to agriculture industry. Statistical data shows that almost 83% of state land has been distributed to private companies under HGU status (Bachriadi 2001).

The presence of private companies in the upland and inland initiated capital penetration and profit oriented agriculture to the village economy. This situation has certainly affected the position of estate crops; it elevates cash crops to commercial crops. cacao, coffee, sugar and tea are not planted for cash needs only, but oriented for profit as well. However, government intervention to transform the upland produces different scales of benefit for the communities most affected. An uneven government intervention is shown by the type of commodity and its extent of plantation area under farmers' control (see Table 6).

The 83% of state land had contributed to the establishment of 3,4 million-hectare state and company-owned plantation in Indonesia.

Table 6. Plantation Commodities and Ownership in Indonesia

Commodities	FP	SoP	CoP	Total
Rubber (ha)	2,882,795	212,617	277,009	3,372,421
(%)	***85***	***6***	***8***	***100***
Oil Palm (ha)	1,190,154	516,447	2,050,739	3,757,340
(%)	***32***	***14***	***55***	***100***
Coffee (ha)	1,192,322	40,645	27,720	1,260,687
(%)	***95***	***3***	***2***	***100***
cacao (ha)	641,133	52,690	56,091	749,914
(%)	***85***	***7***	***7***	***100***
Tea (ha)	67,100	44,263	42,312	153,675
(%)	***44***	***29***	***28***	***100***
Sugar cane (ha)	171,279	64,133	105,248	340,660
(%)	***50***	***19***	***31***	***100***
Average (ha)	6,144,783	930,795	2,559,119	9,634,697
(%)	***64***	***10***	***27***	***100***

Source: Estate Crop Statistics 2003, Ministry of Agriculture
Notes:
FP=Farmer's Plantation, SoP=State-owned Plantation, CoP=Company-owned Plantation

It is shown in Table 6 that coffee, cacao and rubber are more under farmers' control than oil palm or sugar. However, rubber has to be seen from different point of view. Although its ownership is larger in farmers' hands, but the profit control is stronger in the hands of a very long chain of buyers. Rubber smallholders whose lands are less than 4 ha receive a very small amount of profit margin compared to cacao farmers who retain 80% of the margin. This is particularly evidenced by cacao resilience in the monetary crisis of 1997 and 1998, while the rubber price crashed to the bottom in 1999 (Sunderlin 1999).

Facing the state's intervention through private sector's insertion in their cash crop agriculture (NES program, land concessionary right, etc.), and market control of commodity price, upland (or outside Java) farmers were confronted to 'vertical' forces. In addition to that, they are also dealing with 'horizontal' struggle. Unequal access to land and capital between migrants and native farmers, for instance, is a common struggle that migrants have to face.

Li shows the phenomenon of cacao boom in Sulawesi (see Li 2002b) depicting agrarian differentiation stemming from native smallholders' inability to defend their land from their more successful neighbours or to migrants. But, she explained further that especially for cacao, Sulawesi's upland farmers were not the hapless victims of market forces; if they lost land, it was not because they had been displaced by large-scale plantations or agribusiness schemes; nor had they been obliged to plant cacao by the government. The farmers entered into cacao production for their own complex reasons – but not under conditions of their own choice. This situation accompanied by disparity of government subsidies between lowland and inland farmers, in terms of credit provision and uncertain guarantee of land status, have produced an impact of land accumulation, which lead to polarisation as it is shown by Green Revolution of the lowland (Li 2002a). Eventually, the 'horizontal' struggle is created by 'vertical' forces.

When an upland ecosystem is associated with the forest, we are very often confronted with the paradox of national's or international's nature conservation mission and local livelihood interest. This is where another structural force shapes the socio-cultural landscape of the upland. The designation of conservation areas has transformed many cultivated and human-inhabited areas into isolated human compound. The Indonesian government has already designated 519 conservation areas in the country, among which 477 locations are in the terrestrial zone, from upland to lowland. According to Ministry of Forestry data, the total terrestrial conservation area covers more than 22 million hectares.

Sunderlin (1999) points out that cacao and coffee were two smallholder crops that had important implications for natural forest cover. In the most remote area in the upland of Central Sulawesi, for example, where villages can only be reached after an 8-hour ride on motorcycle, coffee and cacao have already dominated vegetation cover in the area. Most secondary forest has been

transformed into mixed-garden forest, where some patch of the forest is dominated by monoculture cacao, and the other part is shared with coffee. Protected forest is often designated by the State without recognising this fact of local communities' farms and settlements existence.

Socially, agrarian conflicts are the result of those structural forces. Conflicts occurred both in the forestry as well as estate crop sector, as shown in the tables below. Economically, the agricultural industrialisation has produced rural poverty. CIFOR (Centre for International Forestry Research) data in 2003 stated that 38 million of poor people are living in and around the forest area.

Table 7. Conflict Frequency in Forestry Sector based on Province, 1997-2003

No.	Province	Frequency	Percentage
1.	East Kalimantan	109	30
2.	Central Java	47	13
3.	North Sumatera	36	10
4.	West Java	25	7
5.	Riau	19	5
6.	Jambi	16	4
7.	East Java	14	4
8.	South Sumatera	12	3
9.	Nangroe Aceh Darussalam	10	3
10.	Central Kalimantan	10	3
11.	Other provinces	61	17
	Total	**359**	**100**

Data source: Wulan et.al. (2004)

Table 8. Conflicts in Estate Crop Sector based on Province, 1970-2001

No	Province	Land Cover (Hectare)		
		Farmers' Plantation (FP)	SoP and CoP (actively used)	SoP and CoP (inactive)
1.	West Java	2.142.186	302.414,57	41.336,54
2.	DKI Jakarta	966	-	-
3.	East Java	3.484.002	383,268,23	32.992,93
4.	South Sumatera	1.076.881	663.909,57	185.942,95
5.	North Sumatera	1.211.607	1.020.589,16	56.597,59
6.	Central Java	1.761.187	114.745,03	3.454,32
7.	Central Sulawesi	501.474	162.437,31	69.519,62
8.	Lampung	1.070.832	210.919,42	11.864,95
9.	South Sulawesi	1.298.383	141.548,85	35.330,33

No	Province	Land Cover (Hectare)		
		Farmers' Plantation (FP)	SoP and CoP (actively used)	SoP and CoP (inactive)
10.	Nangroe Aceh Darussalam	902.746	301.863,24	91.156,62
11.	East Nusa Tenggara	602.076	2.267,73	1.062,58
12.	Riau	817.583	725.917,74	107.875,46
13.	East Kalimantan	381.320	102.671,08	36.084,20
14.	West Sumatera	674.041	262.911,33	75.963,38
15.	Papua	0	136.525,76	114.341,91
16.	Other Provinces	5.336.532	1.513.215,01	406.733,27
	Total	**21.261.816**	**5.359.904,718**	**1.228.920,11**

Looking into the extent and frequency of agrarian conflict occurrence and poverty level, agro-forestry system made its space for acceptance, by either the State or the local people themselves. However, agro-forestry technology still failed to elevate farmers' income (Ruf and Lançoln 2004) due to complexity in managing pest control and balancing soil fertility, which is still costly. If it were managed to success, agro-forestry would be a threat to conservation, since it would cause agricultural activities to penetrate the forest.

Nonetheless, upland agricultural revolution has made farmers adapt and innovate when government's intervention is lacking. Ruf and Lançoln (2004) believed that cacao was the seed of Agricultural Revolution in Sulawesi's upland. They argued that cacao boom was an articulation of an extraordinary increase of yield per hectare as result of farmers' investment in capital, such as land and production inputs. Cacao boom produced ecological impact as well; indicated by an explosion of pod borer pest (Ind. *Penggerek Buah Kakao* or PBK). However, cacao innovations must be recognised as farmers own initiatives combined with their local knowledge, external information and with a little assistance from government program. In Sulawesi's upland, Green (or rice) Revolution has been transformed into 'Brown' (or cacao) Revolution.

CACAO REVOLUTION IN CENTRAL SULAWESI

The History of cacao: Introduction

The history of cacao introduction to Indonesia has not yet been presented with convincing evidence. The strongest finding of Jansen, a Dutch administrator who was in 1853 wrote about cacao in Minahasa, only able to imply that cacao had been planted in Minahasa even before 1780 (Roesmanto 1991). Hall (1949) quoted by Roesmanto (1991) stated that in the first half of the 18th century the Dutch trading company – VOC- has never bought cacao produce in Indonesia, so it is most likely that cacao was brought by Spanish traders to Sulawesi and spread in Minahasa in the 16th century. Li's finding (2002b) asserted such data by stating that the first emergence of cacao in Sulawesi was in 1820-80 stimulated by a demand from the Philippines, where the Mexican drink had become popular under the influence of Spain. Thus, Sulawesi -or particularly Minahasa- was the spreading point of cacao cultivation in Indonesia.

Bleeker wrote in 1861 as quoted by Hall (1949) in Roesmanto (1991) that in 1853 there were 1 million trees of cacao planted on 1.600 hectares of land in Minahasa, but 7 years later after cacao mot attack, only 223,000 trees were left on 350 ha of land. The productivity in that period was quite low with only 500-1000 *pikul* (1 *pikul* = 61,76 kg) with a various level of productivity per year.

According to Roesmanto (1991), in 1880 several cacao gardens were established inside coffee plantation in Central Java, and started to produce 10 tons per year for export. Cacao plantations were spread over northern coast of Java from Ungaran in Central Java to Jember in East Java. But, once again, in 1886 pest and disease wept out cacao and from 1900 onward plantation opening for cacao was none; it was replaced by coffee and rubber.

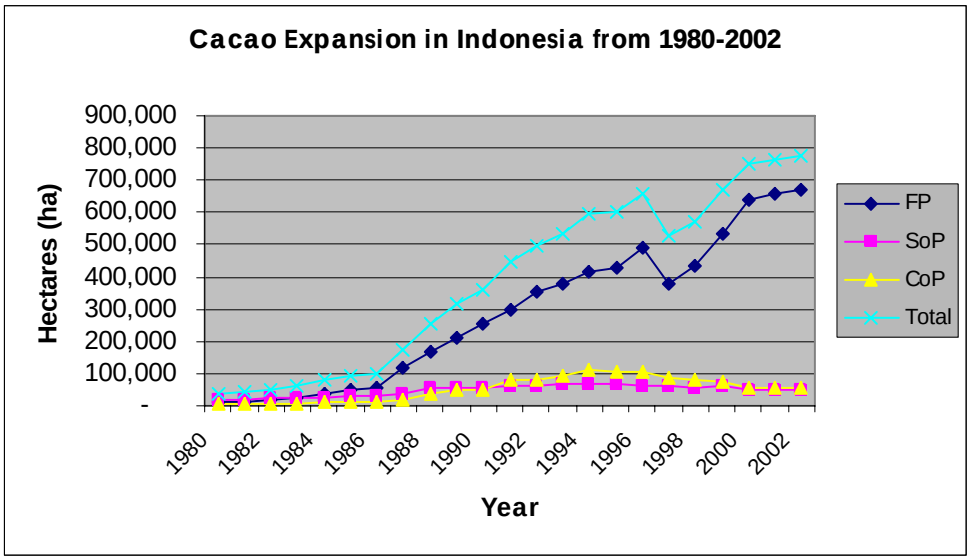
During Japanese occupation period, cacao suffered from lack of maintenance budget. Japanese ruler tried to finance the existing plantations, but the fund was too limited to increase productivity. Dutch plantation experts and

administrator were also put in prison, which worsened the state of cacao production in this period (Roesmanto 1991). It is important to note that in this era, Indonesian farmers faced a strong oppression to plant commodities only to supply the Japanese warfare. Hunger was the main cause of death of rural peasants.

In 1958 cacao in Java experienced its second wave of pest and disease attack. This incident was responded in 1965 by an establishment of a new cacao cultivation centre in East Java and North Sumatra. In Sulawesi, cacao had its second re-emergence when in 1958-1959 the rebellion of Darul Islam or DI/TII needed to financing their movement. They brought cacao seedlings from Sabah-Malaysia to be planted in South Sulawesi (Li 2002b; Ruf and Lançoln 2004).

Cacao Adoption as a Commercial Commodity

Cacao has been cultivated widely in plantation system since 1970. This was ultimately the era of plantation boom due to many new regulations created to strongly support the growth of estate crop production in Indonesia, e.g. the Domestic and Foreign Investment Regulation accompanied with Forestry Law No.5/1967. Those regulations opened up forest resources for exploitation. The boom of oil palm plantation, for example, was an impact of such law. Ruf and Lançoln (2004) and Li (2002b) saw cacao outside this frame, because from the outset, cacao as a commodity was never cultivated by big capital owners, but by smallholders. It was very little connected with Indonesians' history of socio-economic struggle between capital owner and peasant farmers. Unlike other commodities, e.g. oil palm, sugar, tea or rubber, cacao is considered as smallholders' commodity. The data of cacao expansion growth shows that 85% of cacao plantations are controlled and operated by farmers.



Notes:
FP=Farmer's Plantation, SoP=State-owned Plantation, CoP=Company-owned Plantation

Figure 1. Cacao Expansion in Indonesia from 1980-2002

The adoption of cacao was a spontaneous action between farmers. Through all the course of cacao boom and bust cycles, the role of farmers stood out as the innovator, particularly migrant farmer. Bugis who laboured on cacao and oil palm plantations in Sabah in the 1960s and 1970s contributed their experience (Ruf and Lançoln 2004). There were very few programmes in cacao cultivation launched by the government. Table 9 shows that 91, 4 % of cacao expansion is farmers' own initiative, only 8,6% is initiated by five types of government's projects.

Table 9. Cacao Expansion in Indonesia

Expansion pattern in 2003	Total Area		Number of farmers		Average land	Productivity	
	ha	%	KK	%	ha	kg/ha	%xPTP
Project based	*46,183*	*8.64*	*94,340*	*13.66*	*0.49*	*674*	*101.94*
a. NES	3,574	0.67	7,837	1.13	0.46	228	34.49
b. PRTE	3,121	0.58	3,352	0.49	0.93	806	121.94
c. UPP Berbantuan	3,401	0.64	5,579	0.81	0.61	1,299	196.52
d. Partial	14,542	2.72	44,362	6.42	0.33	431	65.20
e. Subsidised Farmers' Initiative	21,545	4.03	33,210	4.81	0.65	605	91.53

Expansion pattern in 2003	Total Area		Number of farmers		Average land	Productivity	
	ha	%	KK	%	ha	kg/ha	%xPTP
Pure Farmers' Initiative	*488,487*	*91.36*	*596,296*	*86.34*	*0.82*	*977*	*147.81*
Total	*534,670*	*100.00*	*690,636*	*100.00*	*0.77*	*825*	*124.87*

Source: Estate Crops Statistics 2004, Ministry of Agriculture

Notes:
NES :Nucleus Estate and Smallholder Scheme
PRPTE :Regeneration, Rehabilitation and Extensification of Export Commodities (Ind.*Peremajaan, Rehabilitasi dan Perluasan Tanaman Ekspor*)
UPP Berbantuan :Subsidised Plantation Development Programme

In my project site, the Head of Agricultural Information and Extension Office (Ind. *Kepala Balai Informasi dan Penyuluhan Pertanian*) of Donggala District admitted limited the government intervention in cacao farming, as well as rice, since most of the districts are in an upland area with too narrow flat terrain to accommodate wet-rice cultivation. He explained:

> For Kulawi sub-district, we do not have any specific program on rice intensification since the only suitable area for rice in Kulawi is only in Gimpu, neither does for cacao, except for seeds provision. Starting from the reformation era, specifically since ~~a~~ year of 2000, we have changed our approach to farmers; from top down to bottom up approach. Of course, for a policy at a provincial level is still top down, but nowadays, we serve extension service based on farmers' need or people initiative as a realisation of this new bottom-up approach. Therefore, it will be specific with things like pest and disease control, fertiliser application, or else, but not generally, because it is too time consuming.

Farmers' autonomy in cacao farming is on a scale that other export commodity farmers might envy. None of any government institutions or regulations intervene cacao price. cacao farmers are directly linked to the global market mechanism. This is a two-side of one coin situation. When we look at the negative side, such situation may place farmers in a very weak position as the price is subject to a fluctuated currency exchange value. The positive side is: because marketing chain between field producers and industrial consumers only consist of three nodes, i.e. farmer to village trader, village trader to big trader, big

trader to exporter; cacao farmers sit on a strong bargaining position. They can even sell their produce directly to the big trader. The chain is very short if we compare it to rubber, which has to pass a long marketing chain from middleman (Ind. *cukong*) to local trader, big trader, broker, rubber factory, and then finally the exporters. Each group of buyer applies their own standard of price. In 2003, cacao farm-gate price was Rp 9.500, while exporter's price was Rp 11.000 or 86% of price was in farmers' hands[10], but rubber farmer suffered from a far lag of price between farm-gate to the exporter, i.e. from Rp 2.000/kg received by the farmer to Rp 5.735/kg at the exporter's hands or 180% of price was in exporters' pocket[11].

Profit margin and price increase have been strong incentive for cacao production. Due to *rupiah* devaluation, Ruf and Lançoln 2004 pointed out that cacao price suddenly rocketing in 1997. From July to October 1997, the price was doubled: from Rp 2.500 to Rp 5.000. This cacao price ratio to rice per kilogram was 5:1, while 2:1 ratio of annual crop to rice had already pushed farmers to plant. At the end of January 1998, cacao's price was Rp 15.000, and 3 months later its ratio rose to 8:1.

Cacao resilience during 1998 economic crisis was proven through its steady price afterward. According to Sunderlin (1999), cacao production for marketing year 1999/2000 was expected to reach 350,000 tons because of favourable weather and price conditions. After the price rose dramatically in July 1998, it declined to Rp 6.000/kg in August 1999. Traders contended that the crop remained profitable as long as the farm-gate price remained above Rp 5.000/kg. Until December 2005, the price of cacao in Central Sulawesi stayed at Rp 10.000-11.0000/kg.

The revolutionary process of cacao production in Sulawesi not only highlights three standout elements: farmers' innovation, almost none government

[10] Source: "Successalliance", Newsletter for Sustainable Cocoa Extension Services for Smallholders, 9th edition, September 2003
[11] Source: Kompas, 1 June, 2001 (daily newspaper)

intervention, and price, but also the social impact derived from it. Li (2002b) and Sitorus (2002) worked on a change of local social formation resulted from cacao boom. Li argued strongly that agrarian differentiation had already taken place in Central Sulawesi due to a formation of landed and landless class in several areas. Sitorus said the same in his findings on Sintuwu – a multiethnic village in Palolo sub-district, Central Sulawesi- that gave light to the impact of shifting mode of production to the agrarian structure. The shift was from the dominant subsistence production, which was the domain of the 'indigenous people' (the Kaili), to the petty commodity (capitalist) one, which was the domain of mainly the 'new comer people' (the Bugis). This shift implies the fundamental change of local agrarian structure through which the Kaili people have been downgraded from 'landed' to 'landless', while the Bugis have been upgraded from 'landless' to 'landed'.

Ruf and Lançoln (2004) have worked extensively as well in the agricultural and environmental impact of cacao Revolution in Sulawesi. They stated that in the lowland and upland Sulawesi thousands hectares of wet-rice field, soybean, and tobacco had been converted to cacao, including forestland. They brought a concept of location rent. Farmers' options to locate their cacao plantation was determined by its land rent or simply put, by its lower production cost that came from the nature of the chosen location. Upland farmers might choose open forest land for forest rent rather than already opened area. Until early 1980s, Ruf and Lançoln stated that plain rent has saved upland and forest cover from cacao expansion, but at the end of 1980s upland forest had been cut for cacao. Consequently, pod borer attacked almost every inch of cacao plantation in Sulawesi.

CACAO REVOLUTION IN THE ADJACENT LORE LINDU 'PROTECTED' FOREST

> "They are acutely angry with the government and park administration for excluding them from land that, with cacao, promises a brighter future. They are unimpressed by the argument that the park, as a 'global biodiversity resource', should have priority over their entitlements to livelihood and prosperity" (Li 2002b: 428).

In Donggala District, 3 out of 14 sub-districts are located in adjacent to Lore Lindu National Park (TNLL), including Kulawi and Palolo sub-district where two villages of my research site are located. According to the TNLL calculation[12], almost 95,000 ha of Kulawi area and 25,000 of Palolo's are inside the Park territory (see Figure 3). In this sense, Li described very accurately villagers' insecure feeling when their livelihood sustainability was threatened by TNLL territorial concept. That is the common shared-expression of many villagers living in the boundaries of Lore Lindu National Park. Various responses emerge as a covert or overt protest. One of the most obvious is the continuous expansion of cacao plantation even after the 1998 crisis when the price fell, but then became steady again in Rp 9,000 – Rp 11,000 (see Figure 4) .

In the sub-district of Kulawi and Palolo, cacao has been villagers' source of cash since 1980s, even before Lore Lindu was designated as a National Park. Donggala farmers started to plant cacao in 1987. The knowledge was spread from the West Coast of Donggala District (Sojol dan Damsol), and it was initiated by some farmers brought the seedlings and started to cultivate them.

[12] Lore Lindu National Park Management Plan 2002-2007, Volume 1.

Figure 2. Palolo and Kulawi Location Map

In the District of Donggala, sub districts Palolo and Kulawi sit at the second and sixth, in term of cacao expansion in the last 6 years. The average cacao expansion from 1999-2004 in Palolo is ± 4,200 ha per year, and ± 2,400 ha in Kulawi with a tendency to increase every year (see Figure 62). According to the Head of Forestry and Estate Crop Agency, Donggala District Office, until March 2005, the demand for cacao seedlings from Donggala farmers has already gone up to

2,000 ha, while government's ability to provide such demand is only for 70,000 ha/year. The seeds are mostly supplied by the Coffee and Cacao Research Centre in Jember, East Java.

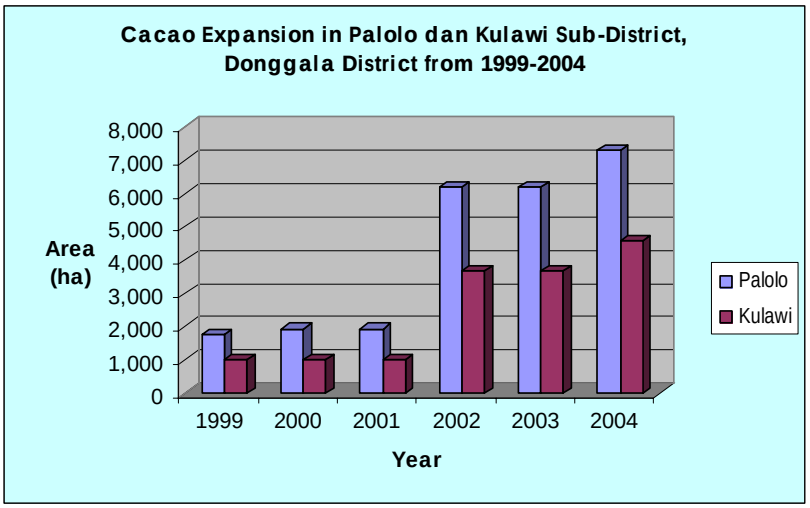


Figure 3. Cacao Expansion in Palolo and Kulawi Sub-District From 1999-2004

When we compared the extent of land cultivated for cacao with production volume per year, it showed a low level of productivity both in Kulawi and Palolo compared to a yield standard of 3 kg per tree or 3 tons per ha/year[13] (see Table 8). Ir. Khalik from Forestry and Estate Crop Agency, Donggala District Office perceived that cacao low productivity is caused by farmers' wanting to show-off their ability to own a vast extent of cacao plantation, and not based on rational calculation of its effective productivity. He further explained that in Donggala, the average landholding for cacao is 3 ha with maximum to 8 ha. Actually, one farmer is able to manage maximum only 2 ha with 1000-1200 trees/ha. Because such calculations do not ocur to farmers, the productivity is only 500-700 kg/ha. The ideal harvest of 80 fruits per tree is achieved only by skilful farmers.

[13] Source: an interview with Head of Extension Service Office in Kulawi in March 30th, 2005

Table 10. Cacao Productivity in Palolo and Kulawi from 1999-2004

Year	Palolo (tons/ha/year)	Kulawi (tons/ha/year)
1999	0.67	1.69
2000	0.69	1.69
2001	1.21	1.71
2002	0.38	0.31
2003	0.38	0.31
2004	0.73	1.28

Source: BPS. Palolo and Kulawi Sub-District Profile 1999 & 2004

However, low productivity may not be a reflection of farmers' ignorance on production efficiency, on the contrary, they develop a livelihood strategy that provides them with various sources of income. Many cacao farmers are well aware that the cacao price is controlled by *rupiah* exchange value against US dollar, which fluctuates. Such circumstances force them to cultivate any cash crop aside of cacao, such as vanilla, coffee, and cloves. For Bugis who tend to depend solely on cacao, they will expand their land or exchange it with other farmer in order to increase their alternatives. Therefore, cacao expansion is a logical response to anticipate loss or to lower risks, despite access restriction placed by TNLL administration. The question is: where did this expansion take place? Did it go to the forest or to rice fields? What are the implications of such expansion?

In Palolo and Kulawi sub-district, after the 1998 monetary crisis, the expansion of cacao suddenly rose in 2002 with an increase of almost 4,000 ha in Palolo and 3,000 ha in Kulawi. If we compare it to rice field extension, during 2000-2004 in both sub-districts show a decreasing tendency, but cacao expands approximately 1,000 ha in those areas (see Table 11). The increase of cacao expansion is a contrast to expansion rate before 2000, which shows 10-80 times growth.

Table 11. Rice – Cacao Area Decrease and Increase in Comparison, 2000-2004

Location	Rice field (ha)		Area decrease per year	Cacao plantation (ha)		Area Increase per year
	2000	2004	2000-2004	2000	2004	2000-2004
Kulawi	6579	5012	392	996	4580	896
Palolo	7471	6471	250	1935	7313	1345

Source: BPS. Kulawi and Palolo Sub-District Profile 2000 and 2004

The fact that rice field decreases in a moderate rate every year compare to progressive cacao expansion tendency may leave us with an impression that cacao expansion has been keeping rice field away from its trajectory. This will leave us with an assumption that cacao farmers along the TNLL border may prefer to open the forest than converting the rice field. How does it happen and why? Is it an expression of resistance to TNLL existence or a livelihood strategy to ensure socio-economic security?

One spot that has not been explored in the complex phenomena of cacao Revolution in Sulawesi is from the gender lens of analysis. This is where I place my research. Through exploring the phenomena of cacao boom in Bolapapu –a village in Kulawi-, and Sintuwu –a village in Palolo-, I will dive into the depth of this inquiry process, starting from a micro phenomenon of gender interaction in social relations of cacao and rice production to the hard evidence of forest cover, cacao and rice existence.

CONCLUSION:

The Green Revolution in Indonesia has failed to prevent rice field conversion. Rice intensification unsuccessfully penetrated upland agriculture due to weak price incentive. Instead of sustaining food crop production, upland rice fields had been replaced by export commodity plantation, especially in outside Java regions.

Government policy to open private sector intervention in estate crop production has elevated cash crops position into commercial commodity at the village level. However, commercialisation had transformed farmers' position at two levels. For those who already hold access to production forces (land, labour, financial capital, production inputs, and technical knowledge), commoditisation has successfully improved their welfare. On the contrary, for peasant farmers who must rely on small landholding, no access to bank loan, and incapability to increase their production inputs, export commodity cultivation has pushed them to socio-economic insecurity. Instead of bridging the gap, government agricultural industrialisation policy, i.e. state landholding distribution to private companies, and Nucleus Estate and Smallholder Scheme, had widened welfare discrepancy.

When government intervention in terms of land access was found in minimum, cash crop plantation flourishes as a lucrative local livelihood, such as cacao. Cacao short market chain with minimum competition from private companies' plantations has attracted smallholders from lowland to the upland areas. Cacao cultivation spreads mainly due to farmers' initiative and innovation. Lack of government assistance in the improvement of cacao cultivation techniques, however, had weakened research that should have been useful to strengthen farmers' capacity.

On the other side, successful cacao adoption has driven farmers' motives for expansion. At present, food crop fields and forest patch are farmer's options for such purpose. Their decisions are certainly influenced by structural forces, such as market and state regulations. Therefore, progressive expansion of cacao plantation into protected forest areas reflects the collisions between two powers: global market *versus* state policy on forest conservation.

In Sulawesi, the power of cacao markets has driven farmers to sustain their cacao production despite agrarian conflicts and landless class formation.

Cacao Revolution has brought up inquiries on social processes and dynamics that revealed a propensity to social polarisation. The change of biophysical landscape of rice field and the forest stand as hard evidence of such impact. This is a call to enter more deeply to the level of decision making with knowledge/power-play behind this process.

CHAPTER 4

BOLAPAPU AND SINTUWU

BOLAPAPU: ARISTOCRACY OF THE PAST AND THE PRESENT

Kulawi Aristocracy and Colonialism

The village of Bolapapu is the capital of Kulawi Sub-District. This 84,17 km2 mountainous village with an altitude of 500 meters above sea level[14] is located 71 km from Palu, the capital of Central Sulawesi Province. Bolapapu is one among other 21 villages of Kulawi Sub-District in Donggala Regency that lie in the Western Border of the Lore Lindu National Park/ LLNP (see Figure 5). Bolapapu is surrounded by the village of Tangkulowi in its West border, Mataue in the East, Boladangko in the South, Namo in the North, Lore Lindu National Park bordering its South East and a hilly rehabilitation forest is bordering the South West.

Bolapapu residents are rather homogeneous in ethnicity. With 2,292 residents in 2004, the dominant ethnic group is Kulawi Moma. It is well known that Kulawi people -differ from other ethnics in Central Sulawesi- concentrated geographically in one area: in Kulawi sub-district (Soetarto and Shohibuddin, 2001). Such 'cultural geographic' peculiarity shapes an ethnically distinct identity group. Based on their spoken language, Kulawi community is divided into four ethnic groups that are considered native, i.e. Kulawi Moma, Uma, Tado, and Umare/Pompa. Moma is spoken by people living in the village of Bolapapu, Mataue, Sungku, Boladangko, Tangkulowi, and Toro. Uma is a language used by people living in Pipikoro (South of Kulawi Sub-District), Tado is spoken by Lindu and Tuva people, and Umare/Pompa is the language of people in Banggaiba, Tovulu, Tobaku, and Rantepulu. The similarities of languages used in those areas construct a claim of territoriality.

[14] Data main source: STORMA Baseline Study of Socio-Economic Aspects of Village Communities in and around Lore Lindu National Park, 1999

Kulawians believe that in the past the *huaka* or territory under Kulawians' authority, covered the whole area where the language is spoken.

Bolapapu consists of two Moma's word; bola means house and papu means fire or burn. In Kulawi legend, Bolapapu was named after a fight between two brothers that caused most houses in the area to burn.

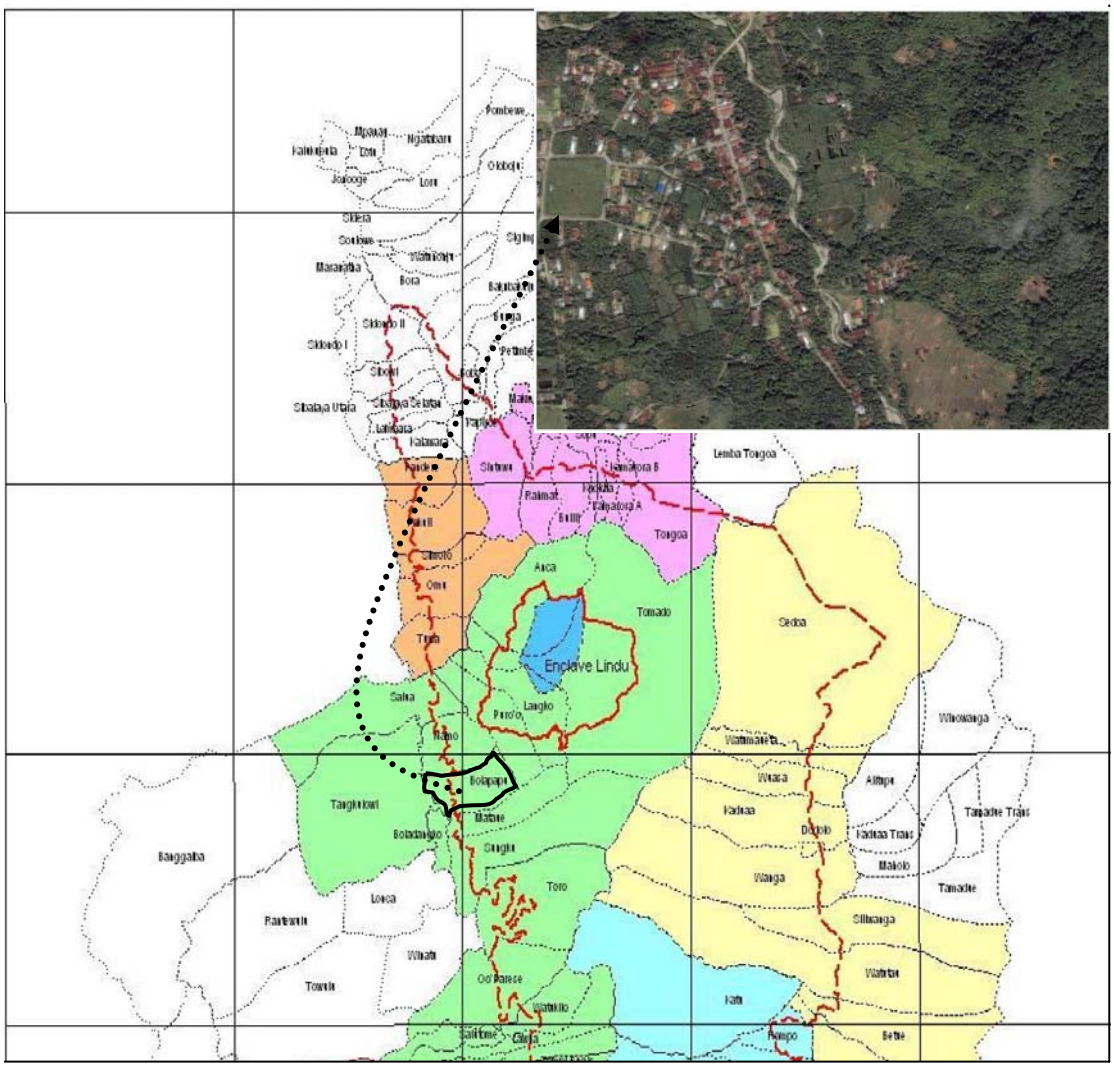


Figure 4. Bolapapu Village Location

The the Bolapapu community still proudly considers their village as 'the heart of Kulawi culture'. Bolapapu has always been the centre of Kulawi's governance

system and the place where all *magau* or 'King' of Kulawi had lived[15]. Schrauwers (2000) believed that this 'monarchy' concept was introduced by the Dutch colonial administration to the uplanders of Central Sulawesi. Jacob Thaha -a Kulawi researcher who has been focusing his study on Kulawi culture for more than five years- agrees that M*agau* is a Dutch introduced conception of leadership. The Dutch interest was to make a concept of Kulawi leadership easier to control. Based on his research in Toro, Shohibuddin (2003) also agreed that the conception of *magau* was part of The Dutch "*buiten gewesten"* (indirect rule) strategy. Moreover, he believed that the very hierarchical stratification itself was another result of Dutch intervention in Kulawi's social and governance system. It had successfully changed the equal federation system between villages in Kulawi into a more centre-oriented and hierarchical system. The system had put Bolapapu as the centre of the government and the highest in the governance strata.

Colonialism had utilised and sharpened Kulawi social stratification that was divided into three strata[16], i.e. *Maradika*, *Todea* and *Batua*. *Magau,* of course, came from *Maradika* stratum, which represented its position on the highest ladder of the strata, and a leadership status[17]. Before Dutch intervention, the leadership system was based on the first founder kinship. They constructed the *Maradika* class. Decision-making was done collectively between *Maradika*[18] and *Totua Ngata*[19]. Problems and rules were discussed between the Totua Ngata and *Maradika*, but

[15] Hangkalea, a woman, who was said to be the first *magau* of Kulawi lived in Bolapapu, although her position as a *magau* or actually only a headwoman (Ind. *kepala suku*) is still debatable. Hangkalea's successor was her brother Tovualangi, who signed a statement of recognition to the Dutch rule over Kulawi (*Korteverklaring*) in 1908, and was then replaced by Tomampe, his nephew. The last magau was Djiloy who ruled until 1961. He stepped down when Kulawi was administratively changed to a sub-district with *Camat* as the head of the sub-district administration.

[16] Shohibuddin (2003) also found the same stratification in Toro village

[17] Such distinction is not found in Garang's analysis (1985); he put *Totua Ngata* as a class under *Maradika*, whilst Shohibuddin argued that *Totua Ngata was* also from *Maradika* class who were given a part in village governance because of their skills, wisdom, and ability to solve community's problems. They were not chosen, but given the status and position based on people's trust and recognition.

[18] Contains two meanings, i.e. 1) an aristocratic class; but also in this case is: 2) a person appointed as the head of the governance system

[19] The advisory council with an authoritative power

decision was delivered to lay people by *Maradika*. *Maradika* as a headman/headwoman was chosen by *Totua Ngata*.

Under *Maradika*, there was a layer of the majority of ordinary people namely *Todea*, and lastly, at the lowest stratum is *Batua*. This layer constituted the lowest section in the Kulawi society, because historically the *Batua* were slaves of the *Maradikas*. Nowadays, because of the disgrace to this history of slavery, the existence of this class is sometimes denied, and it is almost a taboo to speak about it.

The leadership form of *magau*, besides the hierarchical and centre-oriented governance is part of historical elements that perpetuate Kulawi's social stratification to date. Aristocratic stratification is still strongly acknowledged, and to some extent is still actively practiced in Bolapapu, especially among the elders. From the first village head of Bolapapu to the ninth, all were coming from *Maradika* class.

In the past, *Maradika* was also identical with wealth. It was symbolized by ownership of a vast land, materials possession that considered as valuable, like water buffaloes, *dulang*[20], and *mbesa*[21]. Buffaloes continue to be inseparable from Kulawian's social world. These animals are needed in the rice field for land tilling work and they possess socio-cultural function when related to marriage bride-wealth, mourning ritual, and customary sanction. As for *dulang* and *mbesa*, both are confiscated goods from tribal warfare in the past, hence, only the *Maradikas* entitle to own those. These symbols are also used in life cycle rituals from birth to death.

Currently, however, *Maradika* is no longer identical with wealth. Merchants with their access to large-scale businesses occupy the highest positions in the local economy. Educational status that is articulated in the achievement of high position in the government service has become another means to attain a high socio-economic status.

Bolapapu's 2004 village profile shows that out of 1674 persons in the productive age (14-64 years), 79% are farmers. Unlike Sanderson's (2000) generalization of

[20] Special dinner plates made from bronze
[21] A piece of high-value woven cloth

farmer class, Bolapapu farmers are not a repressed homogeneous group that always constitutes the lowest socio-economic and political level. Instead, their social and economic status is varied, depending on the degree of control and ownership over land and other productive means, including aristocratic descent in some cases. Thus, the socio-economic status may depend on types of capital[22] possessed.

In Bolapapu's social system, economic, cultural and social capital played an important role in the past. Cultural and social capital such as a *Maradika* position could be automatically converted into economic capital, because this position included the privilege to own and distribute productive property. *Maradikas*, for instance, held dominant control of land distribution and ownership. If someone wanted to open a new farm outside his/her family land, the person should ask for *Maradika's* consent first.

It was clear that *Maradika's* economic capital linked to their social and cultural capital, and symbolised by large land ownership, aristocratic descent, high education attainment, position in government offices. *Maradika*, then, became the most dominant class at that time; in Bourdieu's terms, a dominant class is characterized by extensive possession of various forms of capital, and its effective means to produce and reproduce social positions.

At present, since land has become privatized and valued as a commodity, the market regulates the distribution and redistribution of land through land transfer. Migrants or outsiders can acquire land simply by purchasing it. The status of

[22] As described by Bourdieu (in Turner 1998), the social world is a sphere with different dimensions based on differentiation and distribution, and the actor is defined by his/her position in this sphere. The actors' positions are determined by two dimensions: (1) the degree of capital ownership and (2) the weight of their capitals' compositions. There are four types of capital, i.e. (1) economic capital; (2) social capital; (3) cultural capital; and (4) symbolic capital. A concept of "capital" is used by Bourdieu because of its ability to explain power relations: 1) capital is accumulated through investment; 2) capital can be inherited; 3) capital can produce profit (Haryatmoko, 2003). Economic capital is productive property (money and material objects, including land, that can be used to produce goods and services); social capital is positions and relations in groupings and social networks, informal interpersonal skills, habits, manners, linguistic styles, educational credentials, tastes, and lifestyles; cultural capital is the use of symbols to legitimate the possessions in varying levels and configurations of the other three types of capital (Turner 1988).

Maradika does not automatically bring control or possession of economic capital. Land allocation, for instance, is decided by the village head – a representation of modern village governance. In other words, aristocratic descent has lost its converted ability to other forms of capital. On the other hand, wealthy merchants may have all the abilities to symbolize his/her economic, social, and cultural capital, but not a cultural capital of aristocracy. Such compositions characterise Bolapapu's present-day social map, where the dominant class is dispersed, power centres are not clustered in one single point, and a value of aristocracy as the most important capital element is eroding (see Table 12).

Table 12. The Social-Economic Strata in Bolapapu

In the past			**At present**		
Social-economic class			Social-Economic class		
Capital's elements	Types of capital	Vertical positions	Capital's elements	Types of capital	Vertical positions
Aristocratic descent Wealth Political position Extensive social relations	Cultural Economic Social Symbolic	Landlord (*Maradika*) Headman/head-woman (*Maradika*) and advisory council (*Totua Ngata*)	Aristocratic descent Education Wealth Political position Extensive	Economic Cultural Social Symbolic	Landowner (*Maradika, Totua Ngata*) Government officer (*Maradika, Totua Ngata*)
			Wealth Education Political position Social relations	Economic Social Cultural Symbolic	Big retailers, big-scale farmers, large-land owners (mostly *Todea*) Government officer with higher education (mostly *Maradika*, some *Todea*) Government officer in general
Wealth Social relations	Economic Social	Small-medium traders & medium farmers (*Todea* or migrants)	Wealth Social relations	Economic Social	Small-medium retailer traders, medium farmers (*Todea, Maradika*)
Social relations	Social	Small farmers or farm labour (*Batua*)	Social relations	Social	Small-scale farmers, farm labour (*Todea*, *Maradika)*

Source: Excerpted from Savitri (2004)

The Story about NAMO

To understand Bolapapu -or more precisely- Kulawians' social construction of aristocracy in present reality requires a visit to its neighbouring village Namo. In June 2003, two hamlets, namely Laone and Sapoo, were administratively separated from Bolapapu and became a new village called Namo. Usually every place in Kulawi is named after the most salient natural feature in the area, but Namo does not have any meaning because it was supposed to be called Nabo, which means undulated land. The name was changed by the Dutch due to misspelling, and this mistake was brought to present.

When Laone and Sapoo were still under Bolapapu's administration, these two hamlets were the only hamlets with 100% Moslem residents. At present, they become the only village in Kulawi that is inhabited by 100% Moslem. Why is this fact so important? Their religion indicates that their ancestors came from Sekko, a place in the southern Sulawesi. In the time of tribal warfare, Sekko people were defeated by Kulawians and many of them were captured and brought to Kulawi to become *Maradika's* slaves or *batua*. They were forced to labour in *Maradika* land or in *Maradika's* household as servants. Laone and Sapoo were areas where the *Maradika* placed their 'servants' to till the land.

Usually, one *Maradika* family would live in the area where servants were deployed to open farm land. This *Maradika* was given a task by the *Magau* to supervise the servants. Due to intensive interactions, cross-marriages between *batua* and *Maradika* were eventually occurred, although it was supposedly forbidden. The family consent for such marriage was only given when the groom is from *Maradika* and the bride is *batua*, since most likely the *batua* woman would be a second or third wife. Kaudern (1940) stated that polygamy was practiced by Kulawian. Occasionally *maradika* man married to more than one woman, and usually only two at a time, but Kaudern found some men with four wives. On the other hand, marriage between Maradika's women to Batua's men was very rare. It was

obligatory for the groom to pay a bride wealth according to the bride's stratum, which meant in this case that the *Batua* groom would have to pay a certain number of buffalos, *dulang* and *mbesa*. Those valuable goods were never in *Batua's* possession or entitlement. Therefore, it would be shameful for *Maradika* parents to have a daughter married to a *batua* man. This belief perpetuates the arranged marriage to date. Some *maradika* parents who still adhere to their aristocracy usually forbid their daughters to have a boyfriend from Laone or Sapoo or now it is known as Namo.

The inferiority of coming from the lowest class in the community is still a factor in the present social life of Namo people. When they finally became a village on their own, they had to choose a village head. The person who was chosen did not live in Namo, but in Mataue, which is about 7 km from Namo. However, it is not merely about the person's domicile, it is more about this person's aristocratic descend. The village head's father was a *Maradika* whose grandfather lived in Namo to supervise the *batua*. The village head himself is Bolapapu's former village secretary. He is now still active as a civil servant who works in the Ministry of Forestry as a forest ranger (Ind. *jagawana*). Why was not a person living in Namo chosen? They claim that no one in Namo is suitable to hold a position as village head.

'Suitable' is the key word that may depict the whole complex of Namo inferiority and Bolapapu superiority. They understand very well that if they have a village head from Laone or Sapoo without any trace of *maradika* blood, they might not be represented in equal position with other village head in Kulawi, especially from Bolapapu. Leadership comes from themselves may not be accepted fully, since they feel that they are all equal. This is evidenced by the removal of a woman leader from her position as the head of woman group that received assistance from an NGO (Non-Government Organisation), and her other position also as the head of Moslem women religious group. This removal act was done by other women group that headed by the wife of village apparatus, not because of an incompetence

issue, but due to a competition of recognition, despite a fact that the removed women leader is the daughter of village most respected religious leader (Ind. *Imam*).

It is also important to note that the villages around Bolapapu, especially Mataue, Sungku, and Boladangko, are villages where the *maradika* with 'the purest' blood used to live, so without a village head that is considered equal by these villages, Namo would stay as 'the village of the lowest'.

As much as the image of hierarchical community would like to be veiled from the outsiders' eyes, the fact of Namo stands as strong evidence of aristocratic hierarchy's influence in the present lifeworld of Kulawians. The issue of democracy as a symbol of modernity brought by many NGOs, and traditionalism attributed to aristocracy, are the ultimate reason behind all efforts to cover the enactment of aristocracy at present.

Aristocracy and Access to Landholding

The description of Bolapapu's social structure may lead us to an assumption of a melting pot of economic capital from the concentration in *Maradika* class to a more redistributive structure. It may indicate a more equal land ownership distribution. Moreover, the majority of landowners in Bolapapu posses less than 1.0 ha (93.5%), and only 6.5 % hold more than 1.0 ha, while the maximum land owned by one person are only 3.0 ha[23]. The large majority of farmers own only 0.25-0.50 ha of farm land. As a whole, land types can be sub-divided into three categories, i.e. wet-rice fields (Ind. *sawah*), dry-land (Ind. *kebun*), and house lot (Ind. *kintal*).

This distribution, however, does not include the land ownership outside Bolapapu. The two biggest local land owners, who are not a *Maradika*, accumulate substantial pieces of land outside Bolapapu: Pak GD owns about 60 ha of cacao estate in Laone, a hamlet in Namo village, and Pak ID owns a 20 ha of land in

[23] Data source: *Daftar Himpunan Ketetapan Pajak dan Pembayaran Tahun 2003. Desa Bolapapu, Kec. Kulawi, Kab. Donggala, Provinsi Sulawesi Tengah*. Issued by: *Ditjen Pajak, Dep. Keuangan, KanWil XIII, Sulawesi Tengah. Kantor Pelayanan PBB Palu.*

Marena, a hamlet in Oo Parese village. These two are the only ones to be recognized as cacao commercial farmers (Ind. *petani pengusaha*) in the Kulawi sub-district.

They said that they were not intentionally accumulating land. People in need of cash came to them offering their land. The need for cash ranges from mourning ritual for their parents, a wedding party for their children or paying for their family member hospital expenses. Transferring land for those purposes is common in Bolapapu, because of the adherence to aristocracy status drives them rather loosing lands than having a shame of not being able to perform rituals in accord to their status. Rich-capital farmer, like GD and ID certainly utilise this situation to its maximum.

The lucrative price of cacao is an undeniable motive for land accumulation; as a farmer in Laone, whose land bordering Pak GD's land, said that Pak GD himself has already come to him many times asking to exchange his land for a motorcycle. Namo farmers stated that many of them have sold their land to GD at a considerably low price, which was about Rp 3 millions per hectare. GD usually bargains for a lower price, and when the owner is in a real need to sell, such a price would be accepted too. The same case is experienced as well by the farmer whose land is neighbouring Pak ID's land in Pobia.

The above analysis applies to the concept of private ownership. However, in Bolapapu, or Kulawi in general, family or kinship ownership has a deeper root in the community. By recognizing this conception, we will enter the area where verbal recognition of ownership from elderly or *Totua Ngata* is as strong as written 'legal' document. This is where customary law places its power over land rights. Thus, based on that, *Maradika*, who are direct descendants of *magau*, such as Tomampe and Djiloy, is still acknowledged of their extensive land ownership. Ibu SM describes it as below:

> In Kulawi, unlike any other area, if a parcel of land has been opened by our ancestor, all his descendants are entitled to use that land, even if the land has not been in use for years and become a *pangale*. Therefore, if you look to the West, the whole hill is ours. We divide it among ourselves, between families from the same ancestor, or our parents usually have already decided for us of which part that entitle to us. We will not claim other land that has already re-opened by our relatives, because we know that it is our relatives' children and grandchildren rights to that parcel of land.

Thus, there is a small portion of landed people in Bolapapu, who are *Maradika* and non-*Maradika* that own a vast areas of land outside the village (up to 60 ha). Below this layer, we will find a gap until we reach the layer of 2-3 ha landowners, followed by a large portion of farmers who own less than 1.0 ha. This composition suggests that an equal distribution of land is not at all an accurate description of agrarian structure in Bolapapu.

How do lay people or poor *maradika* access the land? Most of Kulawians in Bolapapu are landed people. When they are not *Maradika*, their ancestors must have received granted land from *Maradikas*. Therefore, it is almost certain that only migrants will have to struggle harder to attain land through market mechanism. Of course, after generations, land fragmentation due to inheritance was unavoidable; hence, landless newly-wed couples certainly exist. Nevertheless, reciprocity has always been a welfare distribution mechanism in the community. Landless farmers can 'borrow' other farmers' land to be cultivated or called as *mehabi* (Ind. *pinjam garap*), and if the permission is given, the borrower will usually promise to share part of his/her harvest to the landowner as an expression of gratitude to their kindness or *momirara* (Ind. *kemanisan hati*). There is not any formal condition nor does any agreement exist on the portion of sharing, because it is a manifestation of reciprocity.

In Bolapapu, besides land market that channels the access to land for migrants, the non-market mechanism works as well to mediate access to land, particularly for the lower layer of the community. The concept of private property,

namely *dodoha* that is based not only on individual but also on family property shows another means of accessing landholding. A patch of forest land that is cleared for cultivation by one person is also accessible for his or her siblings, and his or her children. Does the same mechanism work in the community where market becomes the main channel of landholding?

SINTUWU: A PLURALISTIC COMMUNITY IN A COMMERCIAL LIFEWORLD

Ethnicity and Landlessness

Sintuwu may have given an example of a place and a community where domination of petty commodity structures has completely removed the existence of subsistence commodity structures along with its social and structural consequences. Interestingly, ethnicity links directly to the option of subsistence crop or cash crop.

This village is located in the Palolo sub-district, Donggala District, in the Eastern border of Lore Lindu National Park. From 21 villages in Palolo sub-district, Sintuwu is one of five villages located along the border of the Park. Located at the altitude of 500 metres above sea level, this village covers an area of 19.23 km2 and is located about 50 km from Palu (see Figure 6).

Sintuwu was established about 40 years ago through a process of multi-ethnic immigration, which made the village a multi-ethnic one. In 1961, 7 families from Bunga and Bakubakulu village opened a land in the area where the village of Sintuwu is now located. They came and opened the land based on their initiatives, not because of government mobilisation through transmigration program, and they called the area as Sintuwu. Sintuwu means unity and solidarity. Starting from seven families, 43 years later, in 2004, Sintuwu's population flourished to 1323 residents with 984 persons were in their productive age (15-60 years), and 92% of them worked as farmers.

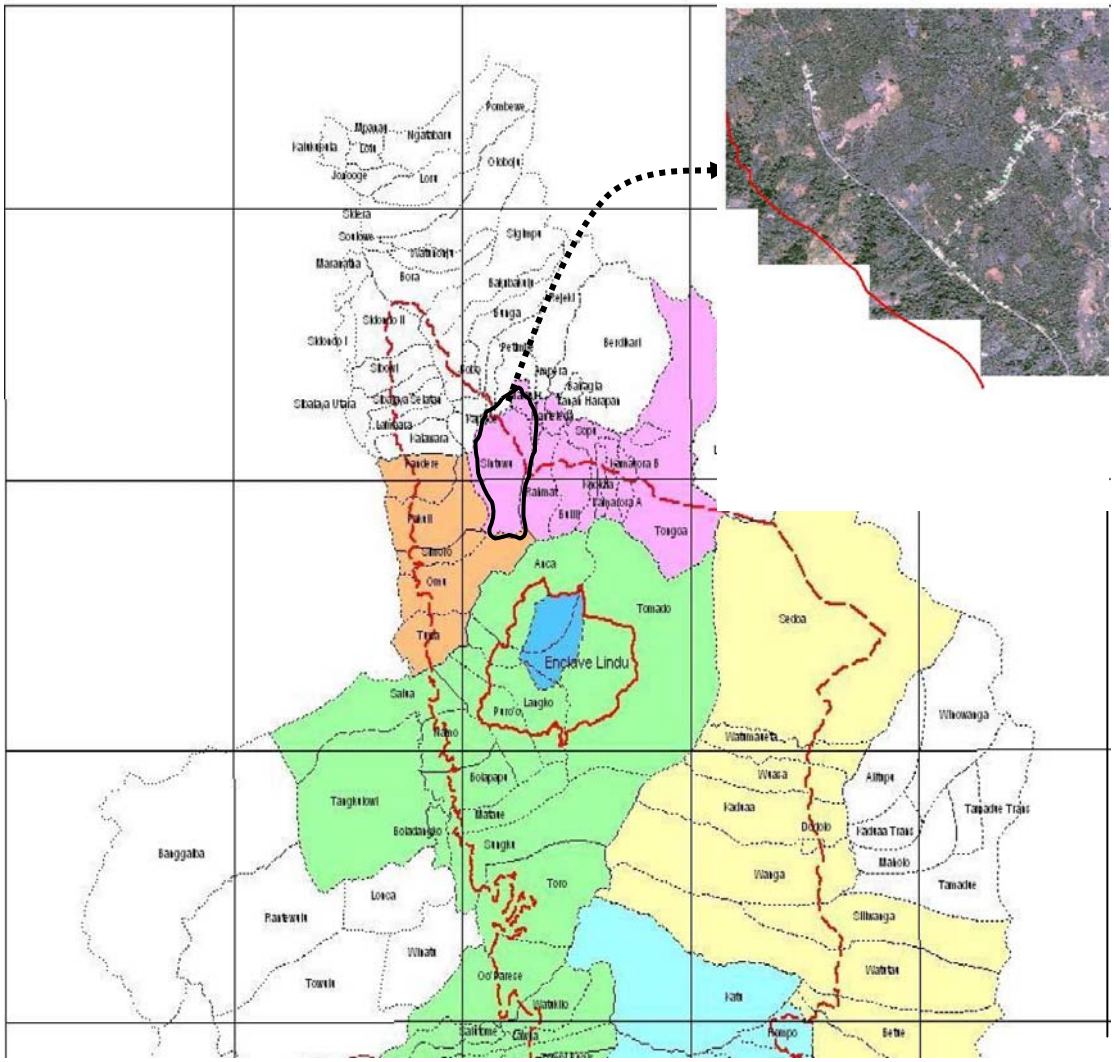


Figure 5. Sintuwu Village Location

Although the village community consists of more than four ethnic groups: Kaili Taa and Ija (sub-groups of Kaili ethnic group), Kulawi Uma (a sub group of Kulawi ethnic group), Bugis, Toraja, Sundanese and Javanese; it is clear that Kaili and Bugis appear to be the major ethnic groups. The ethnic composition is about 50% are Kailis or could be lesser; Bugis is reaching to more than 25%, while the other composes the remaining 25%[24].

Since the Kaili people are the pioneer immigrants, their first adaptation was to open rice field, firstly in a dry-land, then in 1963 they started to open wet rice field by

[24] Based on an interview with Head of Village Council of Sintuwu (Ind. *Badan Perwakilan Desa* or BPD)

channelling water from Katopi River. Corn had already been planted too, but only for subsistence (not for commercial) purposes, because transportation means and infrastructure were still a constraint to reach the nearest market.

Bugis came to Sintuwu without going through such a process of adaptation - by opening a rice field for subsistence-, because their main purpose from the outset is to open a cacao plantation. Therefore, it was very clear from the beginning that rice was Kailis' crop and cacao was Bugis'.

For the last 7 years, which started in 1998 after monetary crisis, cacao has been dominating village economy as well as village agriculture. The land ownership structure in 2003[25] showed that from 425 households, 410 households (96%) were estate crops farmers, and only 87 households (4%) were food crops farmers. From the 410 estate crops farmers, 15 farmers (3,6%) did not own a plantation, and 260 farmers (63%) own more than 1.0 ha of plantation. The structure of rice field ownership showed a contrast to estate crops', with 263 farmers without rice field ownership and 8 farmers own more than 1.0 ha. Since none of Bugis farmers owns rice fields and only they can afford to own more than 1.0 ha cacao plantation, it is clear that 260 of 263 farmers who were without rice fields are Bugis. They were also the 260 farmers who owned more than 1.0 ha cacao plantation. As for 87 food crops farmers, it is clear as well that they are not Bugis, but either Kailis or Kulawians.

Although the Kailis were the pioneers, as a community they did not hold control over land distribution. Such power was taken and applied exclusively by the village head. Under the village head's arrangement, every Kaili was only entitled to 2 hectares of land, without considering number of family members. Eventually, fragmentation and land transfer set aside the Kailis from land holding.

Nowadays, many Kailis are landless. From seven pioneer-families, only four are able to retain their land and stay in Sintuwu. Even the head of customary (Ind.*adat*) council of Sintuwu does not own land anymore. He claims that even the number of

[25] Source: Sintuwu Village Profile 2003

indigenous people (Ind, *orang asli*) in Sintuwu has been declining, and to date less than half are still in the village. Kailis who claim to be the indigenous people, are mostly living from wage, and *bapetak*[26]. Being pushed aside from land control, many Kailis moved out from Sintuwu or forced to search for a farmland outside the village. The Kailis, who retain their position, are able to stay due to their capability in accessing wage and land holding. They live from wet rice production, and some from cacao farming.

Different ethnicity produces different constructions of landlessness. Bugis farmers admitted that before 1980s, when cacao has not yet cultivated in a mass, the main agricultural activity in Sintuwu was rice farming that was practiced by the natives. Change has taken place, and nowadays many natives' land have already been bought and converted to cacao plantations. According to them, it is because the natives adhere to various rituals that require cows to sacrifice, from celebrating birth to mourning the death, which cost the natives their land to buy these cows. In addition to that, practicing rice farming is only a loss due to almost none or very small profit can be gained from such activity. One Bugis woman farmer gave me an example to explain this landlessness:

> When our village head passed away due to illness, the family had to perform a mourning ritual 14 days after the death. Because he was a village head, a cow for sacrifice is necessary. Therefore, the village head's wife sold their land for Rp 6 millions to buy a cow and other needs. When I asked the wife about how much money that she has spent for that ritual, she said that all 6 millions were spent already. That is why most of Kailis now do not have any land anymore here, while migrants are very easy to attain land. For many migrants rice farming is not profitable, we prefer cacao. Therefore, every rice field sold to migrants will be turned into cacao plantation.

In Bugis' conception of land value, it is very irrational to sell land in order to perform a ritual that only last a day or two in people's remembrance, while land is able to give

[26] Bapetak is a close access labour system in rice farming, where the only labour who can access wage is the ones who hold a contract of planting and harvesting with the landowner.

a long-lasting benefit. Hence, they perceive Kailis landlessness is by choice, which is irrational one.

Bugis' access to land was from buying, either from the village head or directly from the Kailis. They were not attracted to buy a forestland, hence, the village head always offer them an already open plot regardless who the first cultivator was. This village head's exclusive land distribution power had legitimated outsiders' -including city dwellers who became absentee landowners- land-grabbing from the Kailis. Such practices were not openly resisted then, because the village head always hide behind a reason that he was forced to allocate land for 'people in high positions' (Ind. *pejabat*), which is evidenced by the existence of land owned by former Central Sulawesi's Governor in Sintuwu. This reason has successfully silenced any protests. But, later in 2002, when 'people in high places' argument failed to protect him due to a 'reformation' movement, the village head was jailed due to illegal land selling inside the area of Lore Lindu National Park. In Kailis' perspectives, the village head's misuse of power over land distribution is the ultimate reason behind their landlessness condition to date. They never believe or accept that their traditional ritual is the cause.

Besides 'village land', the Kailis' private lands saleable to Bugis were their rice field. During 1992-1998, nearly 72% of wet-rice fields in Sintuwu were converted to cacao plantation, so that the wet-rice field areas drastically declined from 270 hectares in 1992 to as little as 75 hectares In 1998. According to Sitorus (2002), the main reason for such land conversion was the good price of cacao, at least during the first half of 1990s. Sometimes the decrease of wet-rice field's productivity, due to the lack of water for irrigation, was proposed as the reason, but it was only a minor one. This may explain the conversion, but insufficiently explain land selling done by the Kailis. If cacao was a lucrative commodity, why did the Kailis sell their land?

Sitorus also proposed the argument of ritual need. The ritual need, however, was one reason, but land fragmentation also played an important role in making the

value of land return diminishes. The smaller land is owned, the effort to maintain its productivity becomes higher, so selling is a luring alternative whilst demand never ceases. In addition, land fragmentation is unavoidable since from the outset every Kaili family was arranged by the headman to own only 2 hectares of land.

Landlessness of the natives in Li's analysis (2002b) emerged as a result of individual decisions in response to the lucrative commodity, combines with individual leader's misuse of power. In a fragmented community there was not any institution to take a role as a collective-defender of landownership. Local history of settlement should be traced to give the backdrop of such fragmentation. Can Li's analysis apply to the case of Sintuwu?

Sintuwu started as a solid community, which is evidenced by the fact that their migration was based on their own initiatives, not because of the government's transmigration project; as reflected in the meaning of Kaili's word chosen for a name given to this place. Then, in 1978, a Kaili migrant from Tatura-Palu became a village head. Regardless of any procedures that put him in a village head position, after gaining that power, he claimed most of the land from Krona River to the uphill - including those that were already tilled- as his. He justified his action by stating that it was his entitlement as 'the president of the kampong', and the protector. He also hid behind 'land for high positioned people' argument as mentioned earlier. In the eyes of the villagers, he became The Government, as many elderly farmers use that word to refer to him. They responded to his claim as follows: '*We, the ignorant people who do not know how to read and write, just accept his word without daring to question it*'. His claim over land had opened a land market in Sintuwu. This marked the beginning of migrant influx to the village, as well as land transfers to the migrants.

The year of 1978 and early 80s were the golden years for the New Order regime. The centralistic approach that has been internalised for 20 years manifested as the obedience of the people to The Government. Sintuwu community in this

period only represented an example of a common symptom shared among rural communities in Indonesia: an uprooted village head from his or her own community due to obligation to serve the supra-village institutions' needs in order to retain the position (Nordholdt 1987). Tjondronegoro (1984) even found that village administrators only belong to the cross-hamlet or upper layer village where elements of democracy and mutual help were not lively practiced. Soetarto (2006) referred this to the effect of state's corporatism, which deliver elitism until the lowest level of state administration.

Landlessness of Kailis in Sintuwu, then, was a product of elitism that was transferred from the State. When elitism confronted a newly develop community, not only local institutions were impossible to realise, but it also developed layers of elites. The village secretary was granted the power by the village head to arrange landholding around his neighbourhood compound. His workers who used to log in his forest patch also received 'a right' to distribute land to new comers who were interested in his patch. This web of elitism, eventually, brought landlessness to the Kailis.

Minority ethnic groups, Sundanese for example, were able to access landholding due to their network with absentee landowners. Absentee landowners, usually, needed someone to take care and protect their land ownership, because it was often that new migrants cultivated abandoned land. This was a chance for migrants to access the land. Pak Uj, a Sundanese cacao farmer, came to Sintuwu in 1991 and used to depend on wage for a living, until he managed to 'borrow' land from a Chinese who lived in Palu. From the selling of vegetables and corn that he cultivated on the borrowed land, he was able to buy his own land in 1995. At present, he has already bought 2 cacao plots of 2.5 ha and an uncultivated 0.5 ha patch of land. He bought one of the cacao plots with a very low price due to its location: inside the National Park. The land was bought from a Kulawian, who opened it from the forest area.

After losing land, Kailis still have to search for land-based or forest-based livelihood due to limited alternatives available in non-agricultural sector either inside or outside their village. I have seen so many young people staying in this village, and such fact tickled me to ask why. One of the village formal leader said that it was due to a low education attainment of Sintuwu villagers, which is justified by the fact that from 1323 villagers only 67 managed to complete high school[27]. Therefore, penetration to the forest was a chosen alternative for accessing new land. As shown by Sitorus (2002) from a survey to 30 households that 21% of landholding was derived from forest grabbing. This fact will lead us to a discussion on agrarian change in the next chapter.

SUMMARY:

LANDHOLDING AS THE ACCESS TO KNOWLEDGE ACCUMULATION

The discussion of land access in this chapter is an entrance to understanding who has the greatest opportunity to accumulate knowledge about rice and cacao. In the Bolapapu community, although aristocracy does not automatically bring an economic power to the *Maradika* as it was in the past, it still regulates the socio-cultural and political life of Kulawians at present. Aristocratic families with vast landholding oblige to give access to landless farmers. Economic power has not yet become the sole indicator of one's position. Therefore, market is not the only exchange mechanism that exists. Reciprocity still enables land access for the lowest layer of the community. Consequently, almost all layers of the Bolapapu community have access to land.

Different local history of settlement produces different responses to land commercialisation. As a village that was established through multi-ethnic immigration process, the identity of 'the indigenous people and the migrants' segregates Sintuwu community. The Kailis or the indigenous people are trapped in a

[27] Data source: Sintuwu Village Profile 2004.

landlessness situation, when the high price of cacao drives land commercialisation. Bugis as the migrants, who came to Sintuwu for cacao, dominates landholding for cacao plantation. Elitism had worsened the landlessness of Kailis and pushed out this indigenous people from land access and subsistence agriculture. Thus, for the last 40 years Sintuwu agrarian differentiation has been moulded by land commercialisation.

All layers of the Bolapapu community hold access to knowledge about cacao as well as rice farming, but Sintuwu community is split into Bugis ethnic group that hold the access to cacao knowledge, while landed and landless Kaili must adhere to rice farming knowledge.

CHAPTER 5

FROM SUBSISTENCE TO PETTY COMMODITY PRODUCTION: AGRARIAN CHANGE IN BOLAPAPU & SINTUWU AS THE CONTEXT OF MARKET-VALUED KNOWLEDGE

AGRICULTURAL TRANSFORMATION IN BOLAPAPU

Dry-land farming is the dominant agricultural system in Bolapapu with an area of 449.5 ha (72.6%), compared to 170 ha (27.4%) wet-paddy fields [28]. Based on the landowner composition, 64% of farmers own only dry land, while 28% own only wet-rice field, followed by a very small portion of farmers who own both types of land (8%)[29]. Does it mean that dry-land farming is valued more than wet-rice cultivation? Is knowledge ownership on petty commodity production valued more than subsistence crop production?

Subsistence Agriculture and State's Intervention

Arragon's study (2002) about land utilisation in Central Sulawesi shows that the Dutch colonial government made wet-rice farming compulsory. The Dutch conceived swidden agriculture as a backward technology intimately related with supernatural beliefs, and therefore should be eliminated by the introduction of religion. In addition, wet-rice farming required farmers to settle on their lands, and therefore, they would be controlled easier by the Dutch.

The wet-rice farming technique was firstly introduced to Kulawi community by Balu. He was considered as the founder of Kulawi and the first person who had taught his people to conduct wet-rice planting in Bolapapu (Garang, 1985).

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[28] Data source: Bolapapu Village Profile 2003

[29] Data source: *Daftar Himpunan Ketetapan Pajak dan Pembayaran Tahun 2003. Desa Bolapapu, Kec. Kulawi, Kab. Donggala, Provinsi Sulawesi Tengah*. Issued by: *Ditjen Pajak, Dep. Keuangan, KanWil XIII, Sulawesi Tengah. Kantor Pelayanan PBB Palu.*

The transition from swidden to sedentary agriculture in Bolapapu occurred when modern wet-rice farming started widely. According to Schrauwers (2002), this transition has brought a foundational shift in farming technology, land ownership, and relation of production based on wage. These shifts are also seen in Bolapapu.

When wet-rice farming was initiated by Kulawians, swidden agriculture did not completely phased-out from village agriculture, as Arragon (2002) found that for Upper Kulawi, swidden agriculture was still being practiced as an adaptation to water deficiency in a steep terrain and hilly condition. Thus, people were still practicing slash and burn agriculture, apply fallow system, and plant many varieties of dry-land paddy. For many years dry-land paddy and wet-paddy were planted together in one sequence, and involved various rituals.

Bolapapu farmers left dry-land paddy farming when rotation encountered land scarcity, which caused by access restriction to the forest in 1973. In 1973, the South East part of the village was delineated and claimed as part of Lore Kalamanta Wildlife Reserve as designated by the State through the issuance of the Ministry of Forestry Decree No.522/Kpts/Um/10/1973. Without rotation, dry-land paddy productivity tends to decline due to its dependency to fertile soil. Besides rotation barrier, dry land paddy had to compete with a shorter yielding period of wet-rice. Wet-rice was harvested twice a year, but dry land paddy only once. In addition, another competition was pushed to the fore by the commoditisation of corn. The opportunity cost of planting one season of dry-land paddy is equal with two seasons of corn, which gives corn a higher commercial value. Eventually, farmers prefer a sedentary agriculture due to rational calculations, and driven force of state's regulation.

The diminishing practice of shifting cultivation was accompanied by the vanishing traditions and rituals. Before sedentary agriculture was established, rice farming used to be an inseparable part of Kulawians' cultural and belief system. In each step of cultivation process, a ritual was performed to acknowledge the

integrative nature between human and the environment. It was believed that both belong to one cosmic system, and a harmony should be sought through creating a direct communication with Mother Nature by using *mantra* and offerings.

Rice farming started with land clearing that was called as *noneara pare*. A group of 10-20 people conducted bush and small trees cutting. Usually, the *Maradika* who owned the land will sacrifice a buffalo and provide food for the workers. When these bushes were already decomposed or in a *mampeana* stage, they cut big wooden trees or *motowo* by making 2-3 meters-ladder and started to cut from the upper part. By using this technique, when the big trees finally cut off and fall, they also take the small ones down. Then, these woods would be left for 3 months until dry enough to burn. After woods were all burnt, the farmers would clean the land from leftovers; this activity was called *mokawo*. Then, they started planting vegetables, like small pumpkin, chilli, and cucumber.

Before starting to plant rice by spreading the rice seed, 2-3 *Maradika* landowners or *Pemanus* would seek for a star constellation at a bright morning to find the third and seventh stars or *halunu*. If the stars were still blinking, and did not shine steadily, it signifies an inappropriate time for planting because pest disturbance was to be expected. When *Pemanus* found their stars, they would start planting and the other will follow. Then, a *Tobalia* or a shaman will chant her 'mantra' to initiate planting season. Before going to the field, the farmers should observe the weather first. If rain comes not in its season or called as *uda muhu*, it was forbidden to go to work.

When paddy starts producing grains or *motantau*, offerings were prepared and Tobalia started to chant mantra -called *nogane*- to ask gods for successful harvest and drive away the pests, like birds and rats. There were several stages to describe the changes until paddy was ready to be harvested, i.e. *mowodono* was when the stalk starts to produce grain, *narabu* was when all paddy already produced grains, *notungkaharapi* was when the grains start to gain weight,

nonguduallo was when they start yellowing, *nokalowu* was when a patch of paddy had ripened, *nompahilele* was when the whole plot had ripen and is ready to be harvested. When it is still 1-2 days more to harvest, the paddy reach a *hompoya* stage. If the harvest could not be done on the most suitable day, the rice stalk would fall. Farmers called it as *mako*. At that stage, the stalk is already too difficult to cut and the grain starts shrinking.

Usually, the *Pemanus* performed harvest 3 days earlier than the others did. All harvesting activities and rituals were done only by women. When the harvest time comes, they clean the barn and put *mbesa* to cover the rice container. Then, before going to the field, they will take a bath, wash their hair, and put some perfume, as a ritual called *moboka*. They also prepare three parts of wrapped glutinous rice to be put on the ground, while burning incense. Before starting the harvest, they also put on *mbesa*, and flowers on the cloth that covers their hair.

Cutting the rice stalk must follow a certain step, and was always initiated by cutting seven stalks as 'the mother seed' for next planting, and put these stalks on the barn ceiling. If from the outset the *Maradika* landowners wished to hold a ceremonial feast after harvest, so they would hold a *Hunca*. In this feast, the *Maradika* had to serve food for people as many as numbers of *dulang* in their possession or called *nebua*. If their paddy field were extensive, they would invite neighbouring villagers.

Hunca was still performed until 1939-1940s. When Japanese entered Kulawi, it was almost impossible to hold such a big feast, because the villagers were forced to use their fields to plant cotton, and their rice yield was all taken. In Watuwulu, Japanese forced farmers to work without having a chance to meet their own needs. Elderly villagers describe Japanese occupation as a cruel period, because even cloth was very rare to find, and their clothing were made from bark skin called *nunu*. This was the period when *mbesa* became scarce and expensive cloth.

Religion also contributes to the diminishing ritual performance. When a mission of Salvation Army entered Kulawi in 1913 to introduce Christianity, and followed by Islam in 1935, then Protestants in 1947 (Garang 1985), almost all rituals that were associated with animism and spiritism, was forbidden and regarded as a sin.

Agriculture modernisation brought by lowland Green Revolution deepened in Kulawi valley in 1980s, which time was very late compared to the western part of Indonesia that has been revolutionised since 1960s. The modernisation penetrates the Bolapapu community in a form of mechanisation. Afterward, many types of traditional rice farming technology, such as *ani-ani*[30], and *baparuja*[31][32] vanished from Bolapapu. A*ni-ani* was replaced by *sabit*[33] in 1980s. *Baparuja* was not practiced anymore since plough and hand tractor entered the village in the same year. Moreover, water buffaloes had become scarce, hence expensive, due to the high consumption for traditional life cycle rituals from birth to death. The introduction of new rice varieties with short stalks substituted various indigenous varieties with long stalk types. This substitution placed *ani-ani* as an unsuitable tool for harvesting. Rice huller replaced grain-pounder. Eventually, modern tools and techniques were more affordable and efficient options for farmers.

I need to emphasize that in this area, modernisation is an option for farmers, not a planned intervention. Many farmers stated that they have never received any support or any extension package from the government for rice cultivation. Ibu Dh and many other farmers only recalled once in 1980s that rice seeds were ever distributed by the government, then, none extension programme has ever occurred since. Even to date, the name of the seed that they always plant, i.e. *pilihan*, is not found in the common list of modern high yielding varieties. In Bolapapu and its

[30] A manual rice stalk cutter operates like a scissor, so it can only be used to cut one stalk each time, which make harvesting a tedious work

[31] A technique to soften the soil before planting that is done by large numbers of water buffalos lead by the herdsman. The buffalos are circling some fields several times until the soil become loose.

[32] Rakki, gumbira, kamba are examples of vanishing indigenous varieties, not to mention many varieties of glutinous rice used to be planted in dry land farm.

[33] Also a manual stalk cutter, operates like a knife with a U-shape sharp edge, so it can cut a bunch of rice stalk at once

neighbouring villages, we would not find IR 64 or Cisadane or alike as modern varieties commonly planted in South Sulawesi or Java. The Head of the Extension Service explained that *pilihan*, although it has a short stalk and shorter cultivation period than indigenous varieties, is not an introduced modern variety; it is farmer's own seed selection, which probably a hybrid of modern variety or between indigenous and modern one, but still 'scientifically' unidentified.

Moreover, unlike the typical Green Revolution modernisation package, farmers rarely use fertilisers and pesticides in their rice farming techniques. Many farmers still rely on the stars to determine the most suitable time for planting to avoid pest disturbance or use a traditional way to control it, such as using herbal poison to kill rats or putting a scarecrow in the middle of their fields to scare away pests.

Conclusively, Green Revolution as a planned intervention has never touched Bolapapu rice farming. The present rice farming practice is a combination of traditional and modern techniques that are picked, selected, and mixed by the farmers' own initiatives. It is also farmers' own agency and their mode of adaptation that produced the present rice farming technology without any significant state's intervention.

Monetisation and the Value of Rice

Apart from mechanisation, modernisation baggage also brought monetisation. Monetisation plays an important role to shift the cultural value of rice farming. Money as a means for exchange entered village economy when the Dutch started to apply taxation. The villagers used to depend on rice for exchange, and when a need for money was created by taxation, it marked the initial commercialisation process of forest product. The villagers had to enter the forest to harvest ebony and resin for cash. Elderly farmers, 60 years plus, stated that, before clove and coffee, their cash income was from resin, then later on in 1970s from rattan.

Since money is exchangeable for rice, the value of rice is split by economic standing. Nowadays, for farmers whose income depends solely on agricultural activities -where money is hard to earn compared to other type of livelihood-, rice cultivation is still a necessity since having a stock in a barn provides a secured feeling. Additionally, rice possesses an important value as means of exchange, as well as means for reciprocity. Between villagers, they often exchange rice for chicken, for instance. Whenever a neighbour has a ceremonial feast, rice is given as a sign of mutual help and sympathy. Reciprocity is certainly embedded in that gift, which means that the receiver obliges to return it to the giver whenever the giver holds a feast too. Therefore, having a rice field for many farmers is still very important, not only because of a need for security assurance, but also because a need to participate in the cultural articulation of rice itself.

On the other side, for the upper class farmers who have various sources of income, rice farming is considered as non-profitable business, hence it is not important to own or cultivate a paddy field. Rice is available whenever money is possessed. Therefore, cacao or any kind of cash crops attract them more, not only because it generates cash but also because it increases their land value too.

Ruff & Lançoln (2004) explained that in the upland, food crop cultivation requires production inputs and labour more than in lowland area, so if the market provides food at an affordable price to the uplanders, no incentives would be available for upland food crop commoditisation. Therefore, in upland Kulawi, including in Bolapapu, rice has never become a commodity.

Commercialisation of Cacao: Global Market Intervention

The rational farmers, as Popkin (1986) would define it, are the entry point for cash crops cultivation. The elderly farmers in Bolapapu claimed that cacao was first introduced by the Dutch, but never as a commercial commodity because it was never planted in monoculture system, and produced to sell. It was not until the late

80s when the price started to increase from Rp 500 to Rp 2000 that cacao caught farmers' attention. In 1990, when the cacao price reached Rp 5,000 per kg, cacao planting started to spread widely.

Cacao was not the first cash crop that entered the village economy. Agriculture commercialisation in Bolapapu started with coffee. In 1930s coffee was introduced by the Dutch through their first trial plot in Panapa, but then villagers only planted the trees for their own needs. Commoditisation of coffee started in 1963 when it was first planted as a monoculture plantation in Lindu by the local migrants as a response to its raising price. According to one elderly farmer in Bolapapu, in 1970s, coffee received a good price, since one load (Ind. *pikul*) of coffee or about 50 kg or less was exchangeable with a cow.

Within the same period clove started to have a good price, in 1966-1967 rich capital Chinese from Palu started to buy land in Bolapapu and established clove plantations. Actually, in 1952-1953 clove has already been brought to Bolapapu by Pendeta Lengke -a protestant priest- from Manado, North Sulawesi and he planted the crop in his church area. This lucrative crop invited a local government-owned company -PD Sulteng- to open a monoculture clove plantation in Marena, about 10 km from Bolapapu. The elderly farmers in Bolapapu still recalled that when PD Sulteng opened their plantation most farmers replaced their crops or open new area for clove.

Nowadays, due to the higher and more stabile price, also triggered by its rocketing price in 1997-1998, cacao has replaced other commercial crops in many farmers' fields. It is quite often that farmers still set aside some parcel of his/her land to plant various cash crops. Mixed-garden is more common than monoculture farm. Monoculture is a cultivation technique that is still not fully accepted for total security, as some farmers explain it below:

> *Saya tanam apa saja yang bisa dijual, tidak tahu harganya rendah atau tinggi, yang penting bisa untuk pembeli gula, sudah cukup.* (I plant whatever crops I can sell, no matter its price, high or low, as long as it can be sold to buy sugar, that is enough)

Saya juga tanam kopi, cengkih, karena itu 'komoditi', ada harganya, jadi harus ditanam. Juga vanili. Vanili sengaja saya tanam sepanjang pagar kebun, supaya jika ada sapi yang lepas masuk kebun dan rusak vanili, saya bisa minta ganti, karena tanaman itu harganya naik sekarang Rp 20 ribu /kg. (I also plant coffee, clove, because those are 'commodity' with prices, so those must be planted. I also plant vanilla along the fence of my land, so if someone's cow crossed my land and damaged my vanilla, I can ask for replacement because that crop is now worth Rp 20.000/kg)

The insecurity expressed by most farmers toward commercial crops, especially cacao as an export commodity is not only on the farmers' side, but also on the industrialists' side. The global market intervention in Sulawesi's cacao is manifested in Bolapapu and its surrounding villages. An international alliance of cacao industry, consisting of a USA's non-profit organization ACDI/VOCA, Masterfoods, and World Cacao Foundation decided to intervene in cacao cultivation practice by deploying a training programme for Indonesia's farmers. This alliance has identified a declining quality of Sulawesi's cacao.

Transforming the imported cacao beans into chocolate is among the largest industries supporting U.S. agricultural business. Becker (1999) stated that Americans consume more than $12 billion worth of chocolate each year--about 12 pounds per person. Each year, U.S. chocolate manufacturers use about 250,000 tons of dry milk, 400,000 tons of sugar, and 350,000 tons of peanuts. In 1997, the industry used more than $3 billion worth of these and other U.S. agricultural products. According to the American Cacao Research Institute in McLean, Virginia, the United States exports over $600 million worth of chocolate products a year.

Clearly, low quality cacao beans cost a big loss for the industry, which means a loss for the producers too. The industry complained about a high level of waste content of Sulawesi's cacao beans. This waste content has slowed down the processing by half, and led to a lower yield of butter and powder from the beans,

which means a lot less value for their money. Some factories were shut down because their inabilities to collect affordable clean beans[34].

USA and Brazil claim that this low quality is indicated by the increase discount from US $ 50 in 1990 to almost US $ 200 in 2004. Sulawesi cacao beans that have gained acceptance from processors in the USA, Brazil and Southeast Asia faced a severe falling price[35]. Therefore, ACDI/VOCA is targeting their training programs to areas of South, Southeast and Central Sulawesi, including in Kulawi sub-district, also West Papua and Bali. The training programme is called as SL PBK or field school for cacao pod borer control (Ind. *Sekolah Lapang Pengendalian Penggerek Buah Kakao*).

The SL-PBK programme reflects the collaborative planned intervention between the state and the global market to cacao farmers' production knowledge. Nonetheless, that only vertical intervention systematically implemented by external-village institution, and remembered well by the villagers. Large portions of ways chosen by farmers to acquire knowledge about cacao are through farmer-to-farmer diffusion or 'horizontal intervention'. However, due to cacao's commercial value, horizontal intervention is not free. Social economic layer, gender, ethnicity, and mutual benefits filter cacao knowledge diffusion between farmers. Unequal access to cacao knowledge as a market-valued knowledge will be discussed in the next chapter.

Cacao Expansion: Rice Field or Forest Conversion?

As discussed in Chapter 5, the domination of dry-land farming in Bolapapu is not at the expense of wet-rice field. According to the Head of Food Crop Agriculture Agency, Kulawi Sub-District Office, in Bolapapu and its four surrounding villages, i.e. Namo, Mataue, Boladangko, Tangkulowi, conversion from rice to cacao is 0%.

[34] Data source: Success Alliance Project Newsletter, April 2002 edition, "Quality of Sulawesi Cocoa Beans"
[35] Ibid.

When conversion occurred, it was mostly for settlement and housing. He believes that wet-rice field is still abundant in Kulawi Sub-District. However, statistical data shows that dry-land farming is dominant and cacao farming expansion is progressing; where does the expansion go to?

The Head of Lore Lindu National Park sub-office in Mataue stated that based on the report from his forest rangers, the Park 'encroachment' along the border adjacent to Bolapapu alone in 2004 is about 60 ha and consists of coffee and cacao trees; and it is 700 ha for the whole Kulawi Sub-district. Instead of converting rice field, forest has become the first choice for cacao expansion.

Pak Dm is known in Bolapapu for his famous attempt of clearing a *pangale*[36] to open cacao plantation. He claimed that the *pangale* belonged to his grandmother and was handed over to him just before she passed away. With his three sons, he opened the *pangale*, and developed it into a cacao plantation in 3 years. During that time, they walked 4 km uphill almost everyday to clear the land. Sometimes they had to spend nights, when the work demanded them to stay. His persistence to open a *pangale* only with his three sons, and invested so much time and energy for it, was considered by many people as an extraordinary effort considering that not many Kulawians will be able to do that. He explained his decision to open a *pangale* as below :

> It is such a loss if I convert my paddy field into cacao farm. We eat rice, and therefore we need a land to plant rice. I would never sell my paddy field no matter what happens, even if I have already had so much money from cacao to buy rice. A place for cacao should be searched outside; therefore, paddy field should be cultivated so we can have strength to search a land for cacao.

Pak Dm argument is a common justification used by Bolapapu farmers to expand or start cacao plantation. Pak Gr presented another case of many farmers preference to penetrate forest for cacao than to convert their rice fields. He

[36] Land that has been fallow and not been cultivated for more than 20 years, so it has already grown to almost a jungle

admitted that he already opened four ha forest around 1980 in the area, which is legally claimed by the State as Lore Lindu National Park territory. He argued that those four ha land inside the Park belongs to his family. When he was caught by the ranger, while weeding in his plot, he argued that he does not take the land but only take the yield from his and his uncle's crops. The ranger released him with a condition that he must plant *gamal* trees to compensate for the trees that he had cut.

Pak Dm and Pak Gr are smallholders, who prior to their cacao expansion owned only less than 0,5 ha rice field, which probably justifies their decision to plant cacao for welfare improvement. However, Pak Ys who already possesses about 2 ha of cacao plantation also expanded his plot in the forest. He claimed that the patch of forest he opened belongs to his grandfather. Cacao expansion certainly does not represent the smallholder's need only; but even worse, for the rich-capital farmers, it drives land accumulation.

Social Relation of Production: From Reciprocity to Paid Labour

Rice farming activities require high labour inputs. Hoeing, planting and harvesting absorb at least 4 to 5 labour in a plot of 0,5 hectares. Such a need was usually met through labour exchange. *Mapalus*, which literally means working together and helping each other, was the most preferred option. People form a group of ten or more, and start working together in each member's farm. If one member is not able to perform the task because of sickness or other reasons, she/he is expected to find a temporary substitute until she/he is able to re-join the group. But, the person who was replaced should repay his/her substitute's labour (called *baku balas tangan*) based on needs, which is not going to be articulated but tacitly understood, either in the form of cash or labour. Reciprocity is the basis of this exchange.

Nowadays, *mapalus* has been transformed into a form of group of individually paid labour (*buruh upahan*) and grouped-paid labour (*borongan*). Labour for planting and weeding works is usually paid daily, with working hours from eight in the morning to three in the afternoon, with an hour break for lunch. The wage is Rp 15,000 per person/day without meal or Rp 10,000 per person/day with meal provided by the farm owner[37]. Harvest work is always paid in-kind, which is one tin-box (*blek)* of paddy (*gabah*) per day, and the tasks range from *basabit*[38] to packing the rice in sacks.

However, farm rationalisation through forms of paid *mapalus* has not yet eliminated solidarity and reciprocity. Only well-to-do farmers opt for such an arrangement since they usually are government officials or traders who do not have enough time to care for their own farm. For small farmers, *baku balas tangan* is still a preferred option.

Solidarity is also expressed in *mapalus* work for collecting a charity for the church or Islamic activity. *Mapalus* is not restricted to production activities, but it is also part of their life cycle rituals, such as celebrating a newly born child, wedding party, mourning rituals, etc. Such personal and reciprocal nature of social relations of production is also expressed in the non-existence of fixed-rent and shared tenancy form of land tenure system. Landless farmers can borrow other farmers' land for cultivation (*mehabi* or *pinjam garap*), and if the permission is given, the borrower will promise to share part of his/her harvest to the landowner as an expression of good will (*momirara* or *kemanisan hati*). There is no formal condition to share, because it is a manifestation of the norm of reciprocity.

Unlike rice farming, high labour input that requires working in a group or *mapalus* in cacao plantation is rarely performed, except for land clearing and manual weeding activity, which is mostly paid and the wage is similar to rice farming activities. Pak IN, an experience cacao monoculturist farmer believes that a farmer

[37] Labor wage in 2004
[38] cutting rice stalks

can handle all the maintenance activity for a thousand cacao trees alone. Paid labour is still needed only by farmers who cannot employ his family member to work in the farm.

If the wage in rice farming, particularly for harvesting work, could be paid by rice, wage in cacao production is always in cash, never in-kind. The wage is the same as a wage in rice farming, which is Rp 15.000 per person per day without meal, or Rp 10.000 to Rp 12.500 with meal provided by the landowner.

Wage labour is actually initiated in Bolapapu when commercial crops start to generate cash surplus. The good coffee price in 1987-88, which was Rp 7.000-8.000 compared to Rp 500 for cacao, triggered the formalisation of relation of production, as Pak DT explains the situation below:

> *Sekitar tahun 1976 belum ada orang yang bayar-bayar tenaga kerja karena uang masih pakat di desa. Waktu itu untuk dapat uang paling ambil rotan dan kayu dengan gergaji buaya. Damar juga sudah tidak ada harga.Baru tahun 1988 waktu kopi ada harga, uang mulai banyak di desa dan orang sudah ada yang bisa kasih gaji.* (Around 1976, nobody paid for labour because money was still scarce in the village. At that time, to have cash we had to harvest rattan and timber first, using a saw. Even resin has also lost its price. Then, in 1988, when coffee started to have a good price, cash was abundance in the village, and people started to give cash for labour)

Nonetheless, wage is a common practice for landowners whose time is not dedicated fully to agriculture, such as civil servants, merchants and traders. For a full-time smallholder farmer, they prefer labour exchange.

In a particular case of cacao farming, such as opening new land in a group, then, the entire work was performed together or called as *mapalus*[39]. Cash lost its value, because the return of their shared work or *palus* is the ownership of newly open land, which would be divided between them. This is a case of Pak Nd, a Bugis who came to and married in Bolapapu over eleven years ago. Because he is a migrant, he does not own any land to be cultivated, except his wife's land. In 1999,

[39] labour in exchange for labour

he and ten other households started to open new land in the Western part of Miu River. Because they worked together, faced the same difficulties, and overcame the barriers together, solidarity bound them, and manifested in the non-existence of a fence to mark each other patch of land. This evidenced a fact that despite cacao's tendency to be individualistic, *mapalus* in a case of shared-benefit is still acceptable, and reciprocity still fits in such frame.

In the Bolapapu community, it is interestingly found that non-market institution in the lower part of the community is able to mediate the penetration of capitalistic structure. For the upper level community, the inability or unwillingness to enter the rules of reciprocity had driven the creation of labour market. Commercial crops had opened up the path to formalisation of relation of production.

AGRICULTURAL TRANSFORMATION IN SINTUWU

Sintuwu covers an area of 1.923 ha, which in 2003, the composition of land use types in Sintuwu shows 491 ha or almost 25% is for cacao plantation, while rice is only 72.50 ha or 3.7%. The plantations were cultivated by 410 cacao farmers, while rice fields were owned by 67 farmers. The massive influx of Bugis was followed by a massive land transfer from Kailis to Bugis, which signifies a massive conversion of rice to cacao as well.

From Rice to Cacao: The Progressive Conversion

From the previous discussion about agrarian structure in Sintuwu, we learned that during the last 40 years rice fields have been replaced by cacao plantation at a progressive pace. Moreover, rice and cacao are specifically confined to ethnicity of the owner, which is rice for Kailis and cacao for Bugis. Without the adherence of Kailis to rice, this food crop may have already vanished from Sintuwu. It is interesting to note that the adherence to rice also depicts security defined by Kailis as almost

similar with Kulawians in Bolapapu. The Kailis maintain their rice fields for food security reason, except for some large landowners who already utilise rice as a commodity.

The elderly people in Sintuwu -even the head of customary (Ind. *Adat*) council- could not remember anymore the rituals that Kailis used to perform in rice farming activity in the past, although they claimed that the rituals once practiced by their ancestors as the expression of gratitude. At present, Kailis' respect to rice is more based on rice exchangeability with other goods. The cultural value of rice has been eroded, except for its function to express mutual-help in Kailis' wedding and mourning rituals.

Before Bugis entered Sintuwu, cacao was never cultivated by Kailis -the pioneer migrants-. The first cacao plantation was established by a Bugis farmer, namely Pak Bd, in 1986. He claimed to be the pioneer of cacao plantation in Sintuwu, since everyone who followed him to plant cacao had taken cacao seeds from him. His cacao seedlings were bought from Jember, East Java –known as the source for the best cacao seedlings-. According to him, during that period until 1990, cacao price was not very attractive, which was just Rp 700 per kg; hence, it has not yet triggered cacao expansion. After the Indonesia's monetary crisis in 1998 or popularly known as '*krismon'*, when cacao price was Rp 15.000 per kg, many farmers started to replace rice by cacao. Prior to '*krismon'*, a dominant agricultural landscape in Sintuwu was wet-rice fields.

Pak Bd is one of the most successful cacao farmers, who has been settled in Sintuwu since 1992. He bought his land, firstly in 1978, from a Chinese who lived in Palu with a price only Rp 600 per ha. At that time, Pak Bd family also lived in Palu, and they visited Sintuwu only on weekends. When they finally settled in Sintuwu, they bought their second land from a Kaili for Rp 2.000 per ha. He is now cultivating 4 ha of cacao plantation. Both locations used to be rice fields, then, they converted all to cacao plantation. Nowadays, cacao plantation is worth Rp 2.000.000 per hectare.

Bugis tend to bring over relatives after success is established in their new settlement. As Ruf and Lançoln (2004) found that the successful expansion of cacao in Sulawesi was due to Bugis knowledge and information network on cacao and land availability that support their local migration. Pak Ms story may present an example to such network.

Pak Ms used to live in Sidrap, South Sulawesi. In 1998, he was summoned by his brother to manage his cacao farm in Sintuwu. His brother, then, chose to stay in Palu. Pak Md –Pak Ms' brother- bought a land in Sintuwu before 1996 from the former Sintuwu village headman. Pak Ms recalled that particular year because in 1996, his brother went to Mecca for pilgrimage, and told Pak Ms that his cacao has already yielded him the trip. Actually, Pak Ms owns a cacao plantation in Sidrap, but because the yield of his cacao has been declining due to bad climate, he chose to migrate to Sintuwu.

It was very clear from the outset that the spreading of cacao cultivation in Sintuwu has never involved government intervention. Due to the Bugis exclusive network, the knowledge tends to circulate among the Bugis themselves. Pak Yb, a Kaili farmer, who owns a small plot of cacao plantation stated that: "*Setengah dari orang Bugis ini terbuka tentang cara mereka bertanam cokelat, tapi setengahnya sembunyi-sembunyi*" (Half of the Bugis people openly show the way they cultivate their cacao, but the other half cover it up). This may partly explain why Kailis are not part of cacao culture.

Although many Kailis have lost their landownership due to a complex reason, but the ones who defend their landholding are not lured to convert their rice fields to cacao. From 1986, Pak Yb has been cultivating rice and corn, and not until in 2001 that he started to plant cacao. He admitted that he was attracted to cacao because of the price and the profit Bugis received. Nevertheless, his cacao remains 150 trees and not more. He seems unsure of the idea to expand his cacao due to his belief that rice is more important to ensure income and food security, because it is not only exchangeable for rice, but also for cash. Moreover, his lack of knowledge

about cacao cultivation created dependency to a Bugis farmer's skill. When he observed that his cacao's stems full of white spots, he knew that it was a disease. Since the Bugis farmer's cacao has also the same symptom but none of control measures was done, he did not know how to deal with the disease. Since then, his cacao yield was decreasing, which had deferred him from expansion.

Besides lacking access to cacao knowledge, the reason for not converting rice to cacao has its root in the load of security assurance that rice presented, as mentioned by Pak Yb. According to them, it is harder to find cash to buy rice. Having rice ensures their food security, since rice is also exchangeable for fish. One litre of rice is worth Rp 2.500 of fish. They knew that rice can be bought, but cacao farming takes time to yield. They are not willing to take such risk.

Despite the hardships and awareness of profit loss, Kailis farmers are reluctant to convert their rice field as long as water is available. In Sintuwu, the only rice field cluster is located in a Kaili's neighbourhood compound called as RT IV. According to the RT IV neighbourhood headman, 60% of agricultural area in RT IV consists of rice field, not to include the potential area. He is optimistic that the potential area will be maximised in the future. In 2001-2002, tractor has entered Sintuwu, and it has accelerated rice field expansion since then.

Unlike Bolapapu, the adherence to rice is also motivated by rice commoditisation. Nowadays, most of rice field owners sell their yields to the mill-owner. Because they sell part of their yield for cash, they usually borrow rice from the mill-owner for consumption. This debt will be paid by the yield from the next season, and this cycle continues until a strong attachment to the mill-owner was formed. Rice farmers prefer to mill their rice to the mill-owner who can lend rice as much as they need. Mill-owner tends to maintain the ties by fetching the yield, even if the field is located in the neighbouring village. This lending creates ties to a mill-owner in Rahmat village- a neighbouring village of Sintuwu-, despite the availability of a closer miller.

Rice commoditisation is also one of motivations of the largest rice field owner in Sintuwu for not converting his rice field to cacao. His rice field is located rather far, about 1 kilometre from RT IV. The field extending in 2 ha of land, and is divided into 30 plots. Every season, Pak Yb hires 30 labourers for planting and harvesting work. Pak Yb is a Kaili from Bunga village, and married to the daughter of Soputamu; who is one of the 7 pioneer families of Sintuwu. His house is the only land left of Soputamu's. Therefore, his 2 ha rice field did not come from inheritance, but from forestland clearing. Pak Yb said that in 1986 he initiated a forest clearing to attain land, since his family did not own land, except for their house lot. Up to the present, he stays in rice business because rice has a market value.

Nevertheless, Pak Ng –the Kaili neighbourhood head in RT IV- believes that rice conversion to cacao is unstoppable, since water supply for rice fields is decreasing. He suspected that forest conversion to cacao plantation in the uphill –the area claimed to be Lore Lindu National Pak territory- has reduced water supply to the Katopi River. In addition to that, since forest has become a private land, it is almost impossible to build irrigation, because the water source is located uphill. Thus, rice conversion into cacao plantation will continuously occur, especially when water supply is unable to reach the field, then, rice is irrational to be maintained.

Rice conversion to cacao has also affected the social relations of production in Sintuwu. As discussed previously, cacao cultivation is characterised by lesser need of labour compared to rice production. Labour abundance due to landlessness, and reduced work opportunity due to rice conversion to cacao has given cacao landowners a privilege for labour selection.

Intensification technique, as part of profit-making effort, has also reduced labour work. Weeding, for instance, has been replaced by herbicide application. Labour opportunity is not available anymore for weeding work. Fertiliser and pesticide application are a common practice, but rarely absorb labour. Eventually, when the land is too extensive to be tilled, and maintenance work starts to require

high labour input, the owner prefers to sharecrop the land. Therefore, in Sintuwu, social relations of production exists in various mechanisms.

Social Relation of Production: Formalisation of Labour Relation

Departing from an understanding that different crops require different farming systems, each crop creates specificities in relation of production aspect. Sintuwu's rice farming and cacao production are unique, because these types of farming are associated with different ethnicity's domain.

In rice farming, reciprocity in the form of mutual-help used to be the main character of relation of production. Reciprocity lives within a community that shares a common value of mutual-help, a common understanding of rules, and a common 'encoding-decoding' process of non-verbal practices. Kinship, time investment on sharing the same living environment, and similar culture in upbringing establish social reciprocity. Schafft and Brown (2002) stated that homogeneity often becomes the base of social ties with a potential to construct cohesiveness. However, in Sintuwu, the viscosity of cohesiveness is diluted by an induction of divisive elements, such as non-native or 'new comer', and wage.

Papa Js, a Kaili farmer, who is the third generation of a pioneer family from Bakubakulu village, still recall when his age was still 8 years old, around 1970s, nobody was needed to be paid to give hands to other farmer's rice farming work, as he described below:

> *Waktu itu semua dilakukan dengan gotong-royong. Jadi jika ada 1 petak sawah yang mau ditanami, orang berbondong-bondong membantu tanam, baik laki-laki maupun perempuan, siapa saja yang punya kesempatan. Sementara, yang punya sawah juga ikut dan sediakan minum serta makanan kecil. Begitu juga ketika panen, mereka baku bantu tanpa dibayar*. *Dulu dengar suara orang batumbuk beras saja tetangga datang membantu tanpa diminta* (At that time, everything was done through mutual-help. So, if a parcel of rice field needed to be planted, everyone came and assisted the owner to plant, either men or women, whoever had the time and energy to be contributed. While the owner, usually, will work together with them and provided snacks

and drinks. The same thing happened in harvesting time; they helped each other without being paid. In those times, if a sound of someone pounding rice were heard, his/her neighbour would automatically come to help without being asked).

Paid labour or named as '*makan gaji*', is literally translated as eating from wage, which means having food not from cultivating their fields but from buying. Paying wage started to occur when Bugis as 'new comers' needed labour to pick cacao fruits. Unlike upper class Bolapapu farmers, who were reluctant to enter reciprocity due to their social status or unable to exchange labour due to time constraints, Bugis farmers in Sintuwu as 'new comers' were unable to use a non-market mechanism to attain labour due to unabridged differences. Firstly, different crops between Bugis and non-Bugis ethnic groups had formed different technical competency, which made labour in exchange for labour or *mapalus* impossible. Secondly, landed and landless positions had formed different interests. Landowner, certainly, would be advantaged from *mapalus*, but for those who are landless, although they might have an option of sharecropping, but wage is one source of income that they expect. Mama Mt, a Bugis farmer, described it as below:

> *Karena tidak merata yang ada tanah, maka tidak mungkin dilakukan kerja kelompok di Sintuwu ini, karena yang tidak punya tanah atau tidak punya kebun cokelat tidak ada kepentingan untuk kerja kelompok. Justeru mereka mengharapkan upah dari kerja di kebun*. (Because landownership is not equally distributed, so it is impossible to perform group-work in Sintuwu, those who don't own any land or any cacao plantation don't have any interest to work together. They expect paid labour, instead).

Therefore, paid labour becomes an acceptable arrangement for both sides, which construct a formal relation of production, not only in cacao but also in rice production.

In cacao production, paid labour is needed mostly in harvesting. The wage per person per day is Rp 20.000 without a meal or Rp 15.000 with a meal provided by the employer. The wage is not gender-divide; men and women receive equal wage. In the peak of harvesting time, Mama Mt stated that usually, a group of Bugis

women in RT V would perform group-work to take out cacao beans from the fruits and clean it. That is, however, the only group-work in cacao production that does not involve wage. Cacao farmers tend to work individually due to specific skills required for pruning, grafting, and spraying techniques. These skills can only be acquired through long practice in cacao cultivation.

Pak Ms, Pak Hs and Pak Bd, for instance, admitted that they never took paid labour for pruning work, because inaccurate pruning would cost them of loosing flowering chance. Spraying is also a task that would never be given to paid labour. Pesticide is counted as a cost, and inaccurate application would cause them a loss. The only task requires minimum skill with a minimum risk in cacao production is harvesting. Therefore, Bugis farmers do not hesitate to pay wages for this task.

Besides different competency in different crops, inter-ethnic social relations of production seldom occur in Sintuwu due to different perception of working hour, and ways to do the work. Ibu Ng, a Kaili farmer, explained the different working hour and different need toward group-work between Kaili and Bugis as follow:

> *Orang Bugis itu lain cara kerjanya dengan Kaili. Mereka kerja sendiri-sendiri. Diutamakan pagi sampai siang, lalu sore kembali lagi ke kebun. Sementara kerja sawah dari pagi sampai sore tidak bisa dikerjakan sendiri kalau luas, terutama waktu tanam dan panen*. (Bugis people have different way of working compared to Kaili. They work individually. Mainly from morning until noon, and they return in the afternoon. While working in rice field is from morning to afternoon, and if the field is extensive, it is impossible to work alone, especially when it comes to planting and harvesting).

Pak Ms, a Bugis cacao farmer, perceived less Kailis' working hour as a sign of Kailis less persistent in crop cultivation. Besides, for work efficiency reason, the lesser labour invested is the better. He presented example of South Sulawesi Bugis farmers' persistence in using time and seeking the most efficient and effective way to do on-farm works, as follow:

> *Orang Bugis kerja lebih keras, tidak santai-santai dan selalu cari akal untuk kerja cepat. Contohnya kalau di Selatan orang tanam kacang hijau tidak ditube*

> *(tugal) karena tidak habis-habis nanti 1 ha. Tapi dibuat alat sehingga tanaman lurus dan kerja cepat selesai. 1 ha bisa dikerjakan sendiri.*(Bugis people work harder, do not seem to slow down, always finding the fastest way to finish the work. For example, farmers in the South never plant green beans by hand, but they make a tool, because too much time would be spent to plant 1 ha without a tool. With a tool, the beans can be planted in a straight line, and in a quicker time. Thus, 1 ha can be done alone.

Pak Ms and Ibu Ng perceptions presented the common idea of Bugis-Kaili work ethos. Such perception implies to rare employment of Kailis by Bugis due to Kaili's stigma of 'bad' work ethos.

Within the general phenomenon of inter-ethnic social relations of production, Pak Bd and Pak Hs present an exception. These successful farmers employ Kaili labour in their cacao plots. Mama Mt and Pak Bd -a Bugis farmer couple who own 4 ha cacao plantation- perceive wage not only as a rationalisation to attain labour, but also as a welfare distribution mechanism. They claim that 'economy' criteria, which mean benefit-cost calculation is not always the basis for labour hiring; they also use 'social' criteria. Pak Bd stated that he does not believe in the common Bugis perception of Kaili's bad work ethos, so he employs whoever needs the job regardless of their ethnicity. His wife asserted that for routine two-weekly harvesting in a low fruit season, they actually don't need additional labour, but because they understand that a wage is important for many landless farmers, they still employ labour to open an access to wages. Then, a Kaili landless couple usually is employed to assist Pak Bd and Mama Mt in harvesting work.

Pak Hs perceived wage as a measure to prevent cacao theft. He saw landless and jobless villagers were forced to steal cacao fruits due to their lack of access to employment opportunity. The former village head allowed *baoe* or picking rat-eaten-cacao fruit of other farmer's for the sake of charity. Later on, this policy was seen as an opportunity to steal. To this extent wage is a social control, and a means

to abridge social rift, as shown by Pak Hs' motivation to hire a Kaili labourer. He employs Pak Hd, a Kaili farmer, to watch over his 5 hectares of cacao plot.

Cacao individualistic character, its commercial load as cash crops, Bugis position as 'new comers', and the competency built by different ethnic-groups to different crop cultivation may have already explained formalisation in cacao relation of production. But, how did contractual labour arrangement enter rice farming social organisation as well?

Massive rice conversion to cacao has reduced work opportunities, while landlessness increases labour force availability. Consequently, these labourers must depend on limited work opportunity. As discussed earlier, such circumstance had created a privilege to select hired labour. Contractual labour arrangement, which is known as *bapetak*, is a mechanism to exclude unselected labourers. *Bapetak* is an exclusive work opportunity provided for a selected labourer to perform planting work, which automatically gives him/her the first 'right' to conduct the harvesting work as well.

Initially, it may function as a social control to ban 'free riders' access to work-sharing or *mapalus*, so he/she would not be able to take advantage in harvest share. Therefore, as Burkard[40] stated in his report to Indonesian Institute of Sciences (LIPI) that workers with 'family-access' in *bapetak* can rely on stable contracts with fixed partners for many years, others instead have to look out for minimal contracts with many partners. But, later the selection criteria for *bapetak*-contract receiver became tighter. Burkard found that whereas during the mid-nineties it was first of all the landowner who searched for a *bapetak*-worker in order to secure the harvest, it was now the tenants who claimed rights to arrangements. Family ties become insufficient to ensure *bapetak* contract.

[40] Dikti-Report (Progress Report Sept.03 – Jan. 04), Delivered by: Dr. Guenter Burkard Subproject A 2 STORMA / Palu

My later finding augments the significance of skill and availability as criteria to receive *bapetak* contract. As Pak Ys, -the largest rice field owner-, explained that he prefers to give a *bapetak* contract to Uma people rather than to his own family (the Kaili). According to him, Uma farmers work harder and faster compared to his relatives, and they respond quickly to his request to perform labour tasks at anytime needed.

Harder competition in labour market, even hinders farmer's enrolment to a group work. Pak Bd is a head of a cacao farmers group that was formed when an NGO organised a training programme for cacao farmers in Sintuwu. After the NGO left, this group became inactive. Later on, Pak Bd insisted to revitalise this group by inviting again the former member and other farmers around his neighbourhood. But, when the first program of this group was to activate group work sharing, Ibu Sy refused to join because she needs a free time to be flexible and available whenever *bapetak*-contract is given to her. So, being open to any *bapetak* contract is a competitive advantage in a tight labour competition.

Sharecropping also becomes one of methods to access the land. According to Sitorus (2002), Kailis obtained land through sharecropping more than Bugis, either for rice farming or cacao, while Bugis access to land from buying is higher than Kailis. Due to a massive land transfer from Kailis to Bugis, such consequence is unavoidable.

The common arrangement of sharecropping is: 2 parts of the crop is for the owner, while one part is for the tenant with all production costs are paid by the tenant. *Bapajak* is another option of land tenancy. This later arrangement involves cash money; a rent price is tagged for a parcel of land. Pak Ap, for example, opened a field for corn 6 years ago in a land that he accessed by paying Rp 2 millions for 5 times harvest. But, he had to stop when after 5 harvests, the owner increased the rent to Rp 300.000 per harvest. He has not found other landowners

who are willing to sharecrop with him up to now, so he has to start searching for a wage or *bapetak* contract soon.

It is often found that a parcel of land not only contains a sharecropping arrangement, but the tenant farmer has to give *bapetak* contract also to attain labour. Mama Ik, for instance, works on a rice field that is owned by her brother in law, so she has to share 30% of the yield for the owner, and 70% for her. This portion of sharing is from a net yield, after she pays the *bapetak* worker. The *bapetak* worker is entitled to 1 tin-box (*blek)* or about 17 kg of rice for planting work, and 1 *blek* from every 5 *blek* of yield for harvesting work.

In a particular case, when tenancy was given as an attempt for 'knowledge-sharing', tenancy relation could be unique. Pak Yb, a Kaili largest rice field owner, has a tenancy arrangement with a Bugis cacao farmer. The Bugis is allowed to plant corn in his land, but he has to cultivate Pak Yb's cacao. The entire corn yield is for the Bugis, and all the cacao yield is for Pak Yb. In other words, the Bugis pays a rent to Pak Yb from his cacao yield. Unfortunately, such arrangement did not succeed in pushing the Bugis to work harder for Pak Yb's cacao yield. Declining yield and no transfer of knowledge, instead, are results from such an arrangement.

Formalisation of relation of production in rice as well as cacao farming emerges out of the broken reciprocity ties. A wage becomes the only way for Bugis landowners to attain labour, as they cannot enter reciprocity relation with Kailis due to different crop knowledge. As for Bugis labour, no other exchange form is acceptable, except for the wage. For non-Bugis landowners, reciprocity was broken by landlessness. Landlessness produces 'free riders' in rice production. Thus, from a social control mechanism to eliminate free riders, and preserving family access to yield, contractual relation of production becomes a mechanism to select 'professional' workers.

Cacao boom had led to migrant influx, and Kaili farmers have been pushed out from land ownership. The combination of social rift and labour abundance has

created a capitalistic structure in the social relations of production between native settlers and migrants. Rich-capital farmers and skilled labour are the 'winners' of the agrarian change in Sintuwu.

TRANSITION FROM SUBSISTENCE TO COMMERCIAL AGRICULTURE: CACAO PRODUCTION AS MARKET-VALUED KNOWLEDGE

Bolapapu and Sintuwu experienced different processes in the transition from subsistence to commercial agriculture. In Bolapapu, rice farming has not yet been commercialised. It still exists and is actively practiced by most farmers. Rice holds the value as food security assurance, means of exchange, and cultural expression of reciprocity. However, monetisation has brought changes to these values. Cash became a primary standard to set crop value. For some cacao farmers, rice farming is not considered as important as cacao production. Cash coming from cacao certainly can buy rice. Additionally, farmers who prefer to maintain their paddy fields ownership do not sell rice, but plant cacao for cash. But, because in Bolapapu rice is still considered as culturally valuable, cacao did not expand at the expense of rice fields.

Sintuwu has arrived at a further point in the trajectory of agriculture commercialisation compared to Bolapapu. Rice farming -as a symbol of subsistence crop- still exists, not because of its subsistence value, but rice commoditisation has been the reason. However, as rice market price is unable to compete with the high price of cacao, cacao plantation has replaced 72% of rice fields in Sintuwu.

The transition toward commercialised agriculture also brings a change of relationship in production and distribution of the crop. The system of mutual-help and group work in rice production was changed into wage for labour and individual work. Labour exchange, in a case of Bolapapu, is still practiced, both in rice and

cacao production, especially by peasant farmers who cannot afford to pay wages. However, in Sintuwu, the market is the only mechanism to attain labour.

Social relation of production is created by interactions, and such interaction occurred within knowledge context of crop production. Thus, having knowledge about rice and cacao cultivation provides access to a social relations of these crops production. In Bolapapu, having knowledge about rice farming means having access to labour exchange. But, having knowledge about cacao cultivation extends beyond an access to labour; it brings power to establish labour market. Wage for labour was practiced in Bolapapu after cacao started to generate cash. With cash paid for wage, cacao rich-capital farmers were released from reciprocity's obligations.

In Sintuwu, knowledge about cacao is accumulated and disseminated exclusively within the Bugis social network. Therefore, the social relations of cacao production created in Bugis cacao plantation, usually, only involves Bugis landowner, sharecropper, and farm workers. Kaili labour rarely wins the competition with Bugis labour due to Kailis' limited knowledge about cacao. Unfortunately, Kaili labourer must also compete with other Kaili or Uma to attain jobs in rice production. Having rice farming knowledge is not enough to be competitive in Sintuwu's rice labour market. The labour abundance has forced rice field owners to select and contract labours in planting and harvesting work, not only based on their skills, but also on their time flexibility.

Clearly, knowledge possession about cacao, whether in Bolapapu or in Sintuwu, does not only open an access to cacao production or labour relation, but also brings power to enter and establish market. Even, in a case of rich-capital cacao farmers in Bolapapu, profit gained from cacao has enabled land accumulation. These privileges would not be gained from possession of rice production knowledge. Rice's less marketable value than cacao is unable to bring

an equal economic power as cacao. In this context, knowledge about cacao receives its market value, and therefore, having the knowledge would be valued more compared to knowledge about rice.

UNEQUAL ACCESS TO AND CONTROL OF MARKET-VALUED KNOWLEDGE

Cacao Knowledge Exclusive Network

As discussed previously, cacao enters Sulawesi never as a planned intervention but as a process of farmer-to-farmer diffusion. The process may not employ a well-patterned and palpable mode of 'intervention', but the vertical notion concerning knowledge/power relation is certainly interplayed. The role of extension service in both communities is insignificant. Head of Agriculture Information and Extension Service, Donggala District Office explained that extension service deliverance has been changed from a top-down to a bottom-up approach. At present, extension service is delivered based on farmers' demand. However, most farmers are not aware of this change, because they used to be passive information receivers from the government. In effect, despite actively seeking for information from extension workers, the mode of farmer-to-farmer diffusion became the most desirable mechanism in acquiring and disseminating knowledge about cacao cultivation.

Access to cacao knowledge, therefore, is never equal. Coming from external sources or from fellow farmers, farmers' ability to accumulate and their willingness to disseminate knowledge about cacao is affected by one's position in the socio-economic layers, ethnicity, and gender. As it is found in Sintuwu, and Bolapapu as well, upper class cacao farmer, who owns 2 ha or more, is able to actively seeking information from various sources, since they possess the network as well as the means to access extra-rural sources of information.

Pak Bd, for example, became the most progressive cacao farmer in Sintuwu, not only because he is a persistent farmer, but also because of his former position in

a logging company. His past position as a finance staff has equipped him with a bookkeeping skill. His past activity in the company's cooperative brought him a capacity to develop a vast network. Thus, from all farmers that I had conversation with, he is the only one who had an experience of being offered to form a provincial branch of national cacao farmer association (Ind. *Gabungan Petani Kakao Indonesia* or GAPKINDO), which head office is located in Jakarta. But he refused the offer because he was not convinced that the association would be useful for the farmers, not to mention the unavailability of funding to run it. He also knew that in term of funding, it is more useful to approach cacao exporters' association whose yearly fund is 8 millions *rupiah* for farmers' training programme. However, he perceived that the implemented programmes were still unable to empower the farmers; it mainly serves the exporters' interests. This type of information and privileges are not accessible by just anyone, even by other progressive farmers.

Another example is GD, who is the owner of 60 ha cacao plantation in Bolapapu. Because he came from a wealthy trader family and inherited the business, he transcends any limitations for acquiring cacao information. Flying to Malaysia to learn about cacao cultivation, getting the best seeds from Java, and applying oven-drying to get the highest selling price are actions produced from the knowledge that not many farmers able to acquire, let alone to apply it.

Due to its market value, cacao knowledge is shared in a closed network, e.g. between friends, and relatives. Rich-capital farmers tend to share information within his inner circle of friends, and families too. GD's brother and cousin, then, are the ones who took benefit from GD's knowledge. They are the only ones in the area who plant the highest quality seed from Jember, East Java.

Pak IN in Bolapapu accumulates his knowledge about cacao through numerous discussions with GD and an extension worker in Gimpu – a village where the extension service office located. He looks to GD because -as mentioned earlier- GD is one of the wealthiest cacao farmers in Bolapapu. Pak IN takes advice from GD

regarding what pesticide to use, what measures to take control pest and disease in his aging cacao plantation. As a good salesperson, GD would advise Pak IN to try various kinds of pesticide that he claimed as already tested by him in his plantation as well. When GD has cut all of his cover trees in order to control fungi disease, Pak IN did the same measure in his cacao farm.

GD, as an owner of 60 ha cacao plantation, admitted that he learned about cacao from books and by visiting as well as observing advance plantations, which are located in various places, from the East coast of Donggala to Malaysia. The idea of cutting his cover trees also came from his visit to Malaysia. He saw there that none of cover trees were needed after cacao grows for 5 years. According to him, too much cover will only invite mold and fungi due to a humid condition. Pak IN observed his cacao and decided that GD's explanation is acceptable, then, he applied cover trees cutting as well.

Pak YF also chooses an almost similar way, not by visiting, but even deeper, that is by working in the cacao plantation runs by Malaysian experts. He worked in the East Coast cacao plantation for a year as a supervisor. Then, he decided to return to Bolapapu and cultivate his own cacao, which has been neglected for a year. From only 1 kg yield, by applying mainly tree pruning in 3 months, he successfully gained 8 sacks of wet cacao beans or about 160 kg dry cacao beans.

Pak IW is another example of farmer who chooses to learn about cacao from pesticide sellers. Even, he successfully persuaded some sellers to give him free samples and to use his plot as a demonstration plot. He promised an organic fertiliser seller, for example, to sell his product to his fellow farmers if the seller agrees to give him free samples. After receiving the free samples, he doesn't wait until the product proofs itself, but to gain other farmers' trust on this product, he uses an NGO community organiser, who happens to work in his village to promote organic farming, as a campaigner. Since this community organiser has the same interests,

and he is respected by the villagers, Pak IW successfully sells the organic fertiliser. Fortunately, his cacao also yields better after applying this organic fertiliser.

Pak YS, who is a civil servant and owns 2 ha of cacao, also an admirer of GD, is a progressive farmer that successfully applies organic fertiliser in his cacao plantation. He learned about cacao cultivation from books and discussions with GD also. Recently, he gained a new knowledge about how to produce and apply organic fertiliser from a training programme on organic farming that was organised by an NGO. Because this organic fertiliser production and application need a supply of waste material, Pak YS formed a group. Through this group, he claimed that he successfully motivates his neighbourhood to pay serious attention to cacao as a main source of income. They used to wake up rather late in the morning and did not go to their field every day, but after they saw what Pak YS gained from his cacao, which was about 80 kg dry beans a week, they became more motivated than before. Nowadays, when Pak YS starts to walk at 6 in the morning to his plantation, he would also meet his neighbours walking to theirs too.

For smallholder farmers, their abilities to access knowledge largely depend on their social network asset, e.g. family kinship. Pak Ab in Namo, for instance, being a cousin of a village head, he was sent to Palu to attend a training programme about cacao cultivation. He masters the knowledge about cacao pruning techniques, sanitation, and good quality seed, which is proven by his high quality cacao beans production.

Cacao smallholders with a close reach to important persons in the village do not always hold a guarantee to access the knowledge either. In some cases, one's gender becomes a factor that determines accessibility to training programs. Ibu Nt, who owns 1 ha of cacao plantation in Bolapapu, has never participated in any training programs, although she has a relative who is the head of the hamlet in where she lives. The hamlet head never chooses her because she cannot speak Indonesian language fluently. Women able to speak good Indonesian are those

who progress beyond the elementary level, which is rare for women at Ibu Nt's age (around 50 years of age). Hence, whenever a training program was conducted in the village, men at any age above 20 would have a better chance to be selected by the village or hamlet head as a participant.

Ibu Dh, who owns about 2 ha of cacao plantation in Bolapapu, is usually selected as a training participant because she soeaks good Indonesian. But, being a sister-in-law of the hamlet head of where she lives and having a good relationship with the village head were still not enough for her to access a training program on cacao pod borer control that was recently implemented in her village. Being a woman, she is not on the top list of the village head's mind when he had to select and invite at least 50 participants for the training program. The program itself has emphasized at least 20% of women participation. But, women who came to the program socialisation meeting were less than 20%. Actually, they came to the village administration office for other purposes, and was not aware of such meeting. Thus, selecting women participants for cacao training program was not seriously done by the village head.

The training program mentioned previously was a programme namely SL PBK or field school for cacao pod borer control (Ind. *Sekolah Lapang Pengendalian Penggerek Buah Kakao*), which was conducted by a US based NGO called ACDI/VOCA and Forestry Agency (Ind. *Dinas Kehutanan dan Perkebunan*) of Donggala District. The NGO hired the extension workers from Agricultural Information and Extension Service Office as the trainer; and train local farmers as training assistants. The training employed a field school method that combines theory and practice conducted in a farm setting. They train farmers to apply the frequent harvesting, pruning, sanitation and fertilising or called as PsPSP (Ind. *Panen sering Pemangkasan Sanitasi Pemupukan*) method with objectives to ensure chemical free quality of the cacao beans, boost the productivity to 200%, and control pests and disease attack.

As a program coming from an external village institution, not to mention its international affiliation, the training organiser did not spend adequate time recognising local problems, except for a general phenomenon of pod borer attack. Consequently, this program gave benefit for farmers who focus on cacao cultivation only, which means well-to-do farmers, but not for smallholders who must strategise their livelihood by planting various crops.

The training programme brought enthusiasm at the beginning, but when it came to application, most farmers opted for traditional practice since the 'new' knowledge requires a total focus to cacao. To many peasant farmers, monoculture is perceived as incapable to ensure total security. Farmers will turn to vanilla, coffee, or cloves, whenever the price is higher than cacao. But, for cacao farmers who rely solely on cacao production for their income sources, this training is perceived as a means to improve their productivity. Even, some farmers have already seen the commercial value of this new knowledge by stating that they may ask for payment if other fellow farmers ask to disseminate the skill and information they received from the training, but an exception will be given for closest neighbours and relatives.

Lacking knowledge of local problems has also made the ACDI/VOCA effort to open access for women farmers' to their training program was only successful in term of numbers. But, women active participation in the discussion and presentation sessions seldom occurred, because most women said that they feel inferior. The inferiority came from their less good skill in speaking Indonesian than men, which was not well recognised by the trainers. Thus, women participants became silent listeners. Their voices were not heard, their problems were not known.

In Sintuwu, farmer-to-farmer diffusion on cacao cultivation is filtered by ethnicity. Since Bugis and Kailis are confined to a different crop, knowledge diffusion between these ethnic groups is difficult to realise. Bugis community is not interested in rice cultivation; hence, a landless Bugis tends to work in cacao plantations, which are mostly owned by landed Bugis. On the other hand, landless Kailis are rarely

employed by Bugis cacao owners due to Kaili's bad work ethos stigma. Consequently, cacao knowledge is circulated mostly within Bugis ethnic group, while rice knowledge diffusion occurred mainly within Kailis. Only landed Kailis who cultivates cacao will enter to an inter-ethnics relation of production in order to access Bugis knowledge on cacao production. Other farmers learn about cacao cultivation through observing Bugis cacao farmers. Thus, inter-ethnic farmer-to-farmer diffusion is constrained by three factors, i.e. 1) an individualistic character of cacao cultivation; 2) Kailis' stigma of bad work ethos; and 3) limited link or shared-interest to construct inter-ethnic relation of production, especially between Bugis and non-Bugis ethnic groups.

Over the negative phenomenon of inter-ethnic knowledge diffusion, Pak Bd's initiative to reactivate a farmer group encountered such opposition. When he gathered farmers around his neighbourhood and tried to convince the benefit of forming a group, he presented success examples of Rahmat village's farmers group – namely Fajar Kakao- to develop various farmers' enterprises, from loan-saving business, cacao paste home industry, agreement with Palu exporters to give the best cacao price for the best quality, cooperation with fertiliser industry to attain lower prices, until forming rice farmers work groups. He emphasized the importance of farmers' willingness to work together and exchange information.

Positive responses came from the meeting of participants, which mostly expressed the need of information and cooperation among farmers. Six work groups (Ind. *kelompok mapalus*) were formed and agreed starting to work in each other farm, and record each member's production volume to detect early pest or disease's spread, as well as to learn from each other success or failure in pest control. Unfortunately, I was not able to observe whether this plan was implemented by the farmers. I heard that Pak Bd was sick afterward, and I suspected this group spirit's cooling off. Nevertheless, as an initiative to provide cross ethnic and cross-gender learning space, the group reactivation was successful to set awareness that

cooperation and togetherness is important to abridge differences. It may break cacao exclusive knowledge network, but further study is needed.

Rice Knowledge Inclusive Network

Rice farmers in Bolapapu, who are mostly women, claim to acquire their knowledge from their mothers. State programme, again, did not touch Bolapapu rice farmers. Therefore, rice farming knowledge also disseminates through farmer-to-farmer diffusion or 'horizontal intervention'. However, unlike cacao, rice knowledge accumulation and dissemination tends to spread freely throughout all layers of the community. The decision in favour of rice for next season's planting presents an example of egalitarian knowledge possession.

Most rice farmers in Bolapapu will plan the next season variety in accordance with the variety planted by the most respected or elderly farmer, usually women, in their hamlet. When I asked several women farmers in Boya hamlet about what she is planning to cultivate for the next season, all of them said that they will see what Tina Edi plant first, and they will follow then. Nevertheless, Tina Edi decision is accepted because not only who she is, but also beyond that, she has justifications for her decision. Usually, these justification make her decision logical and acceptable to everyone, as described by Tina Ori and Ibu Sv below:

> *Kami akan tanam padi bolongaje ikut Tina Edi. Orang tanam padi itu sawahnya jarang didatangi burung. Itu karena daun padinya tegak dan malainya jatuh ke bawah sehingga burung susah memakannya. Ditambah pula padinya pendek, sehingga kalau orang lain tanam padi pilihan yang lebih tinggi, otomatis padi ini jadi terlindungi oleh padi lain di kiri kanannya*. (We will plant *bolongaje* rice like Tina Edi. That variety is rarely eaten by birds. That is because the rice stem is upright and the stalk is bending down, which makes it difficult for birds to eat it. Additionally, the rice is short, so when other people plant *pilihan* rice, which has longer stalk, automatically it would be protected by other variety along its sides).

The statement above implies that the knowledge about rice cultivation, rice varieties included, is not only hers or belongs to the elites, but almost all women who work in the field have the knowledge. Only the 'older knowledge', such as looking for a star sign to determine planting season, is mastered better by the elderly; the younger tend to perceive it as too traditional. They will start planting when the others start planting too, and not being caught into complexity of determining when.

The younger women and men learn about rice farming from their parents or their grandparents at a time when they do not have other livelihood choice. Hence, a deeper interest about traditional knowledge is not cultivated. Moreover, being just a rice farmer is associated with a non-modern profession. Youngsters prefer to be an *ojek*[41] driver or for a woman, they prefer to go to the city looking for a work in a store or to become a household worker in Malaysia, Middle-east countries, etc.

In Sintuwu, nowadays, men's and women's knowledge about rice farming is shared equally because they do not apply a division of labour based on gender. Whoever has the opportunity will enter the work in rice farming. However, the knowledge accumulation and dissemination is confined to Kaili and Uma ethnic groups only, since Bugis and several other ethnic groups, like Sundanese and Javanese, are not interested in rice cultivation. They are more interested in vegetable, corn, and other cash crops varieties than rice. According to them rice requires too much work, while other crops only need attention in the first month of their growing period.

Rice knowledge dissemination, therefore, is not exclusive, but based on crop preference. But, farmers' preference to plant certain crop is based on crop's market value and farmers' skills in crop cultivation. In Sintuwu, rice has the lowest market value compared to vegetable, and corn. Nonetheless, the Kailis stay in rice production, since they do not hold the knowledge of other crops as better as rice. For most Kailis, having knowledge about rice is a ticket to wage. Therefore, within the

[41] motorcycle taxi

Kailis, rice knowledge is market-valued, even for the younger generation. Due to limited education attainment, Kaili youngsters in Sintuwu do not have choices except competing for wages in rice production as well.

Youngsters in Sintuwu have already involved in rice production work since their young age, around 12 or 13 after finishing elementary school. For landless farmers with more than 2 children, older girls must take care for their younger brothers or sisters while their parents work as paid labour. This situation, even, forces young girls to reduce their time for schooling. As for older boys, they have to drop out of the school as soon as their labour is worth for wage. Therefore, in Sintuwu, where landlessness is a common phenomenon, rice knowledge is disseminated to a younger generation in order for survival; as part of family's livelihood strategy.

In Bolapapu rice knowledge network becomes inclusive due to its non-market value, but in Sintuwu rice knowledge inclusiveness is a strategy to expand family's livelihood sources. However, due to rice market value in Sintuwu, its knowledge inclusiveness has become a double-edge sword. It can cut other's opportunity to employment when one's skill and time flexibility supersede the others.

SUMMARY:

Transformation from subsistence to commercial agriculture in Bolapapu was triggered by the introduction of cash crop. Coffee and clove were the first cash crops introduced by the Dutch and Chinese merchants. Cacao followed in 1980s. Cash crops bring monetisation that changes the value of rice. As a non-marketable crop, rice existence is maintained due to its social and cultural value, particularly in expressing reciprocity.

Commercialisation of cacao was evidenced by the global market intervention in product quality improvement. Due to cacao industrialists' complaint over cacao beans quality from Indonesia, a farmers' training programme was deployed by international organisation to improve farmers' technique in producing better quality

cacao beans. cacao high margin price, however, keep farmers' interests in cacao cultivation regardless of the quality. Consequently, expansion of cacao plantation is unstoppable.

Sintuwu presents the example of cacao domination of village economy. Land commercialisation, massive rice and forest conversion, and labour rationalisation through wage and contract evidenced cacao Revolution in Sintuwu. The market value of cacao has contextualised cacao knowledge as a market-valued knowledge. Hence, cacao knowledge was disseminated in an exclusive network. Social economic standing, gender and ethnicity became the filter of cacao knowledge circulation and accumulation. An unequal access to and control of cacao knowledge was found in Sintuwu and the Bolapapu community. As a contrast, rice knowledge is inclusive to all layers and cross-gender. However, due to rice's less marketable value, rice knowledge is owned by the 'weaker', such as poor-capital farmers, landless labour, women in lower socio-economic position, and Kailis or Umas ethnic groups who cannot access cacao business.

CHAPTER 6

GENDER AND ETHNICITY IN THE AGRO-ECOSYSTEM OF A FOREST MARGIN: THE INTERFACE OF UNEQUAL KNOWLEDGE

SOCIAL RELATION OF PRODUCTION: THE ARENA OF KNOWLEDGE INTERFACE

Praxis is an enactment of knowledge. The social organisation of rice and cacao production reflects an enactment of technical and social knowledge about rice and cacao production by actors, also knowledge linkages between them. Division of labour, for instance, is resulted from an enactment of technical knowledge about production process as well as social knowledge about actors' tasks, roles, and power relation. Therefore, social relations of production creates a learning space, where knowledge is exchanged and reproduced.

Because knowledge is not value-free, the production of knowledge can be fully loaded by a power play. Market power, for example, attributes market value to knowledge. Market-valued knowledge defines the position of the knowledge holder, since 'the power effect' of this knowledge enables the holder to exercise control over others. In such circumstances, Long (2001) stated that knowledge interface is not simply a linkage mechanism but a 'force field' between parties. The force field articulates the process of negotiation, struggle, resistance, compliance, in which knowledge is produced. In the arena of social relations of production, a force field is found in firstly, the division of labour and secondly, the decision-making process. Gender and ethnicity -as social identities of where the market-valued knowledge is attached to- contextualised the power-play.

In a relatively homogenous community, e.g. Kulawians in Bolapapu, religion and traditions set a commonly shared rule and norm about gender relation. However, as consequence of Kulawians integration with supra-structure: the State and religious missionaries, transformation of gender norms is certainly occurring. Religious missions entered Central Sulawesi as an integral part of Colonialism, and

introduced new norms about men's and women's roles and positions. Colonial's introduction to sedentary agriculture, and New Order's intervention in agricultural modernisation had affected the alteration of gender relation as well. Gender division of labour in rice farming and cacao production along Kulawi valley, particularly in Bolapapu has shifted from women's to men's domination.

In a multi-ethnic community, like in Sintuwu, different ethnicities and religions set different norms in gender relation. In addition to different crop characteristics, multi-interpretation of gender and ethnicity in rice and cacao production feature a contrast to the Bolapapu community. However, as a newly established community consists of various migrants' ethnic groups, Sintuwu local history is relatively short in comparison to Kulawians of Bolapapu. Therefore, Sintuwu community presents a relatively shorter version of the past: where the past is hardly remembered anymore, and the present becomes more important.

GENDER AND SOCIAL RELATION OF PRODUCTION IN BOLAPAPU

The Transformation of Gender Relation

The cultural and traditional Kulawi norms of gender relation have undergone a long transformation. At the community level, historically, there was a period when *Kulawi* norms and traditions recognised women's roles in the public domain. A woman was symbolised as *ova*, a symbol of wisdom, one who was able to lower a tension in a conflict situation. Therefore, whenever there was an important meeting, women were always sought and invited to prevent a violent conflict. Furthermore, women used to be ritual leaders, especially for rituals related to farming activities. In late 19th century, just before the Dutch entered Kulawi in 1905, the area was headed by a *Tina Ngata* or a woman leader named Hangkalea. She was a woman whose deep wisdom was praised, and respected highly by her people.

The transformation begins with the introduction of Christianity and intervention of the State, which were brought by colonialism. Patriarchy was inserted in the new

religion, and state's regulation. As a culture, patriarchy was formally expressed in the disregarded leadership of Hangkalea, and crowning of Hangkalea's nephew: Tomampe as a King (*magau*) by the Dutch, in 1917. Moreover, patrilineality was further introduced by the attribution of a family name in accord to the men's genealogical line (Arragon 2002). Kulawians used to have one syllable name, but the new regulation to put family name after the first name has changed the tradition. Because of the attribution of men's surname to the landownership, the right to sell lands is perceived as men's right.

The basic transformation of gender norm set in a fundamental belief that woman's place is supplementary to men, since she was created from man's rib, as induced by many 'newly brought' religions. This belief led a total change in women's position that was set by new Kulawian gender norms. Matrilocality, as expressed in the role of woman as the heir of house and paddy fields, is not applied anymore. Women's role as ritual leaders has also vanished.

Nowadays, women are no longer involved in the deliberations of *Adat* decisions within Customary Council (Ind. *Lembaga Adat*), which has become an almost exclusive forum of men. In terms of asserting their position at the community level, a significant transformation has occurred in Bolapapu. Bolapapu's women are now excluded from the mainstream process of village decision making. The only women organisation exists, namely PKK, is confined by the state[42] to domestic tasks and responsibility. PKK is never considered equal with other village institutions in the village decision-making process.

At the household level, Kulawi's traditional norm asserts 'equal' men's-women's position in the daily interactions and division of labour, i.e. men's role as the provider and women's role as the household manager, particularly in resource allocation. This arrangement supposedly balances the intra-household power relation, as it is agreed in Kulawi that a woman is a *Tua Tambi*, a 'place' to secure

[42] PKK is a women's organization from the village to the national level formed by the New Order's government to institutionalized women's role in building the family's welfare.

traditions. Women are the ones who are supposed to pass on and teach traditions to the younger generations. They are also the ones who are responsible for managing the family's wealth. Nowadays, in Kulawi's customary wedding ceremony, the marriage advice is: "The man should be a responsible and hard working husband, eagerly seeking everywhere to provide his family. The wife is to wait for the husband and manage at her best of all the husband's earnings to suffice the family's needs.

The description of such *adat* norms in gender relation unequivocally depicts a segregation of men and women in productive and reproductive domains, as it declares men as the breadwinners. It is also emphasized by Ibu Ln as follows:

> "*Sekarang ini laki-laki yang berkuasa. Kami, perempuan, tidak punya apa-apa, karena mereka piker perempuan tidak tahu apa-apa. Kalau laki-laki mau jual tanah, mereka tidak libatkan perempuan. Ada juga yang isterinya ditanya. Laki-laki ikut campur urusan atur keuangan rumahtangga, seperti masalah tanah itu. Kadang-kadang mereka sembunyi jual.* (Nowadays, men are the only power holders in the family, we – women- are powerless because they think that we do not know anything. When men want to sell the land, they tend not to involve us in the decision, although some women are involved. Men also intervene in managing family income and assets, such as land. Sometimes they sell land without telling the woman)".

This shows that the previous role of a woman as the person who was responsible for managing family wealth –a position that was supposed to balance the control and access in household decision making- is not being applied consistently anymore. Men have taken over some control over family assets too.

It is clear that gender transformation has occurred in Bolapapu when patriarchy started to influence gender relations. Even, a process of deepening has happened, since colonialism entered village history. Arragon's (2002) findings pointed out that the surname was given because the Dutch colonial regime needed to exert control by putting men as the household head and heirs of lands, forcing them to apply sedentary agriculture, and introducing Christianity to eliminate rituals (Schrauwers 2002). Those acts completely set aside a form of men-women

complementary relationship that may have existed at that time and are responsible for the current intensivization of gender inequality.

Gender-divide Inheritance System: Differentiated Access to Land, Differentiated Access to Knowledge Accumulation

Inheritance system in Bolapapu is gender-divide; it distinguishes inherited property to men (sons) and women (daughters). Daughter's part of inheritance is fixed assets, e.g. the entire furnished-house, including the house lot, paddy field, jewellery, and *mbesa*. Dry-land farm, *Agathis* trees in the forest, and cattle are the son's inheritance. Thus, the access of men to the forest and dry land farm has already determined by the cultural norm from the outset, as described by the elderly in Bolapapu (Jore Pamei) and Toro (Toheke) as below:

> *Adat Kulawi sudah mengatur tentang warisan. Anak perempuan menerima benda-benda tidak bergerak, seperti: rumah dan isinya, sawah, mbesa dan emas. Anak perempuan tertua yang paling tahu dan bertugas mengelolanya. Oleh sebab itu mereka disebut sebagai Tua Tambi. Anak laki-laki menerima warisan kebun, pohon damar di hutan dan kerbau*. (Our culture and tradition (*adat*) has set an inheritance rule that daughters receive fixed assets of the family, such as : the family's house and all things inside it, paddy field, *mbesa*, and jewellery. It is the eldest daughter who should know and manage all family's fixed assets. Therefore, they are called as *Tua Tambi*. As for the sons, they will receive dry-land farm, *Agathis* trees in the forest and cattle).

To some extent, this norm is still applied up to the present, especially among *maradika* family. Therefore, forest or forest garden is the 'unfamiliar' or 'unknown' area for women, as described by *Tina* M in a discussion about *adat* norm on gender relation that was conducted in Bolapapu on 23 March, 2003[43]:

> *Di masa lalu, hutan terbagi-bagi menurut penggunaannya. Perempuan tidak pernah ikut tentukan. Misalnya waktu laki-laki buka hutan, perempuan tidak pernah tahu atau ikut, karena perempuan tidak punya kemampuan. Walaupun nanti, perempuan tetap tidak*

[43] Source : minutes meeting of Needs Assessment in Bolapapu, recorded by OPANT on March 23rd, 2003

mampu buka hutan. (In the past, the forest was divided according to its utilization, and women were never involved in such decision. For example, when men went to open the forest, women were never involved or had any knowledge on how to do it, because women don't have the capability for it. Even for the future, women will still not able to take part in opening the forest).

Clear distinction of men's and women's access to land and forest resources has defined men's and women's domain from the outset.

The line consistency of cacao plantation and rice field inheritance is still present. From three line generation, as shown in Table 11, 50% from cacao plantation was passed on by the Grandmother (1st generation line) to the Father (2nd generation line), and will be passed on to the Son (3rd generation). Why was it inherited from the grandmother not the grandfather? Tojaga, an elderly *maradika*, whose age more than 80 years, testified that at the time when he was still young and unmarried or about 60 years ago, it was not easy being the only brother among five older sisters. The entire family wealth was divided firstly between sisters, and as the youngest, he only received the *agathis* tree in the forest. Hence, he had to search for a new land in order to have a plot to be cultivated. Tojaga's story depicts a tendency of land inheritance at the period when women as *Tua Tambi* were still being practiced consistently. Consequently, in that generation, unless the man was able to accumulate land through his own effort, woman would possess more land than man does.

Table 13. Cacao and Rice field Inheritance Line in Bolapapu (Survey, n=30)

Categories of heir/bequeath	Cacao line of inheritance			Rice field line of inheritance		
	Person who bequeathed the land (%)	Heir of the land (%)	Person who will be inherited the land (%)	Person who bequeathed the land (%)	Heir of the land (%)	Person who will be inherited the land (%)
Grandfather/Father/Son	36	50	37	30	39	11
Grandmother/Mother/Daughter	56	17	3	54	45	2
Grandparents/Father&Mother/ Son&Daughter		33	20		6	

It is also important to understand that cacao plot received by the second generation was unlikely a cacao plot from the outset. The land could be a fallow land that has been abandoned for many years, and used to be a dry-land rice or cornfield owned by the first generation. If the second generation or the Father converted the inherited land to cacao plantation, then, the third generation will maintain it as it is. It is very unlikely that the Son will convert it into other uses. Conversion of inherited rice field is more likely to happen. The land was mostly converted to housing.

Rice field also shows a consistent inheritance line in the first two generation, i.e. from the Grandmother (1st generation) to the Mother (2nd generation). However, coming down to the third generation, it shows a diversion, which put the Son (3rd generation) as the hire of rice field, not the Daughter. Actually, it reflects phenomena of limited non-agricultural income inside the village, and prioritisation of the Son as the breadwinner of his future family. Young generation, who is confined inside the village, as discussed earlier, only has two options, i.e. work in the rice field and cacao plantation or become an *ojek* driver. Since the second option requires new investment, which is not affordable to just anyone, so the first option is more taken. Therefore, the inheritance line goes down to the Son, so as the breadwinner he will hold a security assurance for the whole family.

The fact that both farm types tend to be inherited to the male implies a shift of women position in their access to both farming types. As this study is conducted in the present context of second generation, inheritance system in Bolapapu shows an access differentiation to land that was brought from the first generation. The inheritance system also shows man and woman's shifting positions, in term of privilege access to land: from woman domination to man domination. Land access differentiation brought from inheritance system reflects the praxis of gendered-division of labour, which entails to the knowledge differentiation based on gender.

Gendered Division of Labour in Rice Farming

In rice farming, most of the production tasks and decisions are done by women. The rice farming task attribution to women is inseparable from women responsibility in food preparation. In the Bolapapu community, women tend to hold the ownership of rice fields, which opens up an opportunity to accumulate knowledge about rice farming, and exercise control of decision making in such area.

In terms of labour, women perform dominantly at all stages of rice growth, e.g. seedlings preparation, planting, weeding, and harvesting. Men's participation is usually concentrated at the preparation stage, like ploughing and fencing. *Mapalus* or working together for mutual help usually takes place in planting that involves women labour only, and harvesting, which consist of women and men labour. Because of the induced mechanisation and the introduction of modern varieties, the types of tasks are changing, e.g. the replacement of hoeing, which used to be done by women, with plough, which is operated by men, also the replacement of rice miller operated by men in substitution of rice pounding that used to be done by women. Hence, women's labour that has been replaced by mechanization is automatically involved in a handover from women to men labour.

Nonetheless, women in Bolapapu still manage to retain their parts in the labour market, since many stages of rice farming tasks are still exclusively done by women, e.g. seedlings preparation, planting and weeding. Therefore, despite some replacements caused by mechanisation, women are still the main actor of rice farming. Their involvement may not be as intense as it was in the past when all rituals and manual work demanded women's participation, but at present women are still recognized as the expert in rice farming. This means that the ownership of knowledge is theirs, and they tend to pass it to their daughters too, because most women always point toward their mothers when questions about their source of

information of rice farming are asked. Clearly, rice, from the field to the table, is women's knowledge domain.

Gendered Division of Labour in Cacao Production

In contrary to rice farming, a gendered division of labour in cacao cultivation is not clearly defined, partly because either only men who handle the work in a cacao plantation and women's involvement is infrequent or men and women together do the planting, weeding, pruning, harvesting, and drying process. If women are involved, they will do almost all types of work, except for spraying pesticides; but if they are not involved, the only task they do is drying, and sometimes selling. Women's full involvement occurs when the land is owned by the women or the husbands need their wives' labour. In such cases, women, actually, hold an opportunity to accumulate knowledge about cacao cultivation. However, it is not always utilised by them whenever the men actively involve as well. They tend to leave the knowledge acquirement to the men, especially if it was acquired through a formal training programme. There is a hegemonic cultural belief that training programmes, village meetings, and alike is for the men to attend. It is not useful for women, because after the meeting the husband will surely tell whatever it is to the wives. Therefore, attendance of husband and wife or women is not necessary.

We can also observe a decrease of woman involvement in cacao farming when she starts to have children and concentrates all her time on domestic chores, as reflected by the case of Pak Nh and Ibu Ng household. Before she started to have their third child, Ibu Ng assisted her husband in weeding and harvesting work. Nowadays, after having six children she only masters the strategy of when and where to sell.

There are cases of women non-involvement in cacao farming too, which occur in upper class farm households. The household division of labour puts the wives either in domestic setting only, like Pak Id's wife, or in productive work outside cacao

farming, such as Pak GD's wife -the biggest cacao plantation owner-, who is in charge of managing their sundries shop, whilst she never cares for the cacao business.

Gender and Decision Making Process

The hierarchy of production and reproduction work may not be constructed until there is a shift from production-for-subsistence to production-for-commercialization, which is the essence of capitalism (Sanderson 2000). Then, production-for-subsistence becomes less valued because of its inability to generate profit. Putting this in a context of gender hierarchy, reproductive work that is women's domain, thus, becomes subordinate to men's productive work.

In the past, the women's role and status in rice farming in the Bolapapu community may have been valued highly, because production-for-subsistence was a dominant type of economy at that time. However, since rice farming has never been commercialised, whereas the type of village economy has already shifted into a production-for-commercialism through the introduction of cash and export crops, the standard of value has changed. Rice farming is regarded as a less valued activity, going hand in hand with a devaluation of the related sphere of knowledge. Since rice farming knowledge is embedded in women's domain, the above process only asserts women's subordination in their reproductive work.

When we place women's rice farming knowledge next to men's domination in the ownership of cacao knowledge, it asserts men's domination in productive domain. Such domination is demonstrated by men's authoritative role in cacao production, as well as their 'intervention' in household decision making pertaining to income allocation. Furthermore, women's role at community level decision-making also contributes to the understanding of women's position as a valued knowledge holder or non-valued knowledge holder. In both domains, domestic and public

arenas, a negotiated decision is reflected by struggle and compromises women and men made to define their positions.

Household Level Decision-Making: Cacao and Rice Contestation

Decision-making can be translated into control and access. By control, we mean the power to decide when and how a task is performed and a resource is used. By access, I mean the freedom or permission to perform tasks and use resources. A decision maker certainly has the power to control, and therefore access is inclusive, but having access does not imply an automatic control of resources.

In rice farming, the decision maker and task executor are mostly women, except in types of work considered men's work, e.g. putting a fence along the seedlings plot and ploughing, also fertiliser or pesticide application and labour recruitment due to those items' relations with money management (see Figure 6 and Table 14).

On the contrary, in cacao cultivation all decisions are made by men, except for the type of commodity to plant (see Table 14). The latter topic is open to negotiation, since women have to ensure the provision of household needs during the early growth of cacao. Usually, it takes two years until cacao yields; therefore, a seasonal cash crop is important to provide income. Mama Fad, for instance, gains a position where her thoughts are decisive in her husband's cacao plantation decision making. She stated that:

> *Setelah panen nanti jagungnya, Saya rencanakan satu kali lagi tanam sambil siapkan koker. Setelah itu tanam gamal sambil tanam cokelat satu kaligus saja*. (After harvesting the corn, I plan to cultivate the corn again for one last time, while preparing polybags for cacao seeds. After that, plan *gamal* trees and cacao at the same time)

She uses I as the subject, who has the plan, and not We or My Husband. This is a statement of her authority in her husband's cacao plantation.

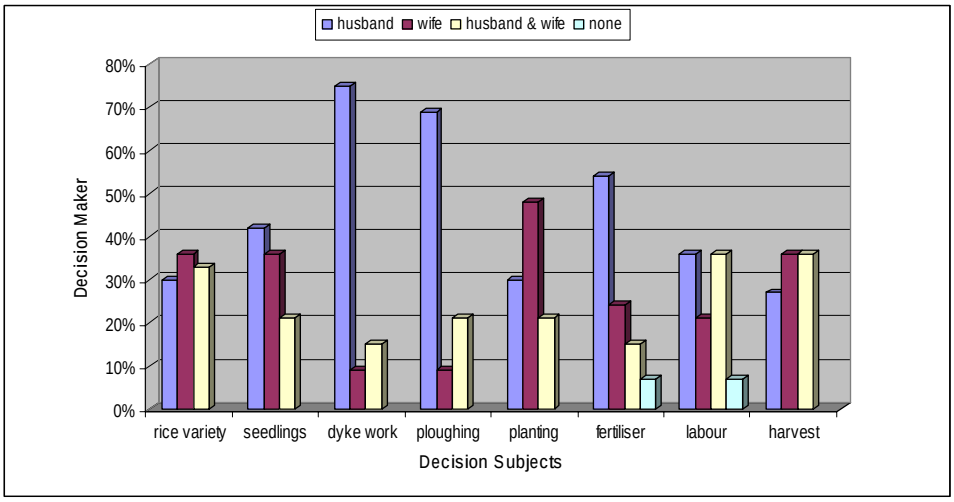

Figure 6. Rice Cultivation Decision Making (Survey, n=30)

At the end, decisions are made either only by men or by both men and women as husband and wife through discussions. There are tasks that women perform without participating in the decision-making (see Table 14).

Table 14. Rice and Cacao Farming: Decision Making and Task Execution in the Bolapapu Community

Organization of production	Decision maker(s) (Control and Access)		Task executor(s) (Access only)	
	Woman	Man	Woman	Man
Rice Farming:				
Type of variety planted	✓		✓	
Labour recruitment	✓	✓	✓	✓
Use of inputs (fertilizer, pesticide)		✓		✓
Types of fertilizer/pesticide, the volume & the frequency of application		✓		✓
Types of tasks:				
– Put fences		✓		✓
– Spread seeds	✓			
– Ploughing or hoeing	✓	✓	✓	✓
– Plant the seedlings	✓		✓	
– Weed	✓		✓	
– Apply fertilizer and/or pesticide		✓		✓
– Harvesting	✓	✓	✓	✓
Cacao cultivation:				
Type of commodity planted	✓	✓	✓	✓
Labour recruitment		✓		✓
Use of fertilizer, pesticide		✓		✓
Types of fertilizer/pesticide, the volume & frequency of application		✓		✓

	Decision maker(s) (Control and Access)		Task executor(s) (Access only)	
Types of tasks:				
– Plant the seedlings		✓		✓
– Weeding, pruning		✓	✓	✓
– Apply fertilizer and/or pesticide		✓		✓
– Harvesting		✓	✓	✓
– Drying	✓	✓	✓	✓
Marketing	✓	✓	✓	✓

Adapted from: Savitri (2004)

According to Katz (1995), widespread growth of non-traditional crops has been tied to both low and high male dominance, depending on the way women were involved in production. Where women subsidized crop production through unremunerated labour, and where men assumed leadership and control over this key income source, women's household power relative to their husbands may have suffered. Bossen's case study (Bossen, 1983) shows that in communities dependent on local plantation work, men asserted a high degree of authority and power within and outside the household, due to women's relative exclusion from plantation work and the lack of other economic opportunities for them.

In Bolapapu, every technical aspect of cacao cultivation is decided mostly by men (see Figure 7). Interestingly, non-technical aspects, such as marketing and income management absorb women's decision highly (see Figure 8). Unlike Katz and Bossen's cases, in general, although Bolapapu women have a limited control in plantation work (see figure 7), but they still hold a good grip in household's resource allocation, as shown by Figure 8. However, producing from a survey result, there is always a possibility that Figures 7 and 8 below only reflect a normative knowledge, but not the actual praxis. Therefore, for a thorough understanding of the negotiated field, a close look is required to the types of expenses that women are able to control, as well as examining the processes of decision making.

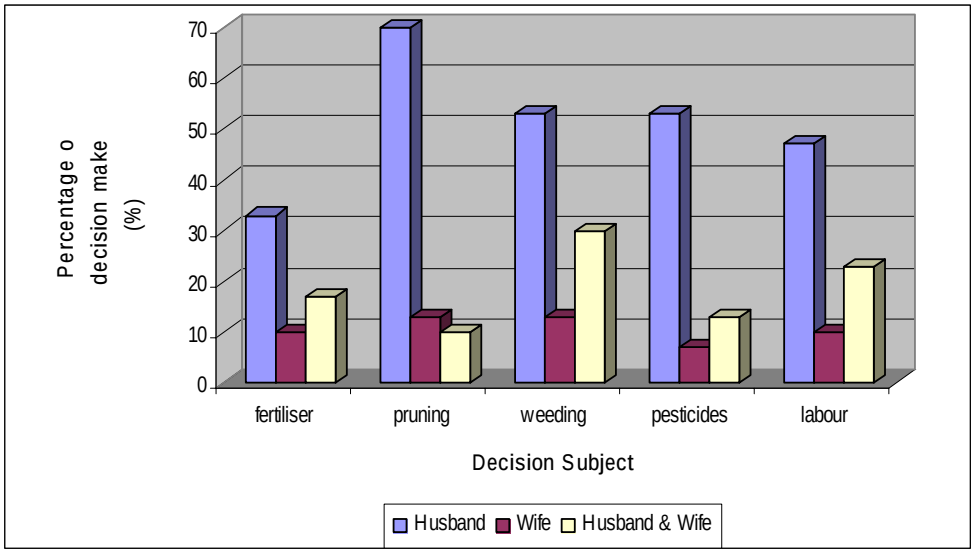

Figure 7. Cacao Cultivation Decision-making (Survey, n=30)

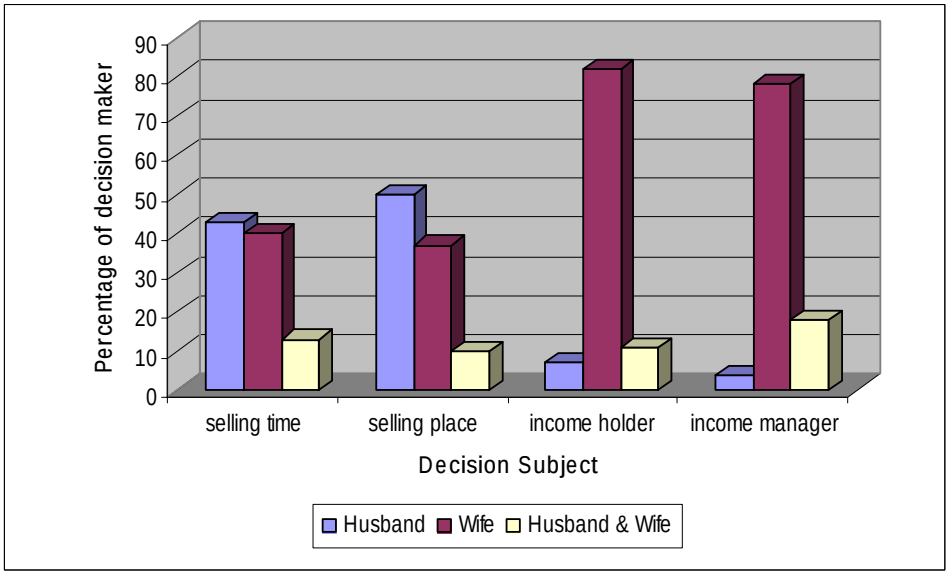

Figure 8. Cacao Selling and Household Income Decision-making (Survey, n=30)

In general, cacao marketing is the area where Bolapapu women are usually able to take a significant part in decision-making process since it is directly related with income allocation. They usually know when certain household needs must be met. Therefore, 'when to sell' is part of women decision. The easiness to sell always lures some farmers to shorten their drying time, especially when they are in a dire need of cash. From time to time, a retail trader who collects farmer's produce will pay a visit, and they will not be reluctant to buy cacao beans even only after a day

of drying. Having cacao beans dried in front of the house and bought by a retail trader, is equal to projecting immediate expenses within a day or two. Usually, these expenses relate to daily needs, e.g. food, transportation cost for the children, school fees, which are for women to decide.

For planned expenses, some farmers bring their produce directly to the village trader. The expenses usually relate to a feast that should be held in the near future. This type of expense is often decided by both husband and wife. Then, the husband will take charge of finding the highest buyer.

In a case when farmers have borrowed money, fertiliser, or pesticides from the village trader, there is an obligation to sell their produce only to this particular trader to pay off the loan. In such a setting, the wife will take part in weighing the beans, and make sure that the weight in the trader's store is not less, so they know exactly how much money will be received and should be paid to pay off the loan. Most farmers are actually confined to this type of social relations in terms of marketing of their produce. Many farmers know all along that they may receive a better price if they sell cacao directly to the provincial capital, but they are attached to the village trader because of never ending debt. This is a strategic knowledge holds both by men and women.

However, a control in household income allocation in Bolapapu can hardly be generalised, and some cases show that this depends on the form of communication and type of relationship within each conjugal relationship (see Table 15), as shown by seven cases discussed in Savitri (2004). There are three types of relationships that describe the degree of equality between husband and wife. Senior-junior partner reflect a relationship where husband consult the wife, but decision is in the husband's control. Male domination describes husband's total control of decision-making. Equal partner is a type of relationship which decisions are made based on discussion and agreement between husband and wife.

Table 15. Gender Relations and Pattern of Decision Making

Socio-economic class	Land-ownership	Category of farming character	Type of relationship	Type of decisions	Pattern of decision Making	
					Single decision maker	Shared decision making
Maradika & upper class	Man Woman	Conservative farmer: Th-SM	Senior-junior partner	Asset allocation (land transfer, expansion, inheritance)		√
				Production	√ (female)	
Maradika & lower class	Man Woman	Conservative farmer: Dh-DT	Equal partner	Asset allocation (land transfer, inheritance, expansion)		√
				Production		√
Non-maradika & upper class	Man only	Progressive farmer: GD Is Ys	Male domination	Asset allocation (land transfer, inheritance, expansion)	√	
				Production	√	
Non-maradika & middle class	Man only	Conservative farmer: Nh-Ng	Senior-junior partner	Asset allocation (land transfer, inheritance)	√	
				Production		√
Non-maradika & lower class	Woman only	Conservative farmer: Rg	Senior-junior partner	Resource allocation (income utilization for production and consumption)	√	
				Production		√
Non-maradika & lower class	Man only	Progressive farmer: Dm	Senior-junior partner	Resource allocation (income utilization for production and consumption)	√	
				Production		√

Adapted from: Savitri (2004)

I have to re-discuss the extraordinary position of Ibu Dh compared to other Kulawian women. Ibu Dh, in a very assertive expression, stated that the wife is the one who should be the money manager in the family, as expressed below:

> *Kebanyakan perempuan jadi bendahara dan putuskan pengeluaran keluarga. Karena tidak mungkin kalau habis garam kita datang ke tetangga pinjam garam. Jadi yang tahu kebutuhan keluarga adalah perempuan. Kecuali sejak awal memang sudah direncanakan, misalnya panen minggu ini untuk pembeli keperluan tertentu*. (Most

women are the treasurer and decide household expenses. Because it is impossible when we run out of salt, we borrow it from the neighbour. So, the one who knows the household need is the woman. The only exception is when the expenses were already planned from the outset. For example, this week harvest is to buy certain needs).

Her husband emphasized her statement, but with a little bit of resentment as expressed in his statement below:

> *Yang mengatur pengeluaran di rumahtangga 'ibu dapur'. Tidak pernah saya pegang uang walau sedikit, saya pasti kasih mama, kecuali kalau saya diberi uang dari anak-anak. Karena saya anggap itu saya punya*. (The one who manages the expenses is 'the mother'. I never keep any money, even a little, I always give it to the mother, except when I am given money by my children. Because I consider that as my own money).

Ibu Dh is a Kulawian woman who may still represent the role of *Tua Tambi* of Kulawian tradition. It is not a surprise at all, since she and her husband come from a *maradika* family. As *maradika* is supposed to maintain traditions, although with a little disappointment, her husband seems to accept his wife's authority. Therefore, she has an extensive authority in her household money management. The income from cacao, *warung* (small sundries shop), her son's and daughter's contribution to the family are all managed by her. She gives pocket money to her husband for cigarettes.

Ibu Dh initiated a cacao plantation by herself as the land is hers, and her husband at that time worked as a carpenter who travelled a lot. She collected the seedlings from her father's plantation. Nowadays, after the husband quit his carpentry work, and contributes more time for cacao farming, the tasks and decisions are shared. She usually consults marketing matters to her husband, and let her husband decides on herbicide application. Actually, the couple is categorised as a conservative farmer, who tend to apply cultivation technique in a conservative manner, not too eager to find new techniques to control pest and diseases or increase their cacao productivity.

She cultivates a respected social status as she can speak three languages: Indonesia, Kaili, and Kulawi-Moma fluently, and master the later two at the highest level. Hence, she becomes a speaker for her community. She is also appointed as one of the customary (Ind. *adat*) women, who hold a leading role in traditional ceremonies. Such position is not easy to acquire, because the person must understand very well how *adat* rituals should be performed, and master the purest version of Moma language. These intra and inter-household roles put her in a higher autonomy compared to ordinary women in her village. She conceives that such condition is ubiquitous in her community, which is proven incorrect.

Pak Is presents a contrast fact to Ibu Dh's household, as he explains that some women are incapable of taking responsibility as money manager, but some other women can. Thus, household money management should be conducted by the most capable husband or wife as he presents his household as an example in comparison to other household as follows:

> *Yang mengatur belanja atau pengeluaran rumahtangga saya sendiri. Saya biasa putuskan bisa beli pupuk atau tidak. Sudah tiga periode ini tidak bisa beli pupuk, karena hasil cokelat habis dipakai untuk kebutuhan sehari-hari.*
>
> *Istri saya kasih uang bulanan saja untuk belanja kebutuhan rumahtangga. Masalahnya perempuan pintar kalau ada uang, tapi bodoh kalau tidak ada uang. Perempuan kalau tidak ada uang tidak berani bon di warung. Laki-laki yang bisa cari-cari alasan untuk bon, yang penting keluarga bisa makan.*
>
> *Dulu memang perempuan Kulawi kebanyakan jago ke sawah dan ke kebun. Waktu belum ada cokelat, laki-laki yang bajaga anak sementara ibu-ibu ke sawah. Tapi kalau sudah dapat hasil perempuan lalu santai, nanti kalau so mau habis baru baribut lagi. Perempuan Kulawi banyak bicara.*
>
> *Di Kulawi siapa yang atur belanja rumahtangga itu tergantung pengaturan masing-masing keluarga. Seperti Mamanya Fatima, misalnya, itu semua dia yang atur lelaki hanya tahu kerja, dibelikan baju, dsb.*

Tidak hanya laki-laki yang bajual cokelat, perempuan juga banyak. Tapi pengaturan keuangan rumahtangga memang tergantung siapa yang bisa. Bukan karena yang bajual cokelat lelaki lalu lelaki juga yang pegang uang. Contohnya Mama Fatima itu.

(I do the management of my household income and expenses. I also decide whether to buy fertiliser or not. There have been 3 periods of harvest when I could not buy fertiliser, because income from cacao was spent for daily expenses. I give my wife a monthly allowance for household need. A woman is smart when she has money, but stupid when she is penniless. When there is no money, a woman doesn't dare to borrow things from the small shop. The man can find reasons to borrow first, as long as the family can eat. In the past, Kulawi women were famous for their working capacities in the field. Before cacao existed, men took care of the children while women went to the field. When women have the money from the harvest, they are relaxed, but when it is almost spent, they start to make a fuss. Kulawi women talk too much. In Kulawi, who is the money manager is arranged within each family. Mama Fatima, for example, she controls all; the man only knows work and work, she bought the clothes for him and everything else. Not only men sell cacao, women do too, but household money management depends on who is capable of doing it. Mama Fatima is the example).

Pak Is' exercised control over money management, however, is not taken without resistance by his wife (Mama Man). In almost 20 years of Pak Is' cacao farming activities, not once that Mama Man has ever assisted him in cacao cultivation or even went to the plantation. It goes *vice versa* for Mama Man's rice farming work. Pak Is has never helped her wife in rice farming work either. Her resistance is manifested in an expression of disagreement to depend solely on cacao for their household income. Therefore, despite his husband request to abandon her rice farming activities due to its inability of profit making, she kept the rice field under her control. Eventually, she had to give it up to her daughter because she was getting too old to work in the field. Nevertheless, during those times, she held the security of herself and her family by having her own businesses and a control over rice stock in the barn.

From Ibu Dh and Pak Is' stories, it is clear that the control over resource allocation in the household level encounters resistance from the less powerful.

However, compliance was given as a measure to avoid conflict. In Ibu Dh and Mama Man's positions, the decisive elements that strengthened women bargaining position are: ownership to land, and roles in the public domain. Better position is also gained from possession of relatively extensive knowledge compared to other women, e.g. language skill and higher education. Ibu Dh and Mama Fad present such facts as they gain considerable respect in their intra-and inter-household relations due to their skills and education.

Mama Fad is also coming from a *maradika* family and married to a *maradika* descendant. She managed to finish a specialised high school for teaching. Then, she became a civil servant. Now, she is holding a position as a pre-school principal in Namo Village. Her husband was very proud when her wife was appointed as a school (Ger. *kindergarten*) principal. She was inaugurated by the Bupati or Head of Regency of Donggala in Palu. Her husband called me to share this important moment. Mama Fad is truly the pride of her family, because she is the only one who gained the status of a civil servant in addition to having a village leader for a husband. Her older brother did not manage to finish school, and becomes a farmer. Her younger brother went to an Islamic school to become an *ulama* or religious leader, but he failed. Although as a village leader's wife she has all the opportunity to elevate higher her social status, but she remains low profile.

Pak NS, her husband, supports her career, gives respect to her wife's decision on their children matters, takes Mama Fad's thoughts into account in production decisions, but when it comes to domestic chores, like washing dishes, sweeping, washing clothes, he never gives a hand. Even a small errand, like putting rice into the bowl from its pot, which only five steps from where he sits, he has to call his wife to do it. Mama Fad is a typical picture of a woman who has to bear a double burden. But, because she has a good education, which resulting a good career, her husband listens to her opinions, especially in a cacao technical matter that other husbands may not willing to take their wives' opinions seriously.

Mama Fad extraordinary position, in term of cacao knowledge holding and decision making, is reflected in their discussion about their newly bought land. Pak NS bought a land, which was just recently cleared and ready to be planted. In determining on crop to be planted first on their land, Mama Fad suggested to plant corn first, so it could generate income while waiting for cacao starting to yield. Pak NS, initially did not agree to her suggestion, because according to him, the land fertility is poor, and planting corn would make it poorer. Mama Fad argued by stating that it is necessary, then, to plant it together, so both crops would be fertilised evenly. Pak NS accepted her wife argument, since it did make sense to him. Hence, it was decided that they would plant corn while waiting for their cacao to yield. Then, after the corn was harvested, Mama Fad -not her husband- laid out a plan to continue the corn for a second harvest and starting to plant the cacao seed at once.

Another technical discussion also took place about deciding the best cover trees or *sombar* to plant. Mama Fad suggested to plant *gamal*, because of its fast growing and easiness to plant. However, Pak NS argued that *gamal* canopy would harden the soil when it grows big, and it also absorbs soil nutrition too much. *Dadap* is a better choice than *gamal* because it does not give both effects as *gamal*. Mama Fad accepted this argument. Then, they decided to plant *dadap* as a cover tree.

Despite these various technical discussions on cacao cultivation, Pak NS and Mama Fad are conservative farmers. They acquired knowledge about cacao mainly from discussion with other farmers. Often times, Pak NS is seen in a serious discussion with Pak Is, but he does not intentionally search for information from various sources.

Due to lack of social internalisation of Kulawian women position in the past, women who are married to non-Kulawians do not share Ibu Dh's and Mama Fad's 'luxurious' positions. Pak Is' wife (Mama Man) and Ibu At, for example, complain

about their husband's authoritative decision in household resource allocation. Ibu At claimed that her husband never trusts her in managing their household income. Her husband is afraid that their money will be used for 'useless expenses'. Eventually, she expressed her resistance by opening a small sundries shop using her own saving. Her saving comes from her motorcycle's rent -bought for her by her father prior to her marriage - to *ojek* drivers. This is her struggle to claim autonomy over her household income.

When I attended and facilitated, as requested by the organiser, a Kulawian women meeting in Marena in June 2005, a strong statement was made about husband's authority over household assets caused by husband's business demand in cacao came as below[44]:

> *Saya seorang wanita karier (penghasilan keluarga lebih besar daripada pendapatan suami yang hanya sebagai petani coklat). Saya membeli lahan yang ada dan tidak ada tanaman coklatnya, tapi sertifikat tanah sebagian besar atas nama suami tanpa bertanya pada isteri nama siapa? Saya membeli kebanyakan uang dari pendapatan saya sebagai istri, tanah tersebut sebanyak 9 lokasi hanya 2 atas nama isteri.*
>
> (I am a career woman with a higher income than my husband who works merely as a cacao farmer. I bought parcels of land with and without cacao trees on it, but most of the land is certified under my husband's name without asking me whose name should be put in the certificate. Those parcels of land were bought mostly from my earning. Those parcels are located in nine different locations, but only two were certified under the wife's name).

Because it is anonymously written in order to encourage women to speak out without worries of shame and intimidation, I was not able to explore a form of resistance that this woman might express covertly or overtly to counter her husband land-grabbing act. Only later on, in a session of hope statement that some general statements on women's equal right to decide on household as well as community matters, are expressed, but it does not directly relate to the issue.

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[44] I quoted the statement from a meta-card that was written by the participants anonymously during the meeting. The session was aimed to identify problems that women must face at the household and community level. I facilitated the session together with two male facilitators.

Reflecting on stories of women positions with their struggles to attain women's present place in the sphere of valued knowledge, it comes to the fore that women must struggle harder to be counted in cacao business. Unless they have a high social status outside the household, women tend to be excluded from cacao domain. Even, the case revealed in the women meeting showed that economic position does not automatically grant women autonomy in asset management and entitlement.

Their attempts to gain possession of market-valued knowledge, e.g. Ibu Dh and Mama Fad, or even to be in a total isolation from the knowledge, e.g. Mama Man (Pak Is' wife), are motivated mainly by household security, and self-autonomy. Although they might not gain a degree of autonomy that they may have wanted, but their resistance to husband's authority had reproduced newly defined position, i.e. from totally shut down access to household resource allocation and production decision into relative control of certain income sources and expenses, including certain authority in production decision.

Important to note is that Ibu Dh and Mama Fad's husbands are conservative farmers. Wives of progressive farmers, like Pak Is, Pak YS, and GD, for examples, never received the same opportunities to access their husbands' cacao businesses. On one side, they believe that cacao is none of their business. It is part of their husbands' duty as the breadwinner of the family. On the other side, their husbands do not need their wives labour or knowledge, since they have progressively cultivated their own capacity in cacao cultivation, labour recruitment, and marketing network. Clearly, the production decisions in progressive farmers' households are men's domain, which is solely conducted by the husband (see Table 13).

Community Level Decision-making: Tina Ngata, PKK, and OPANT

Ideally, village resource utilisation and management, in terms of water, forest, rice and cacao fields, are determined through a process of deliberation at the village level, and involves various layers of community. However, such deliberation has never occurred since village governance was transformed into a centralistic governance system by the New Order regime, or even goes further back to Dutch Colonialism.

Decentralisation Law No.22/1999 has reformed such centralistic and corporatism approach, and opened up possibilities to create local governance system based on local values. This opportunity was utilised cleverly by Toro community, one of Kulawian villages that is located about 5 km from Bolapapu. They realised that they have rich local traditions, norms and values that can be revitalised to strengthen local institution capacities. Boosting up by the democratisation movement from the extra-rural institutions, i.e. NGOs, like YTM and Care, Toro managed to reform their governance institutions using *adat* values. Their struggle has successfully gained recognition from Lore Lindu National Park Administration, especially over their customary land claiming. Another successful result is the creation of discourse on revitalisation of women's role in village decision making.

Toro phenomenon cannot be left out from a discussion about Kulawian tradition of gendered role in public domain, which is claimed to have a source in Bolapapu as 'the heart of Kulawi culture'. In this sense, Toro movement is perceived by elderly in Bolapapu as a transgression of Bolapapu's *adat* authority. However, since Toro leaders are also blood-related with many elderly sitting in *Majelis Adat Kulawi* or Kulawi Customary Council, e.g. Tama Rama, so to a certain extent Toro movement receives protection and consent.

Toro women expression in emphasizing a reformation movement is reflected by their decision to choose a form of organisation, instead of retaining the old format of

PKK[45]. Then, *Organisasi Perempuan Adat Ngata Toro* (OPANT) or Toro Customary Women Organisation was established in 1999. Through this organisation, Rukmini - the leader- visited villages around Kulawi to disseminate awareness about gender equality, and seek a common understanding toward the importance of *adat* revitalization, particularly for a betterment of women status and position in to date social sphere. Many discussions took place in villages around Kulawi sub-district that touched topics of women's leadership, and gender equality, as shown by Kulawi history. This is where a concept of *Tina Ngata* is contested, reinterpreted and reproduced.

Discussing gender in community decision-making process in Kulawi, would lead us to refer to *adat* institution called *Tina Ngata*. It is told by the elderly who sit in *Totua Ngata* or Customary Council (Ind. *Lembaga Adat*) in Toro and some in Bolapapu that *Tina Ngata* refers to a woman or women figures whose charisma and wisdom put her as a leader or a person who people go to consult matters[46]. Other interpretation –proposed by a *maradika* in Bolapapu- tries to negate such definition by translating *Tina Ngata* as capital city (Ind. *Ibu Kota*). According to this interpretation, *Tina* means a mother or a woman, and *Ngata* means a city or a region. However, for a purpose of women's role revitalisation, OPANT uses the first reinterpretation of *Tina Ngata*. For simplicity , I labelled the first interpretation as Toro version, and the later as Bolapapu version.

In Toro, women's leadership as depicted by Toro version of *Tina Ngata*, is claimed to be applied by Rukmini. Rukmini's attachment to various NGOs has elevated the issue of women movement in Toro to the international level. Her achievement is highly recognised outside, and she has been invited to many international meetings. However, her leadership inside the village is contestable.

[45] PKK is women organization from the village to the national level formed by the New Order's government to institutionalized women's role in building the family's welfare.
[46] Source: a paper titled "*Posisi Perempuan Masyarakat Adat Kulawi Dulu dan Saat Ini (Dalam Konteks Pergeseran Peran)*", written and presented by Andreas Lagimpu in Semiloka Konsolidasi Perempuan Adat Kulawi, 14-16 June 2005, in Marena.

Döbel findings[47] show that OPANT, as the only women organisation in the village, is not able to conduct its mission to improve women position in the widest term.

Critiques and disappointment bring *Tina Ngata* conception –as it is presented by Rukmini role- to be hardly understood, let alone accepted by ordinary women in Kulawi. Once, a difficult question was asked by Ibu Dh to me: "*Bagaimana sampai Rukmini itu menjadi Tina Ngata*? (How did Rukmini become a Tina Ngata?)". She defined Tina Ngata as: "*Tua Umur, Bisa Bategur, Bicara Tajam* (mature/old enough in age, able to give reprimand, and critical)". An almost similar question about criteria of *Tina Ngata* was also asked in a Kulawi Women Consolidation Meeting, which was attended by 27 participants from 16 villages, held by OPANT and Civil Society Organisation or ORAK (Ind. *Organisasi Rakyat*) of Marena, in Marena on 14-16 June, 2005. The native Kulawians asked whether a conception of *Tina Ngata* refers to criteria of *Tina Ngata* Kulawi in the past, i.e. must come from an aristocratic family; but, migrant ethnic groups did not accept it. A statement from a migrant ethnic group participant expressed their confusions:

> *Masa lalu betul sekali perempuan dikatakan strategis, kepemimpinan perempuan pada masa lalu itu mereka memimpin secara individu dan saat jadi pemimpin karismanya sangat menarik masyarakat. Masa kini karisma itu sudah tidak ada lagi, karena kepemimpinan sekarang ini sudah berubah dan otomatis kepemimpinan perempuan menurun karena semakin modernnya, karena mengikuti kemodernan ini maka sekarang menurun perannya.*
>
> *Saya kira tidak pas lagi kembali ke dulu. Karena pakai baju adat siang-siang saja panas sekali. Mungkin iklim sekarang sudah lain dengan dulu. Kalau cara menanam kita lihat bulan, kami bukan org asli, tapi Pipikoro-Kantewu jadi adik orang Kulawi, sehingga satu rumpun Kulawi saja. Tapi kita juga tidak bisa terus-menerus seperti itu kita harus melihat kemajuan seperti ini.*
>
> (It is true that in the past women's role is strategic, women's leadership in the past was an individual leadership, and when a woman became a leader, her charisma attracted people. At present, charisma does not exist anymore, because women's leadership is declining due to modernity, because of following such modernity, women roles are

[47] Reinald Döbel, a researcher from Language, Gender and Sustainability Project-Germany, conducted research on leadership in Toro, and I used his data under his permission.

declining. I think it is not appropriate if we want to go back to the past. Because wearing customary clothing in daylight has already made us sweating. Maybe today's weather is different than before. The way we do planting is by looking in the month; we are not natives, we are Pipikoro-Kantewu, Kulawian younger sister, so we come from the same root. But, we cannot go on like this, we have to look forward).

In that meeting a discussion about *Tina Ngata* was not resolved. However, all participants agreed to form a woman organisation in each village. This agreement leads to a question of what form of organisation.

The idea of creating women organisation is to ensure women's involvement in the village level decision-making, especially in the area as OPANT promoted: the management of natural resources, including the forest. OPANT -in this case, Rukmini- has successfully involved in almost every important decision-making event, not only at a village level, but in Kulawi sub-district also. At a village level, Rukmini as OPANT leader, and OPANT as a woman organisation that stands in equal position with other village institution, has been involved in *adat* court sanctioning upon various problems, from illegal logging to adultery. Rukmini argued that such role cannot be performed by PKK. Hence, PKK is not useful in pushing up wome's role to a village level. Then, a discourse of PKK *versus* Customary Women Organisation becomes a core subject in almost every women meeting.

Ibu Fan and Ibu Hj disagreed to this useless notion of PKK for slightly different reasons. Ibu Fd, as a former head of PKK in Bolapapu, opposed the idea of using the label of 'customary women organisation', since it completely negates the existence of PKK, which is supposedly maintained, due to its connection to supra-rural network, including the provided facilities. On the other hand, Ibu Hj -a PKK secretary of Mataue- argued that throwing away the name of PKK will complicate the struggle to exert wome's role in village decision making due to people resistance to the term 'customary women organisation'. Such term has already been associated with 'LSM' or NGO, which is interpreted as 'the rebels' or the opposition of the government.

Therefore, Mataue and Bolapapu women decided to retain the form of PKK in their villages, while building an access to village meetings, not as a food caterer, but as an opinion provider. However, aside of Toro –with its boom and bust social dynamic-, other Kulawian villages, remain silent in response to this women movement.

Despite this internal dynamic, there were many outsiders' programs entered Kulawian villages without addressing gender issues. There are at least five NGOs and government programs, which were conducted during my research period, i.e.

1. a process of building a conservation agreement in Lindu,
2. a process of developing village regulation on natural resource management in Namo,
3. a process of water catchments participatory planning in Bolapapu,
4. an establishment of Kulawian villages governance forum in Bolapapu, and
5. a training programme of cacao pod borer control that required 20% of women participation

I have attended meetings and followed these various programmes to come to conclusion that those village level programmes were not carried out in a gender-sensitive manner. Women were invited, and their attendance has already counted as participation, regardless of their silence or less-active participation during the meeting sessions. Women's silence was unnoticed, which signifies a relegation of women's knowledge in relation to forest conservation, water, and natural resource management. Those programmes were vertical interventions, in which women's knowledge is neither part of interface processes nor part of the process of new knowledge emergence.

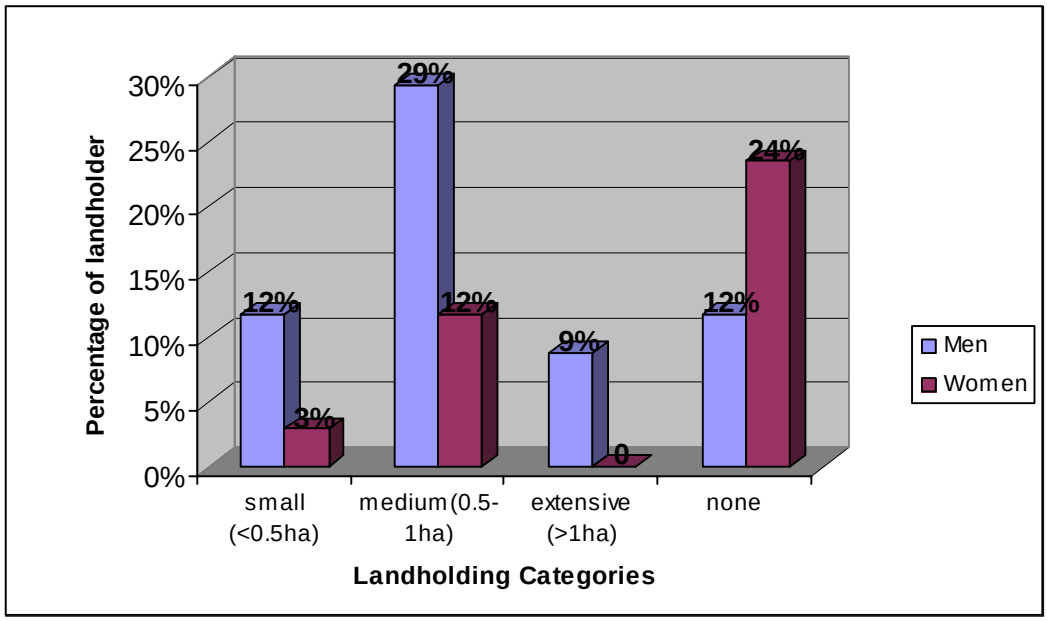
GENDER AND ETHNICITY IN SOCIAL RELATION OF PRODUCTION IN SINTUWU

Division of Labour and Production Decision Making

As discussed in previous chapters, land access in Sintuwu -as an entrance to knowledge accumulation- is mediated mainly by land market, either by buying or by

sharecropping. In terms of ethnicity, Bugis possesses a greater access to landholding through buying, especially for cacao plantation. Majority of Kaili enters landholding through sharecropping, borrowing or *bapajak*. Moreover, we also had gathered an understanding that cacao is generally known as Bugis crop, and rice is Kaili and Kulawians crop.

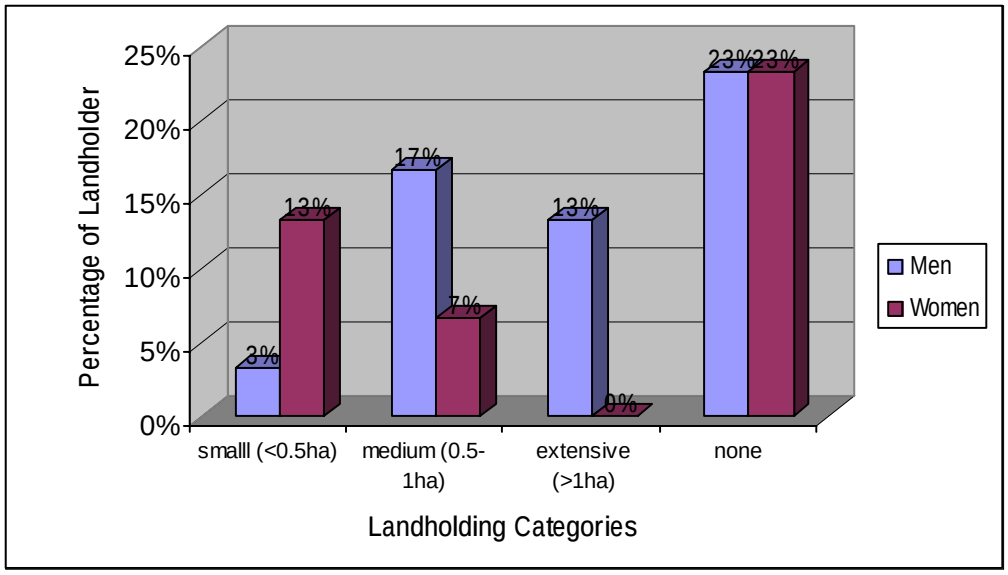
When we put a gender perspective in land access to cacao cultivation and rice farming, as shown in Figure 9 and 10, men in both crops dominate landholding, except for smallholding of rice fields. It is also reflected from the survey result that women landlessness is higher than men, particularly in cacao plantation holding. In both types of crops, landlessness and medium size landholding dominate the structure. This composition implies a shift from smallholding to medium size holding, which has left the smallholders with landlessness. If such tendency of agrarian change perpetuates in the future, extensive landholding and landlessness will dominate the structure. It will depict an extreme polarisation in Sintuwu community.



Data Source: Statistic Analysis from Guenther Burkard's Survey of 34 respondents in 2004[48]

Figure 9. Cacao Plantation Ownership Structure in Sintuwu in 2004

[48] Guenther Burkard is a STORMA researcher that has conducted an extensive research in Lore Lindu areas for many years. I use his survey data under his permission.



Data Source: Statistic Analysis from Guenther Burkard's Survey of 34 respondents in 2004

Figure 10. Rice field Ownership Structure in Sintuwu in 2004

The landholding structure of cacao plantation leaves us with a general conclusion that Bugis men hold greater access to knowledge accumulation and dissemination about cacao cultivation than Bugis women do. Furthermore, cacao farming for Bugis is an exclusive livelihood. They focus on one commodity only, unlike Kulawians in Bolapapu. The most progressive farmer, who also a pioneer cacao cultivator in the village, even, has been keeping record on every harvest since 1992, when his cacao started to yield in maximum. He evaluates his yield yearly, and setting a target for the next season. He also applies a simple bookkeeping of his cacao production and selling.

Bugis women can access cacao cultivation knowledge when the men are not able to perform certain work due to sickness or age. Unlike general assumptions about masculine and feminine capacity, some Bugis women are capable to perform cacao cultivation tasks, which are considered as masculine tasks, like pruning and spraying. Women from other ethnic groups would never do or would not be allowed to do such tasks.

Mama Mt, Pak Bd's wife, for example, goes to their plantation everyday, and she is the one who does the pesticide spraying due to her husband illness. She voluntarily takes over the spraying task, although she said that it is the hardest work. She has to carry several kilogram of fully loaded sprayer tank for many hours, not to mention a stiff neck caused by continuously looking up. Thus, it is a fact that some of the Bugis women do the masculine tasks of cacao cultivation, however, when it comes to production decisions they will leave it to the husband or the husband will take over. Once I asked Mama Mt whether she would do some spraying in the near future, so I can go together with her. She said that it is not yet decided. When I asked her husband, he explained that they would do the spraying in three days. Three days later, she did the spraying, and I went with her. Mama Mt carried out the task, but her husband decided it.

One afternoon, I took a walk around Bugis neighbourhood, which is easily marked by their unique above-the ground-house. At that time, Mama Mt was still in her cacao plot, but I spotted that most Bugis women were sitting around in front one of the houses. Pak Ms wife was one of them. Then, she was summoned by her husband to care for the cacao beans that were dried on their porch. Pak Ms stated that her wife only helps in harvesting work and drying the beans afterward. Ibu Su also carries out the same task as Pak Ms' wife. I found her harrowing the cacao beans in front of her house, while her husband went to his cacao plot. Another day when I visited Pak Hs cacao plot, I asked for his wife, and he stated that she doesn't go everyday to the plantation. But, when his wife went with him to his cacao plot, usually she would go for planting or harvesting chilli or vegetables, but not taking part in cacao cultivation task. From my daily visit to one cacao plot to another, I rarely found Bugis women participate in pruning or spraying, but all wives know exactly the daily price of cacao, and the place to sell in order to have a good price. Thus, Bugis women, in general, take parts only in harvesting, drying, and marketing of cacao.

Mama Mt, and Mama An, who I spotted carried a cutter on her shoulder and spraying the grass in front of her house, represent a particular type of labour substitution for their husbands. Mama An is not a Bugis, she is a Kaili married to the former village head. Her husband is too old to work in the field, so she is left with a responsibility to care for their cacao plot. She was also the one who attended the cacao farmer group's meeting, not her husband, and took charge in forming a *palus* group around her cacao plot as agreed in the meeting.

Women from other ethnic groups in Sintuwu, like most Bugis women, also rarely involved in cacao masculine task, except cutting fruits and taking out the beans at harvesting time; a perceived feminine task. Pak Uj, a Sundanese, and Pak Ra a Kulawian-Uma are both cacao plantation owners, and both wives claim that they do not involve in their husbands cacao plantation affair. Pak Uj gave his wife a small shop (Ind. *warung*) in their house to be managed, and her income from the shop is treated as the family's petty cash. This is because according to him women are not capable of doing cacao cultivation work, such as pruning, spraying, weeding, except for harvesting. Her wife said she is not interested as well. The same case is for Pak Ra and his wife. Pak Ra's wife has her own business as a vegetable seller, so she stated that cacao cultivation is none of her business. Thus, unlike Bolapapu, cacao farming in Sintuwu has truly set aside women's involvement in decision-making process. Women part is mainly the tasks, and men care for both the decisions and the task. By this arrangement, women who carry out cacao cultivation tasks are able to develop some knowledge about cacao, but never hold a control over production decision.

In rice farming, Kaili women used to have an important role in rice production, almost similar to Kulawians in Bolapapu. Around 1970s, rice planting and harvesting were mainly women's work. Nowadays, rice farming work is not gender-divided. Since land has become scarce, and labour market transformed into a competitive arena in *bapetak* arrangement, women must struggle harder for wage. Men had

entered the area, where Kulawian men had never in, e.g. planting, so they become a competitor of *bapetak* too. Nonetheless, *bapetak* contract holder is still dominated by women who come from Kaili ethnic group. As rice farming is also dominant in Kulawian farming system, so a competition for *bapetak* contract is also coming from Kulawian-Uma.

Unlike Bugis women position in cacao production, Kaili women possess a relatively greater control in rice production decision. Mama Ik, for instance, decides types of herbicides to use, since she knows exactly which one is cheaper. Pak Neg, also a Kaili rice farmer, asserts that in general women are the money manager. Woman has the authority to decide expenses for food and school fee for the children, but when it comes to fertiliser and pesticide or production inputs, men usually decide those types of expenses. Pak Yb, who owns 2 hectares of rice fields, select his *bapetak* worker solely based on his judgement toward work quality of the Umas, and his wife did not involve in such decision. In general, Sintuwu men's and women's positions in rice and cacao production are described in Table 16.

Table 16. Rice and Cacao Farming: Decision Making and Task Execution in Sintuwu Community

Organization of production	Decision maker(s) (Control and Access)		Task executor(s) (Access only)	
	Woman	Man	Woman	Man
Cacao cultivation:				
Type of commodity planted		✓		✓
Labour recruitment		✓		✓
Use of fertilizer, pesticide		✓		✓
Types of fertilizer/pesticide, the volume & frequency of application		✓		✓
Types of tasks: – Plant the seedlings – Weeding, – Pruning – Apply fertilizer and/or pesticide – Harvesting – Drying		 ✓ ✓ ✓ ✓ ✓ ✓	 ✓ ✓ ✓ ✓	 ✓ ✓ ✓ ✓ ✓
Marketing	✓	✓	✓	✓
Rice Farming:				
Type of variety planted	✓		✓	
Labour recruitment	✓	✓	✓	✓
Use of inputs (fertilizer, pesticide)	✓	✓	✓	✓
Types of fertilizer/pesticide, the volume & frequency of application	✓	✓	✓	✓

	Decision maker(s) (Control and Access)		Task executor(s) (Access only)	
Types of tasks:				
– Put fences	✓	✓	✓	✓
– Spread seeds	✓	✓	✓	✓
– Ploughing or hoeing	✓	✓		✓
– Plant the seedlings	✓	✓	✓	✓
– Weed	✓	✓	✓	✓
– Apply fertilizer and/or pesticide	✓	✓	✓	✓
– Harvesting	✓	✓	✓	✓

It is described in Table 14 that regardless of ethnicity, women hold lesser control of cacao knowledge compared to men. Bugis women can access the knowledge by taking over men's work, e.g. spraying or pruning, but their knowledge is still insufficient to take charge in cacao production decision. In comparison with Bugis women, Kaili women's access to cacao knowledge is none due to limited Kailis' ownership of cacao plantation.

In rice production, Kaili women's greater control, however, still has to face the challenge of intensive men's involvement in rice production. For rice farmers' household, equal men and women competency in rice cultivation skill certainly would benefit the household. Mama Ik's household, for example, is benefited from her husband skill in rice farming, so her husband would receive seven *bapetak* contracts in a year. However, for women headed household, competition with men labour is a threat to her livelihood. Therefore, Ibu Sy refused to be active in cacao farmers group, so she would have more flexible time to accept *bapetak* contract. Time flexibility is a high point in labour selection.

Since rice and cacao are crops confined to different ethnics, it does not only represent gender-divided knowledge, but ethnic-divided as well. Within each knowledge constellation, gender analysis has revealed women exclusion from cacao knowledge; and in rice farming, men become an equal knowledge holder. Due to highly commercialised commodity of cacao and rice, men and women are concentrating in income generation effort to ensure security. Women's autonomy was not only defined in her participation in household and production decision-

making process, but also in the freedom to choose her own income generating activity. The later requires a network building of her own, like Pak Ra's wife activity as a vegetable seller, or having a good education, like Pak Ny's wife who works as a midwife.

Coming down to inter-ethnic production relation, in cacao farming, Bugis is reluctant to hire Kaili labour, either men or women, due to a stigma of Kaili's bad work ethos. Labour market in cacao farming for Kaili is narrowly opened, hence, dominated by Bugis men and women. In the cacao case, being a woman and a Kaili is not saleable in Sintuwu's labour market.

Community Level Decision-Making

Resistance of Kailis in Sintuwu appears in a face of rejection to any leadership form comes from other ethnic. Three times village head election have been held in Sintuwu since its last establishment as a formal village, and many non-Kaili candidates had emerged, but none has ever been elected. Majority of the voters admitted the excellent quality of non-Kaili candidates, however, the votes were for the Kaili candidate. Pak Bd and Pak Hs, for example, were two respected Bugis candidates due to their extensive external network, good social economic status, and high integrity; but the elected candidate was a Kaili, who is the relative of the former village head. Village head election is the interface arena where the Kailis 'steal' a controlling power.

Customary Council (Ind. *Lembaga Adat*) is another means to insert Kailis power in the village level decision-making process. Despite multiethnic character of Sintuwu community, nine members of *Adat* council are all Kailis. The council also uses Kaili customary rules as the only tool to settle cases. However, the *Adat* council has limited authority. Only domestic cases, such as : adultery, unwanted pregnancy, and alike, are brought to be settled by *Adat* council. Usually, disputes and violations outside domestic territory are brought to the state authority, either to the village

head or to the police. Bugis and other ethnic groups must accept the enactment of Kaili customary rule by the *Adat* council due to their position as 'new comer' or migrants.

Women participation in village decision-making process was unobservable during my research period. Organised women activity is limited to Islamic and Christian religion events where women constitute groups. Traditional and formal institutions in Sintuwu rarely involve women. None of Kaili women becomes the member of *Adat* Council, not to mention other ethnic group women. PKK, as a formal village institution for women, was once formed, but it became inactive. Some women explained that due to inactive PKK at Palolo sub-district level, PKK in Sintuwu was not motivated to become active as well. The only village institution that has a woman member who participates actively in village decision-making is the Village Representative Body or BPD (Ind. *Badan Perwakilan Desa*).

According to the head of BPD, the only woman member - Ibu Ad- was elected as a BPD member not because she is a woman, but because she is a 'vocal' person, who is critical to various village head's decisions or policy. One of her struggle to push forward women's programme in Sintuwu was to create women traditional music group. Her initiative failed due to village head's corruption over the fund for the group's traditional custom and musical instruments. She protested the village head, but she was not heard. Her bravery to voice her thought brought her to sit in BPD.

When Pak Bd intended to reactivate a cacao farmer group, he invited 25 farmers around his neighbourhood, including Ibu Ad. She was critical to the idea of group reactivation and demanded group organisation's transparency. At the end, she finally supported the idea to conduct group work in each member's plantation. Three other women also attended the meeting, and became the group's member. However, when the group tried to organise themselves in six smaller groups based on each member's cacao plot location, some men were reluctant to be in the same

group with women. They argued that women would not have the same work quality as men, but they will accept wome's role as group's meal provider. In other words, women participation in the farmers group is not perceived as technically beneficial. The access is open for women's involvement, but men hold control of technical matters that affect cacao productivity.

In the multiethnic community, a village level decision-making process becomes the arena of power struggle between ethnicity. In such a case, gender norm of each ethnicity may set different value to women's role in public domain. However, women in Sintuwu -regardless of their ethnicity- do not have the opportunity to cultivate and show their capacity at community level organisation or leadership. Ibu Ad shows her agency to breakthrough women's tradition of silence. Unfortunately, partitions of ethnicity and religion still restrain organised cross-ethnic women activities.

SUMMARY

BOLAPAPU AND SINTUWU: GENDER AND ETHNICITY IN THE INTERFACE OF UNEQUAL KNOWLEDGE

It was discussed previously that agricultural transformation in Bolapapu and Sintuwu has put rice and cacao knowledge in an unequal position. Market value of cacao knowledge has given the knowledge holder greater control over decisions at the household and community level. On the contrary, rice knowledge holder holds lesser power in decision-making. In addition, gender and ethnicity, as knowledge holder's identity, contextualise deeper power inequality (see Table 17).

Table 17. Knowledge and Decision-Making Inequality as Contextualised By Market, Gender and Ethnicity

Decision-making Level	Rice Knowledge		Cacao Knowledge	
	Bolapapu	Sintuwu	Bolapapu	Sintuwu
Household level	- Kulawi Moma - In the past: still dominated by women - At present: tend to diffuse across gender - Women hold greater control in production decision-making	- Dominated by Kaili and Kulawi Uma - In the past: used to be dominated by Kaili women - At present: shared equally between Kaili and Uma men and women - Men and women share control over production decisions	- Kulawi Moma, Bugis and Chinese - Dominated by men - Women access and control is based on her land ownership, types of intra-household relationship, her social status, her husband's ethnicity - Less control of women over production decision-making process	- Dominated by Bugis men - Bugis women access is greater than other women, due to men labour substitution - Bugis women control in decision-making is none - Non-Bugis (Kaili, Uma, Sundanese, Javanese) men have less access than Bugis - Non-Bugis men depend on Bugis men's knowledge about cacao - Non-Bugis women do not involve in cacao cultivation at all
Community level	- Kulawian *adat* norm justifies women roles and leadership in public domain - Women are organised in state and *adat's* organisation - Women organise struggle to gain access and control in community level decision-making	- Kaili men control village governance and *adat* institution - Women do not organise themselves in cross-ethnic and cross-religion organisation - Women can join farmers group, but positioned as supplementary member - Regardless of ethnicity, women do not have access to community level decision-making	- Kulawian men control village governance and *adat* institution - Due to *adat* revitalisation movement, Kulawian men are situated to support women participation in community level decision-making	- Bugis men have lesser access to village governance and no access to *adat* institution - Women do not organise themselves in cross-ethnic and cross-religion organisation - Women can join farmers group, but positioned as supplementary member - Regardless of ethnicity, women do not have access to community level decision-making

Women in Bolapapu and in Sintuwu, regardless of their ethnicity, hold lesser control or do not have access at all to cacao production decision-making at a

household level. As rice knowledge holder, women in Bolapapu and Kailis in Sintuwu do not have access as well to cacao production decision-making at a community level. cacao expansion to the forest or the rice field, for example, is decided at household level, but the impact of rice and forest conversion is at a community-scale.

Due to cacao market value, the impact of deforestation to water scarcity for rice cultivation was ignored; not because of ignorance, but because cacao cultivation is always seen positively as a better livelihood. Therefore, rice farmers' interest for water availability was never negotiated at a community level. Kaili's position as a power holder in Sintuwu village governance was never used to defend rice farming existence. On the contrary, Kaili village head had pushed land commercialisation to the landlessness situation for Kailis. In Bolapapu or Kulawi at large, women's better access to community decision-making has not yet utilised to control cacao expansion to the forest. Market power has concealed the link that should have mediated rice and cacao production.

CHAPTER 7

DIVERGENT LOCAL KNOWLEDGE AND COMMUNITY SOCIO-ECONOMIC SECURITY: THE NEGOTIATED 'SECURITY'

FOREST AS THE DIVERGENT POINT OF RICE-CACAO KNOWLEDGE

Rice Farming as a Resistance to Cacao Domination

Women farmers in Bolapapu, who maintain rice farming, are well aware that the intensive need of continuous water supply for rice farming requires forest conservation. Ibu Sv, a rice farmer whose husband is a truck driver and does not own any cacao plantation, complains of decreasing water supply for rice, especially for her mother's rice field. Her rice field receives water from Rarono River, so the supply is relatively guaranteed. However, her mother's field is located in the East side of the village, which water comes from springs in the forest. She notices that since the last two seasons the water has been decreasing. Although the rainy season still comes regularly, the water sources are unable to provide sufficient water for her mother's rice fields and east side rice fields in general. Facing such constraint, she is convinced that the lack of water is caused by forest cutting that has been done by many people.

Ibu Dh, besides a cacao farmer, is also a rice farmer, so she knows water sources for Bolpapu rice fields. She took me to the upper part of Rarono River and showed me that the river has suffered from sedimentation; hence, the volume is getting less. This river supplies water for rice fields located at the West side of Bolapapu. She and some other women farmers told stories about flood that has been coming regularly from Rarono River, which force some rice farmers to convert their rice fields to cacao plots due to sands, rocks, and soils brought by the flood. For the East side, she realized that, since water has been channelled to houses, the volume is getting less for rice fields. Ibu Dh does not mention any logging activity that might cause either the flood or the water scarcity.

The children's writings about the forest are also expressed in the normative knowledge about the importance of forest conservation. Their writings -as part of reflection of their parents' knowledge- reveal that Bolapapu villagers, in general, hold the knowledge about water-forest link. When I discussed the children's writings with men and women in a separate discussion, both discussions show that men and women accept the expression of their children about their on-farm activities, knowledge about forest, the cacao and rice division of labour in the family, and farming motivation (e.g. to pay for food, for school fees, for clothing, etc).

Possessing knowledge that links the importance of forest conservation for rice field sustainability does not always impinge on its uses in the negotiation of cutting the forest for cacao plantation or conserving it for rice farming purposes. It was mentioned earlier that the tendency of cacao expansion in Bolapapu is to the forest, not rice field, and consequently, cacao expansion will sacrifice rice farming as an indirect effect of forest cutting.

Learning from expansion facts done by YS, GD, and GD's cousins in Marena, forest grabbing is most likely driven by rich-capital progressive farmers. Land clearing greatly consumes capital for labour recruitment, unless it is done and shared collectively. However, progressive farmers tend to operate on individual account for profit making, so it is very unlikely that they would do expansion collectively. They may, of course, try to buy cacao plots from smallholders, which impinges only on energy saving. Nevertheless, since cacao has shown its stability as an income source, and many smallholders have invested various crops in one plot, persuasion for land transfer is rather difficult. In such a case, forest grabbing is an attractive option.

Pak Ys, for example, has already spotted which patch of forest is still open for cultivation. He claimed that the whole rehabilitation forest on the West side of Bolapapu is actually farmers' land that has been claimed by the State for rehabilitation purpose. To date, some of the area has already been reclaimed, but

still many hectares are left un-reclaimed. Land availability motivates Ys to suggest a reclaiming act during one of several village meetings conducted for village development planning in March 2006.

Because wives of progressive farmers do not own rice fields, and they have never been involved in cacao production decision, so expansion goes without any resistance at the household level. Moreover, most women farmers in Bolapapu rely on cacao for their household earnings. Despite their rice field ownership in which water supply interest is embedded, a tendency to comply and conform to forest conversion decision most likely appears for the reason of household security.

Rice farming is a medium to express and exercise women's autonomy. In Bolapapu, conservative farmers still dominate the composition of farmers' type of character. Hence, rice farming is able to retain its place in the community. In effect, Bolapapu women's autonomy is relatively greater than non - rice farmer. Nevertheless, rice does not gain any market value from crop commercialisation, which might preserve its existence in the future. Rice fights a loosing battle.

Rice field diminishing presence in Sintuwu did not occur unchallenged. Bugis men and women in Sintuwu do not construct a direct link with water necessity from the forest, since their cacao plantations do not rely directly on the function of forest cover. In this case, even knowledge about the importance of forest for water supply is a common knowledge; it will not provide any motivation to stop cacao expansion to the forest. It is claimed that the expansion to the forest is often done by the Kulawi Uma who came later, and must opt for opening forestland for farming, because no more land is available. This is also an argument given to justify forest clearing in Dongi-Dongi where some of Kailis from Sintuwu also participated. Nonetheless, cacao cultivation does not create a linkage to forest conservation.

On the other hand, due to adherence to water supply for rice farming, Kailis' women and men in Sintuwu are the stakeholder of forest cover who would be

disadvantaged greatly by any scale of forest destruction. Kaili rice farmer complaint of decreasing water supply for their rice fields is expressed by Pak Neg as below:

> *Air memang menjadi kendala utama, karena belum ada irigasi. Bendungan pun masih swadaya, hanya dibuat dari batu yang disusun-susun saja, sehingga jika banjir air tertahan di dalam dan jika butuh air susah dimasukkan, karena tidak ada pintu air. Selain itu air juga semakin sedikit, lihat saja aliran sungai Katopi yang di bawah jembatan itu, hanya itu airnya sekarang. Semakin banyak kebun di atas sehingga sulit membuat got jalan air dari atas.* (Water has become a main constraint, because irrigation has not yet been built. The existing dam is our own initiative, but it was only made of stacked rocks, so when the flood comes it will be retained inside, and when water is needed, it is difficult to let it in, because the dam does not have a water gate. Besides, the water is getting less also, look at the Katopi River under the bridge, that is all what left now. There has been an increase number of farmland uphill, so it is difficult to make dykes for channelling water from there)

Pak Ny, a cacao farmer, claims that water dykes for rice irrigation have been built inside cacao plots, often without asking for permission from the cacao owner. Fortunately, such incidents have not caused any open disputes or a clash yet. cacao landowners tend to allow it to avoid conflict. Pak Ny who owns a cacao plot that has been dug out in some places for water supply to other farmer's rice field, chose to be submissive, as he explained below:

> *Kita paham karena air yang terbatas, di sini tidak ada pengaturan air untuk sawah. Kalau perlu ya ambil dan masukkan ke petaknya, meskipun melewati kebun orang.Sampai saat ini memang tidak ada perselisihan, yah kita hindarilah, sepanjang tidak merusak.* (We understand that because of limited water, there is no water management for rice field here. If someone needs it, just let it in, although it has to transgress other people land. Until today no disputes are caused by such act, we try to avoid it, as long as it does not cause damage).

However, water dykes inside cacao plot hardly depict compliance to cacao domination. A presence of water dyke inside cacao plot is evidence of the struggle to protect the rice fields.

Rice farming persistency in Bolapapu and Sintuwu conveys a form of resistance to cacao domination. In such context, the interface between rice and cacao knowledge, which is supposedly mediated by water-forest link, does not produce any successful negotiation. Rice and cacao knowledge interface does not yield a new knowledge that accommodates both interests. We can see none of innovation in cacao cultivation spare the forest function for rice field's water supply. Rice and cacao knowledge represents divergent knowledge.

Forest Conversion: the Evidence of Divergent Knowledge

When agro-ecological knowledge is manifested into praxis, the most solid evidence is the composition of agro-ecological landscape in the area where human interaction takes place. The trace of unsuccessful negotiation in rice-cacao knowledge interface is physically stated by the domination of cacao plantation over the rice and the forest.

In 2004, land use type in Sintuwu shows a composition of 10,5% rice field and 54% perennial stand or cacao plot[49]. The diminishing presence of rice field is already identified by other researchers, prior to my research (Sitorus 2002, Burkard's survey 2003). My findings reconfirm such physical evidence.

Table 18. Land Cover Change of Palolo Sub-district inside LLLNP from 2001-2005

	Land Cover Types	Year 2005 (Oct 2005) in hectare (ha)								
		Forest	Forest garden	Plantation	Dry-land farm	Wet-rice field	Built area	Open area	Water bodies	No Data
Year 2001 (Aug 2001)	Forest	7156.620	27.810	569.970	0.090	3.240	0.270	10.080	0.270	0
	Forest garden	0.000	178.740	208.350	0.000	0.540	0.270	1.170	0.000	0
	Plantation	0.000	0.000	1534.410	0.000	0.000	0.000	0.000	0.000	0

[49] Source: Central Sulawesi Statistic Bureau. Palolo Sub-District Profile 2004

Land Cover Types	Year 2005 (Oct 2005) in hectare (ha)								
	Forest	Forest garden	Plantation	Dry-land farm	Wet-rice field	Built area	Open area	Water bodies	No Data
Dry-land farm	0.000	0.000	0.000	38.610	0.000	0.000	0.000	0.000	0
Wet-rice field	0.000	0.270	1.890	0.000	7.470	0.000	0.000	0.000	0
Built area	0.000	0.000	0.000	0.000	0.000	13.950	0.000	0.000	0
Open area	0.000	0.540	19.440	0.000	0.000	0.000	26.370	0.000	0
Water bodies	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.630	0
No Data	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	18.27

Data Source:
Satellite Imagery LANDSAT ETM, Path/Row: 114/061, Acquisition date: 24 Aug. 2001 and 6 Oct. 2005

After 2001, when the cacao boom was over, rice conversion to cacao in Palolo sub-district occurred only in very limited number, as shown by land use change analysis in Table 18. The tendency of conversion shifts to forest conversion. However, forest conversion can cause rice field conversion as well, as it is shown by a process of dried rice field conversion to cacao in Kulawi (see Figure 11).

Based on the Head of Agricultural Extension Service Office's observation and experience, a converse fact of land use change is shown by Kulawi sub-district. According to him, a conversion from rice field to cacao plantation in Kulawi is relatively small, because social value is inherent in rice. From time to time, rice is sold, but only after rice stock for 4 months ahead has been saved. He asserted that selling rice is not their main income generating activity, but cacao is. Therefore, in Kulawi, instead of converting rice field, farmers prefer to convert coffee (in a forest garden system) to cacao. He claims that it is also because of government political interest to maintain food security at any level, so extension worker is obliged to persuade farmers for not converting their rice fields.

As a result of slower pace to commercialisation compared to Sintuwu, the social value of rice has retained rice field existence in Kulawi landscape. However, it may not remain for long, since land satellite imagery interpretation in Table 19 shows that the conversion of rice to cacao in Kulawi district from 2001 t0 2005 has taken off almost 45 ha of rice field.

Table 19. Land Cover Change of Kulawi Sub-District inside LLNP from 2001-2005

	Land Cover Types	Year 2005 (Oct 2005)								
		Forest	Forest garden	Plantation	Dry-land farm	Wet-rice field	Built area	Open area	Water bodies	No Data
Year 2001 (Aug 2001)	Forest	53867.880	4670.370	689.850	95.490	241.290	19.350	172.980	18.180	0
	Forest garden	0.000	2901.420	613.980	91.530	52.290	9.990	72.900	3.780	0
	Plantation	0.000	0.000	2957.580	0.000	0.000	0.000	0.000	0.000	0
	Dry-land farm	0.000	0.000	0.000	379.710	0.000	0.000	0.000	0.000	0
	Wet-rice field	0.000	9.180	44.910	44.460	155.160	20.970	29.880	5.940	0
	Built area	0.000	0.000	0.000	0.000	0.000	71.100	0.000	0.000	0
	Open area	0.000	77.220	113.220	48.870	78.660	10.350	97.020	4.500	0
	Water bodies	0.000	1.530	3.420	2.520	16.380	0.720	2.160	194.490	0
	No Data	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	18.09

Data Source:
Satellite Imagery LANDSAT ETM, Path/Row: 114/061, Acquisition date: 24 Aug. 2001 and 6 Oct. 2005

In Bolapapu and its surrounding villages conversion mainly occurred due to sedimentation as discussed earlier. Cacao expansion to the forest is the first option. However, it is like a circling effect, forest is cut for cacao, then, bare land causes flood and sedimentation, which landed on rice field, and finally, rice field has to be converted to cacao plantation. Thus, Sintuwu and Kulawi are actually facing a similar land use change; both are circling in the same cycle, as shown in Figure 11.

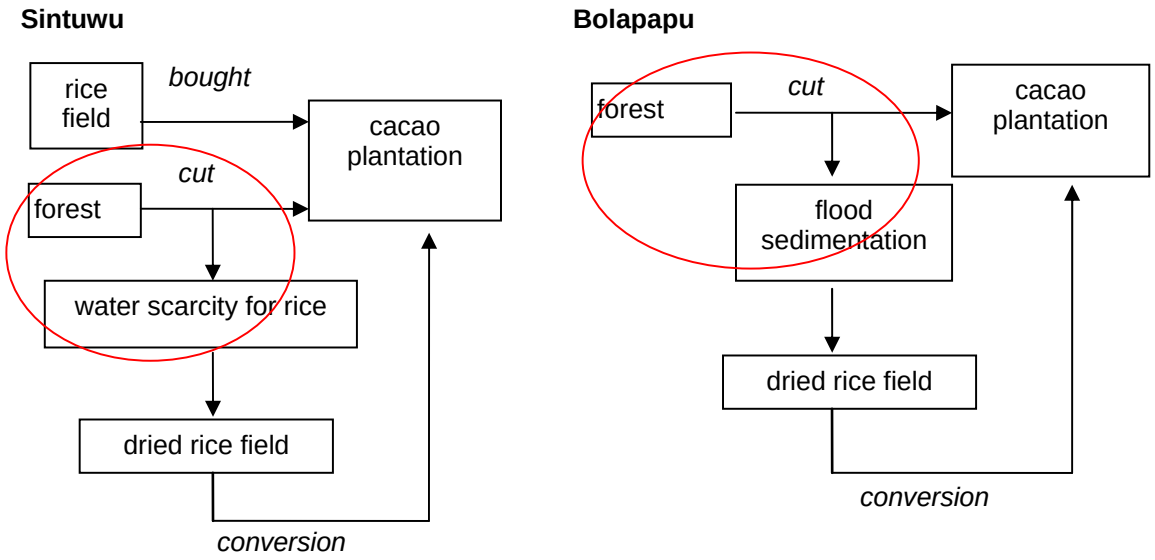


Figure 11.Circle of Land Use Change in Sintuwu and Bolapapu

If we omit the forest that cycled in red in cacao-rice circle (see Figure 11), rice and cacao stand as two unconnected elements. Those two knowledges are diverted in two different paths that lead them to achieve 'security'. 'Security' that could be a quasi-security, since water scarcity and flood is veiled by 'economic security', while it also represents other unseen dimensions of security, e.g. 'ecological security'.

Forest conversion to cacao plantation in Palolo and Kulawi articulates a neglect of ecological security. Land use change analysis of Palolo and Kulawi (see Table 18 and Table 19) shows that from 2001 to 2005, 778 hectares of forest and forest garden in Palolo have been converted to plantation. In Kulawi, forest and forest garden conversion to plantation has covered 1.303 ha. If we compare each converted patch of forest to the remaining total forest in 2005, in Palolo the conversion to plantation has taken off almost 11% of forest cover. In Kulawi, 2,4% of forest cover has already been transformed into plantation.

Palolo and Kulawi land satellite imageries (see Figure 12, 13and Figure 14) show that in 2005 the dark green colour that represents forest cover has thinning out in compare with the images of 2001. Light green and yellowish patch is wider in 2005 compared to 2001, which signifies a decreasing patch of forest cover and an increasing area of monoculture and shorter vegetations, which is interpreted as a perennial status.

Forest grabbing in Sintuwu is a mode of land obtainment, especially since Lore Lindu National Park is designated as a conservation area in 1997. The park itself goesback to 1976, as shown in Table 20. Therefore, the contestation of borderline between 'legal' and 'illegal' land for occupation has occurred since 1978, particularly when the logging road - popularly known as *Jalan Jepang*- was opened by a logging company, namely PT. KS. Since then, the road is regarded as 'the borderline' of Lore Lindu National Park (LLNP).

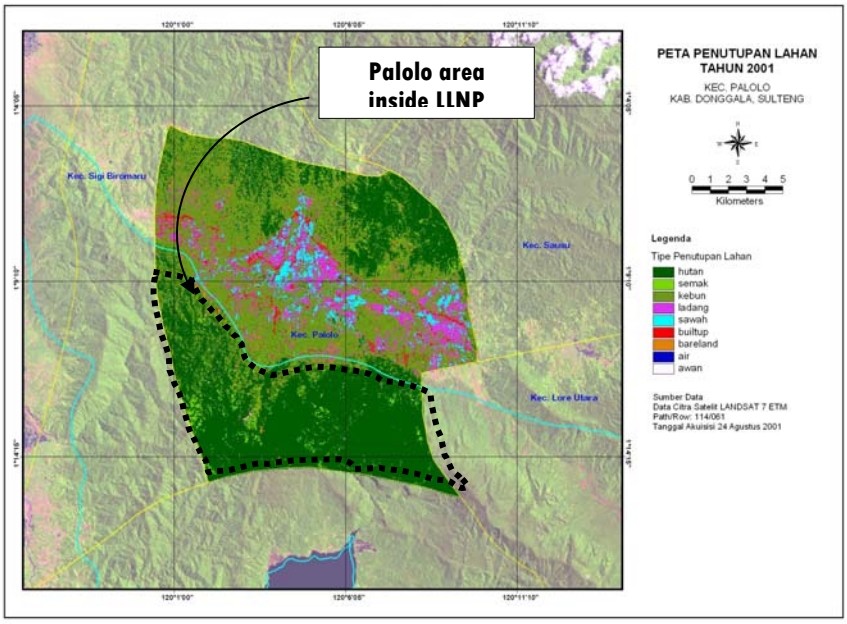


Figure 12. Palolo Land Cover in 2001

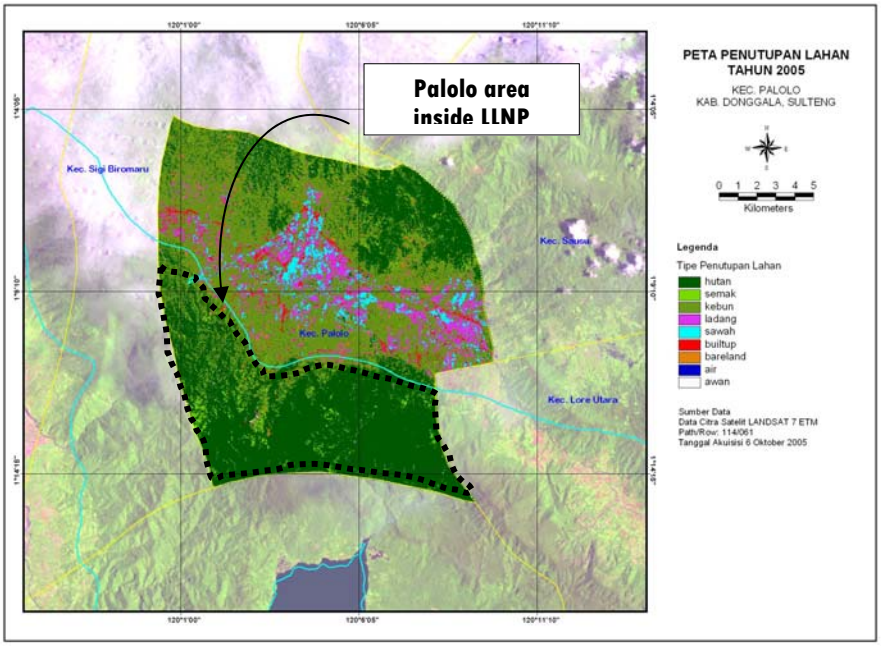


Figure 13. Palolo Land Cover in 2005

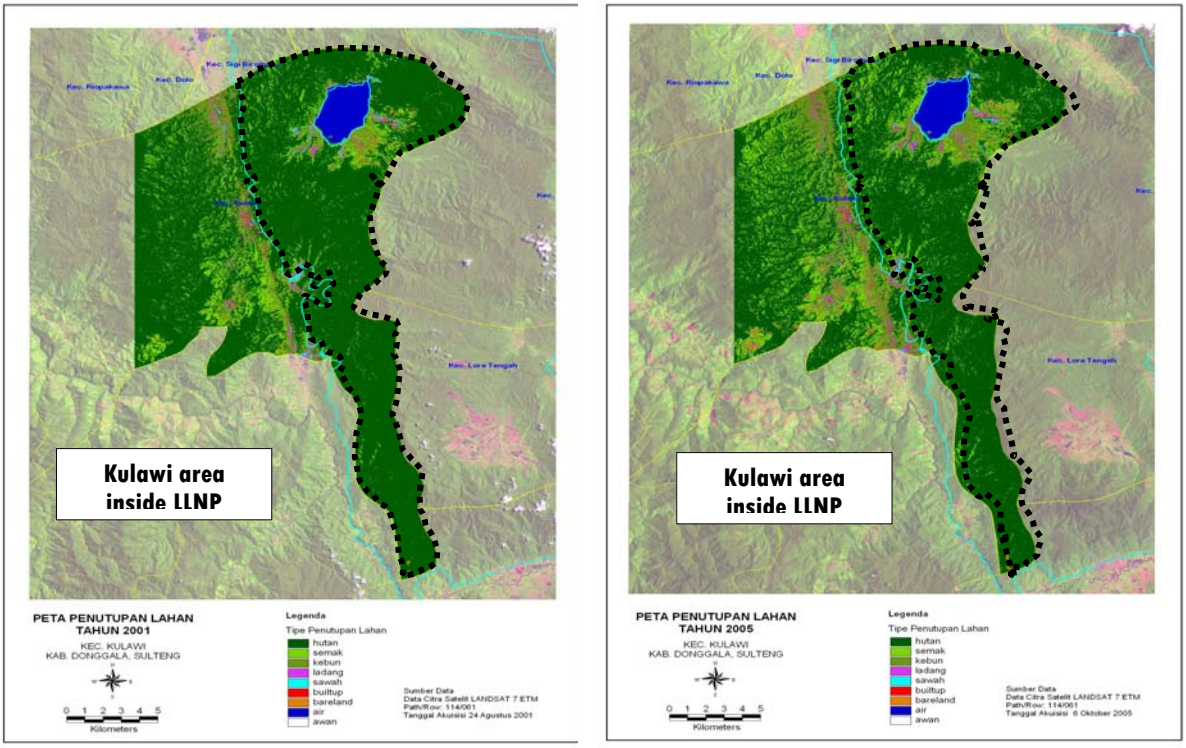


Figure 14. Kulawi Land Cover in 2001 and 2005

Ironically, the road was not constructed based on LLNP border delineation, which is logical, since the Park delineation was not started until 1982 and finished in 1993. Pak Bd who used to work for PT. KS for 20 years, stated that, actually, the road construction just followed the most suitable and easiest soil contour. After the road had been finished and 'appointed' as a borderline of LLNP, the west side of the logging road was conceived as LLNP's territory. Therefore, farmland located on that side became illegal. Forest clearing in that area is an illegal activity.

Table 20. Lore Lindu National Park Designation Process

Status		Year
I	Proposed	1976
II	Statement of Intention to become National Park	1982
III	Status Appointment and Territory Delineation	1993
IV	Status Designation	1997
V	Declaration as National Park	1999

Source: Lore Lindu National Park Management Plan 2002-2027, Vol.1

When reformation movement pervaded Sintuwu, farmers whose lands are located inside LLNP territory reclaimed their properties. According to Pak Mahodin, who is the village head of Sintuwu elected in June 2006, farmers won the negotiation with LLNP, because in December 1998 LLNP administration has allowed farmers to continue their farming activity, but cultivation of steep slope was banned.

Many versions of negotiated border came up in my findings, from 700 meters until 3 km from the logging road to the West side. However, Pak Bn, head of LLNP buffer zone forum for Palolo Sub-District, asserted that negotiation of LLNP's border never occurred, as he explained below:

> *Belum ada negosiasi apa-apa dengan TNLL soal pal batas. Sampai sekarang pal batas TNLL masih di jalan Jepang, belum ada kesepakatan apa-apa dengan TNLL. Memang tuntutan masyarakat adalah pal batas disesuaikan dengan garis terakhir perkebunan masyarakat yang ada di TNLL. Sebab secara historis batas desa Rahmat dan Sintuwu itu ada di puncak gunung sana, kurang lebih 3 km masuk ke areal dari jalan Jepang*. (No negotiation has ever occurred with LLNP regarding the borderline. Up to now, the border is still in jalan Jepang, no agreement has been made with LLNP. It is true that people demand to adjust the border in accord to the farthest line of farm location inside LLNP. Because, actually, the village border of Rahmat and Sintuwu are located far up on the top of that hill, about 3 km inside the Park from jalan Jepang).

Contestation of borderline is a contestation of legality. Legal status ensures the safety of farmer's property from others' claim. However, household security defines 'safety' in its own term. Papa and Mama Uj, for example, described their decision to buy a cacao plot inside LLNP territory as follow:

[Mama Uj]: *(Tanah kami).....ada 1 tempat di gunung masuk areal. Ya, tergantung nasib saja itu, kalau memang pemerintah mau ambil ulang, ya terserah. Itu istilahnya kan pemerintah punya.*
(Our land.....there is one parcel 'Uphill', inside the Area. It depends on the faith, if the Government wants to take it back, it is up to them. It can be said that the land is Theirs [Government])

[Papa Uj]: *Itu kebetulan saya ambil juga karna murah. Itu sebenarnya di sebelah jalan ini kan termasuk hutan lindung sudah..hutan terlarang. Kebetulan di pinggir jalan ada orang mau jual, kalau dikasih murah mau saya. cuma 5 juta...0,5 ha, sudah ada*

coklat kurang-kurang petek. Jadi saya pikir ah, tidak apalah diambil pemerintah, yang penting kan uang saya sudah kembali. Hutan larangan..hutan lindung kan untuk dilindungi...jadi untuk sementara...ndak pa-pa, tokh. Tadinya saya tidak mau ikut campur. Kita ini tidak mau berurusan dengan pemerintah.

(I took that land because it is cheap. Actually, the other side of this road is protected forest…forbidden forest. It just happened that somebody wanted to sell the land on the other side; if it were cheap, I would buy it. It was only Rp 5 millions…..0,5 ha of cacao has already planted, just waiting to be picked. So, I think…ah, it's okay if the Government wants to take it back, as long as my money is paid off. Forbidden forest…protected forest is a forest to be protected, right…so, for temporary purpose…it's okay, right. Initially, I didn't want to take part. We don't want to have anything to do with the Government)

[Mama Uj]: *Walaupun kita pinjam gunung tapi berpikir juga* (Although we borrow 'the Hill' , we also have considerations)

[Papa Uj]: Macam saya ini orang bodoh begini..aih...[long pause]…takut (Like myself … stupid farmer..aih……..afraid)

Possessing a land or cacao plot inside 'the forbidden' forest is, of course, forbidden, which means illegal. But, they do not 'own' the land. They just 'borrow' it from the Government. As long as it is borrowed, and not owning, it is safe. It is safe because whenever the Government takes it back, they will return it. They just take what the crops produce, but they do not grab the land ownership from the Government. In Sintuwu, land borrowing is a common practice to support livelihood. In Bolapapu, Pak Gr, who opened 4 ha forest patch inside LLNP territory, also push forward the reason of household security to justify his land borrowing from the Government. Hence, household security guarantees safety in 'land borrowing'.

Sintuwu and Bolapapu cacao farmers define forestland as property of the Government. MacPherson (1978) characterizes property as ". . . a right in the sense of an enforceable claim to some use or benefit of something" that is acknowledged and supported by society through law, custom, or convention. Hence, legality - defined by (State) law- becomes an issue in property claim. Having such knowledge,

Bolapapu and Sintuwu farmer intentionally avoid property claim, but pushing in 'borrow' as a statement of access.

Peluso (2003) defines access as *the ability to benefit from things*-including material objects, persons, institutions, and symbols, *whether or not they have rights to them*. Ability implies the multiplicity of ways people derive benefits from resources, including, but not limited to, property relations. Peluso believes that by focusing on ability, rather than rights, as in property theory, this formulation of access brings attention to a wider range of social relationships that can constrain or enable people to benefit from resources without focusing on property relations alone.

Access to the forest for taking out economic benefit, as stated by the presence of cacao plantation and diminishing forest, has employed a complex web of power in gender and ethnicity relation. Inherent in forest ecosystem is ecological benefit or ecological security. In Bolapapu and Sintuwu, access to ecological benefit has never been used by the community, but has been utilised to maximum by the State in a statement of conservation status and property claim over forest resources. Thus, access to the forest represents a zero-sum game in withdrawal of economic and ecological benefit, because rice has failed to link both benefits, as cacao market power supersedes rice's subsistence security and forest ecological value. Is there a chance of compromise? Is there a chance to converge the knowledge?

'SUSTAINABLE CACAO PRODUCTION': RICE-CACAO KNOWLEDGE CONVERGENCE

The key question to discover the point of convergence between rice and cacao knowledge is: how to cultivate cacao without destructing forest cover? Initially, realising some Kulawian cacao farmers' dependency to shade trees or locally known as *sombar*, has cultivated the idea of maintaining some forest cover in cacao plantation as a possibility to mediate rice and cacao interests.

Research on sustainable cacao farming shows that the widespread transformation of traditional, complex forest farming systems to sun-grown monocultures of coffee or cacao may adversely affect long-term agricultural productivity, simplify forest environments, increase habitat fragmentation, lead to exotic weed species invasions, and isolate primary forest in protected areas and remnant fragments. In contrast, shade-grown perennial farms provide valuable economic and biodiversity conservation benefits and appear to have been productive for decades (Siebert, 2002; Kessler et al., 2005; Asare, 2006).

In his research site in Moa, South part of Kulawi, Siebert found that farmers in Moa are aware of the agronomic and socioeconomic vulnerability of sun-grown cacao and have begun to modify their cultivation practices. Following a series of droughts and widespread mortality of sun-planted cacao seedlings in the late 1990s, many Moa farmers cultivating full-sun cacao increased the density of *Glericidia sepium* planting and began incorporating bananas in their farms. This was undertaken to increase shade and organic matter levels and thereby reduce soil moisture losses and increase soil water-holding capacity.

However, the idea of shade trees seems unrealistic after Pak GD –the largest cacao plantation owner in Kulawi- successfully spread the argument of unimportant tree cover for mature cacao, then, he and some progressive farmers in Kulawi (Pak Is, Pak Ys, and Pak YF) cut their shade trees. When I came to Sintuwu, I observed that none of mature cacao trees in Bugis plantation has been shaded. Pak Bd asserted that cacao needs dry microclimate to avoid fungus and other diseases caused by over-humid environment. My visits to other parts of Central Sulawesi also found none existence of shade trees is considered better for cacao. Balinese migrant farmers in Central Sulawesi never use shade trees, even, in cacao's early growth. Balinese farmers are known as some of the most advance cacao cultivators besides Bugis farmers. They believe that monoculture system is the best system for cacao planting to prevent pest and disease spread coming from other vegetation.

Pak Ys, the progressive farmer in Bolapapu, once explained that pest and disease in his cacao tree was infested by pest and disease from fruit trees in his plot. Therefore, he is convinced that monoculture is a better system. Research recommendations suggest the contrary. Mono-cropping is both a high-input and a fragile practice with respect to pests and diseases, but also with regard to soils and climatic variability (Siebert, 2003; Simmons et al., 2006). Agroforestry system is seen as the best opportunity for cacao production to be sustainable. While research is focusing on trees in cacao growing systems, opinions differ in various countries on optimal levels of shade and those trees that are compatible or incompatible with cacao.

In my research cases, considering Bugis and Balinese sun grown cacao experience in cacao farming, the use of *sombar* in humid and hilly environments might lead to decreasing productivity. Learning from the empirical facts, decreasing cacao yield would drive farmers to expand their cacao plantation. Forestry Agency of Donggala District Office's data has shown vast cacao plantation ownership and low productivity as a description of farmers' tendency to place their security in land expansion (see Figure 4, Chapter 4). Investment on new plots, by either converting other crops or opening new farmland, is seen as a way to expand the chance to increase yield.

According to Asare (2006), from the perspective of biodiversity conservation, it is more profitable for farmers to employ more intensive management practices on their cacao farms for greater productivity rather than reclaiming abandoned cacao farms, which may be on their way to forest regeneration in heavily degraded landscapes. Therefore, sustainable cacao production cannot be solely defined in preservation of some of forest cover inside cacao plantations.

Ruf and Lançoln (2005) found that the success of cacao upland farmers in Sulawesi is affected by their investment in fertiliser and herbicide. The use of 500 kg fertiliser per hectare in cacao plantation has increased yield to 1,500 kg dry cacao

beans per hectare. Herbicide has also helped farmers greatly in controlling weeds, especially the most difficult one: imperata grass. If cacao farmers concentrate their effort to intensify inputs, instead of expanding their land, they would gain a better chance to increase productivity. Pak Bd admitted the positive effect of intensification as well. He has experimented fertiliser application in his cacao plots, and it has increased his cacao productivity from only 1.000 kg to 1.200 kg per hectare in 2004. Thus, intensification hinders farmers' cacao plots expansion to the forest. According to Pak Bd, a focus to increase productivity is worth more than capital investment in new plots. New cultivation consumes more time, energy and money, not to mention taking longer time to yield.

The use of fertiliser and herbicide has already been a farmers' option in Sintuwu and Bolapapu. The ineffectiveness of fertiliser and herbicide application is the main reason of cacao remained low-productivity. Most farmers do not keep record of the time and volume of fertiliser application. Therefore, they could not anticipate funding availability when fertiliser and herbicide are needed. Consequently, farmers perceive fertiliser and herbicide as costs, not investment, and buying those became the last option among other necessities.

Besides investment in fertiliser and herbicide, intensification for ageing cacao trees (15-20 years old) is done by side grafting. Grafting younger and more productive branch to ageing trees' stem will renew tree's capacity to produce cacao fruit. Asare (2006) stated that in Côte d'Ivoire and Ghana maintaining or increasing production has meant the rehabilitation of ageing cacao farms and the recycling of land in response to the absence of new primary forest areas as a result of extensive deforestation. In Sintuwu, Pak Bd has also applied side grafting in his old trees, and he succeeded to grow new grafted branches on his 20-year-old cacao trees. Although he has not been able to proof its impact yet, but he has seen it successfully done in other village. Therefore, Pak Bd was convinced that cacao intensification is a better solution than expansion.

Crop diversification, as already applied by many farmers, is also another strategy to avoid cacao expansion to the forest. Generally, farmers place more importance on enhancing cacao production but also using the cacao farm to meet their daily household demands and needs. Cameroon and Nigeria but also evident in Ghana and Côte d'Ivoire is to diversify cacao systems using fruit trees (Asare, 2006). By depending to various crops, farmers would not be affected too much by cacao price fluctuation. Coffee, clove, vanilla and candlenut have been providing alternatives for Kulawian's source of income, because they have applied agroforestry system in their land. This fact may explain the smaller number of converted forest patches in Kulawi compared to Palolo Sub-District.

Ruf and Lançoln (2005) stated that crop adoption by farmers largely depends on its comparative advantage. Asare (2006) investigation on farmers' perceptions of trees associated with cacao found that farmers are concerned about exploiting all the necessary components in the system and their interactions to maximize income and reduce risks. Thus, the more crops farmers plant, the more they would have option of advantages, which reduce the risks they have to take.

Vaious options to divert farmers' motives from cacao expansion to the forest may not be able to completely stop or even significantly reduce forest destruction or save rice fields existence. Nonetheless, the knowledge about these options would offer points of convergence between rice and cacao knowledge. The enactment of this knowledge, however, depends on the decision-making process at the household level, and community level, which should occur across gender and ethnicity barriers. Hence, knowledge convergence requires power-sharing, not power domination over others. In this context, events and initiatives to abridge differences, e.g. cross-gender and cross-ethnic farmers group creation, are places where compromises and new knowledge emergence would be given a space.

CHAPTER 8

CONCLUSIONS AND REFLECTIONS

CONCLUSIONS

In a homogenous community with one dominant ethnic group, such as Bolapapu, knowledge about cacao and rice production occupies different domains based on gender. Gender norms are rooted in the tradition (Ind*. Adat),* religion, and state's intervention in social organization. These gender norms and rules regulate the inheritance system, which defines men's access to cacao farm and women's access to rice land ownership. Gender norm also enters cacao and rice social relations of production in a form of division of labour, where rice farming was dominated by women and cacao by men.

In a heterogeneous community that consists of different ethnicities, such as Sintuwu, knowledge about cacao was brought and dominated by 'the migrants' or Bugis ethnic group, while native settlers or the Kaili developed knowledge about rice farming, which has been practiced since they settled in Sintuwu.

Crop commercialisation attributes market value to cacao knowledge, which place cacao knowledge acquisition and dissemination in an exclusive network as situated by 'horizontal intervention'. Social economic position, gender and ethnicity determine farmer's enrolment in the network. Conjugal and family relations, similar farmer character in knowledge acquisition and application (conservative or progressive farmer) are social ties where cacao knowledge diffusion takes place. However, it doesn't always occur across gender and across ethnic groups where rice knowledge is also present. Therefore, in the Bolapapu community, household's ownership of cacao and rice land does not guarantee intra-household knowledge diffusion between gender. In Sintuwu, Kaili's ownership of cacao and rice farming also does not automatically ensure cacao knowledge transfer from Bugis labour to Kaili landowner.

In contrast to cacao, rice knowledge is inclusively acquired and disseminated. However, due to less market value, rice knowledge possession and its farming practice does not attract cacao farmers. Unequal access to market valued knowledge has widened the gap between cacao and rice knowledge holders, and set cacao domination in village economy.

In Bolapapu, cacao domination has not yet reduced rice's high social value, which defended rice existence in the village agroecosystem. Reciprocity is still widely practiced across Bolapapu's socio-economic and cultural life. In Sintuwu, the form of resistance to the domination of cacao is the persistence of rice field existence, not because of social or cultural value, but due to commoditisation. Rice lesser market value does not reduce rice important position as the main livelihood of Kaili.

Struggle to maintain rice existence in Bolapapu and Sintuwu, however, must comply with a decision that favours occupation of rice and forestland for cacao. Household socio-economic security that is defined by cacao market value justifies rice and forestland conversion for cacao plantation, which evidenced a divergent knowledge in both communities.

The implication of this unmediated cacao knowledge domination is construction of access; access to the forest, mainly to withdraw its economic benefit by eliminating its ecological benefit. Then, access to cacao social relations of production to acquire cacao knowledge; lastly, access to defend sustainable benefit from cacao by expansion. 'Socio-economic security' is defined by access.

Cacao commercialisation has attributed lesser value to rice knowledge, which relegates the position of rice knowledge holder in decision-making process. At the household level, women –as rice knowledge holder in Bolapapu- do not hold a control over cacao production. At the community level, Kaili –as rice knowledge holder in Sintuwu- also do not have a strong bargaining position in defending rice dependency to the forest. The result is deforestation and rice conversion as

evidenced by land use composition in the overall areas of Kulawi and Palolo, where the village of Bolapapu and Sintuwu are located respectively.

The convergence of rice and cacao knowledge, however, should be made possible across gender and ethnicity, not only for the forest conservation as the insurance of ecological security, but also for community's socio-economic security. The convergence might be found in a range of alternative ways to conduct cacao sustainable production, i.e. from agroforestry system to intensification.

REFLECTION

Choosing the word 'uncover', initially, was meant to express a hope that this research would be able to reveal the importance of women's knowledge to be taken into account in the forest margin sustainable management, especially their agroecological knowledge pertaining rice and forest connection. Prior to the field work, I realised that a critical question should be addressed firstly to my research paradigm: 'what do I mean by uncover? Who is doing the uncovering?'

Then, I realised that 'uncover' should not be translated into my own attempt to discover the 'truth', but the truth should be found and negotiated with the research subject. I went to the field with a shifting expectation from my ability to reveal the importance of women's knowledge to my ability together with them to unveil their own important knowledge.

I came back from the field bringing an understanding that most of them have known all along, both men and women, that without forest they will loose their rice field. But, it is taken naturally as a faith or as a consequence of choosing cacao as the highest importance than other ways of livelihood. So, it is nothing to unveil! We cannot uncover it, because it is not covered, but intentionally not seen. It is not covered by ignorance, but covered by a definition of 'economic security'. Is this 'a false consciousness'?

The women's movement in Toro, regardless of its lack of elitism, is actually a statement to 'uncover the concealed link'. 'Women have to take part in forest management, since they possess the *adat* knowledge on how to carry-out a sustainable management'. This is what the movements want to express. This is a claim to access and hold both ecological and socio-economic security. But, this movement is still stepping on a long journey that will test the endurance of its mission. I truly hope that Kulawi women's struggle endures every obstacle that may put off their spirit. Keep your spirit alive, sisters!

We tend to see what we want to see. Sometimes because we know that the unseen is bad or ugly or because we don't know that the unseen should be seen. During those months in the field I might have failed to discover with them what should be seen, as I sensed it in my participation in men's and women's meetings, and day to day individual interaction. But, then, I realised that we fight a hard battle in finding a compromise in market power, and 'security' reason, which has been going on since capitalism rules the economic lifeworld. I am in the same world with them; so, will I accept if someone tells me that my way of livelihood is destructive, without addressing the powerful system that may lead my decision to choose such way?

This research is not an attempt to uncover the unseen, but to uncover the power that has situated us in making a decision of not seeing what we should see. But, I do not stop there. My research also travels beyond seeing. This is also a journey to search the point of compromise between two powers that should be used to enrich and sustain our live for generations.

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"I herewith affirm that I have written the thesis 'UNCOVERING THE CONCEALED LINK: GENDER & ETHNICITY-DIVIDED LOCAL KNOWLEDGE IN THE AGRO-ECOSYSTEM OF A FOREST MARGIN, A Case Study of Kulawi and Palolo Local Knowledge in Central Sulawesi, Indonesia' independently without the assistance of third persons, using only such sources which have been named",

Bogor, 09th May, 2007

Laksmi Adriani Savitri