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Changing gender divisions of labor in a Philippine upland village

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In recent years, much has been written and said about rural women's participation in environmental movements, policy and research. Some analytical streams have posited women's central position in environmental conservation, while others have been more skeptical. However, at the heart of the relationship between women and the environment lies the gender division of labor.

The Women, Environment and Development (WED) stream argues that upland and rural women are more closely associated with the environment by virtue of the gender division of labor which deploy them to gather fuel, food and fodder, as well as grow subsistence crops for survival whereas men are largely engaged in cash crop production (Dankelman and Davidson, 1988; Rodda, 1991; Sontheimer, 1991). The ecofeminist argument, meanwhile, emphasizes the spiritual and ideological content of women's relationship with the environment, pointing out that women had been the environment's primordial caretakers until the patriarchal inroads of capitalism obliterated this (Shiva, 1989; Shiva and Mies, 1993).

In this paper, I depart from the foregoing perspectives and instead argue that the gender division of labor in resource use and management is influenced by historical factors, such as changing ecological, economic, political and social conditions in the form of soil erosion, increasing commoditization and social differentiation; by power embedded in hierarchical values ascribed to gendered labor; and by people's social agency that has re-worked such values over time. In short, the gender division of labor in resource use is diverse, contested and dynamic.

Gendered resource use refers to the way resource use is *organized* -- that is, women and men separately enact concrete divisions of labor, and produce distinct gender divisions of labor in various activities. In my view, the gender division of labor is organized according to (a) how work is considered female or male (constructed gender identity); and, (b) whether female work is more important than male work or vice-versa (constructed social valuation/hierarchy). Thus the gender division of labor is not a result of biologically-given or 'natural' roles of women and men, but that they are socially constructed and derived (Feldman, 1992). For example, in earlier writing, Maria Mies (1986) has pointed out that the origins of the gender division of labor lay in the different primordial ways in which women and men worked to transform nature: women, through their bodies via childbirth and reproduction, and men, through the use of tools. Women's work has always been interpreted as a purely physiological, natural function -- whereas men's work was considered social, that is, producing exchange values (Mies, 1986: 51-52). Mies' insights have since then been criticized for their insistent reliance on the mode of production as that which determines gender differentiation. I have however raised her insights here to underscore the interpretative and evaluative element in discourse on female and male work, and how power is embedded in such a discourse.

The gender division of labor also constitutes a hierarchy of valuation ascribed to female and male work in harnessing the resources of the environment. Such a hierarchy is used to reinforce or weaken the various positions of women and men (Mohanty, 1988: 76; van Halsema, 1991: 128-129). One way in which power comes about between women and men is when gender divisions of labor are justified and explained by positing biological and ‘natural’ hierarchical differences between male and female work. These differences are, however, socially and historically determined, context-specific, and are therefore changeable and vary among different groups.

I also wish to emphasize that hierarchical meanings attached to female and male work are not pre-given; instead, they are produced, reproduced or altered by the repeated actions of social actors over time. Meaning does not inhere in symbols, but must be invested in and interpreted by acting social actors or established through *praxis* (Moore, 1994a: 74). Actors construct meanings which both inform and are shaped by everyday practice (Bourdieu 1977 in Hart, 1995: 57), a form of enabling power on the part of social actors. Their practices, however, are not performed entirely out of free will and cannot escape established rules and norms, nor cannot float free from prevailing circumstances (Connell, 1987: 95; Giddens, 1984). Thus, the gender divisions of labor are reproduced or transformed by the practices actually performed by people, who, in turn, are constrained and influenced by prevailing constructions of gender.

Several factors influence people as they transform or reinforce the gender division of labor in a particular social setting. For example, Mackintosh (1981) explained that the gender division of labor existing in both agricultural and urban manufacturing settings has largely fueled the engines of capitalism, where poor women provide a source of cheap remunerated labor as well as unpaid domestic services. Changing land tenure regimes, type of cultivation, technology, employment and external intervention in productive processes have therefore deployed women and men to undertake new and different tasks in response to capitalist accumulation (Deere, 1982: 796-797; 1995: 55; Boserup, 1970). Emerging class structures have also relegated poorer women to undertake particular activities, while wealthier women to others (Deere, 1982). In this paper, I will attempt to show how the gender division of labor has altered due to environmental change, increasing linkages with the wider economy and changing gender values through a case study below¹. Thus, the natural environment will be the locus of social relationships, where people transform nature and simultaneously, re-define themselves – specifically through their divisions of labor.

The Kalanguya

The Kalanguya live in the upland portions of the province of Nueva Vizcaya and other adjacent provinces. The Kalanguya live in settlements within the southern Cordillera² region (Afable, 1989) and they locate their place of origin in Tinec, a village in Ifugao province from where they had migrated southward to contiguous

¹ Fieldwork for this study was conducted in 1996-1997

²The Cordillera is a mountain range located in the northernmost region of the island of Luzon, one of three major islands in the Philippines and I will continuously refer to it as the region of origin of the Kalanguya and most other ethnic groups of northern Luzon.

portions of the provinces of Benguet, Nueva Vizcaya, Pangasinan and the hilly fringes of Nueva Ecija (see Figure 1). Genealogically, they are closest to the Ibaloi and Kankana-ey who are known as the people living in most of Benguet Province (Lewis, 1992) who call them “I-kadasan,” or the people living in the kalasan, or oak forest. They are also sometimes referred to as “Ikalahan,” a name made more popular in the last 20 years by an American missionary who set up a mission school in Imugan, a mountain village in Santa Fe, Nueva Vizcaya. The Kalanguya, however, were a largely anonymous group to ethnologists, census surveyors and anthropologists who made the first inventories and studies of Filipino ethnic groups during the Spanish colonial period (1521-1898) and the American colonial period (1898-1946)³ in the Philippines (cf Resurreccion, 1999). However, the Kalanguya generally identify themselves as “Igorot⁴,” a generic term referring largely to the upland peoples occupying the Cordillera region who were known to have resisted Spanish rule, thereby preserving their cultural autonomy, marking their difference from lowland, hispanized Filipinos. Today, most popular literature refers to the Igorots as the “indigenous cultural communities” of northern Luzon.

The Kalanguya have been chiefly swidden and dry rice agriculturists, hunters and forest gatherers, fishers, and livestock raisers and today, engage in a different yet still a diverse set of resource use activities. Continuous commercial logging in Nueva Vizcaya until 1990 coupled with conversion of forest to agriculture weakened the Kalanguyas’ sweet potato harvests, which among other things, compelled many of them to shift to paddy rice agriculture and vegetable gardening. The government’s strict enforcement of the ban on swidden farming in later years also drove them to practice more sedentary forms of agriculture.

Today, Kalanguya have multiple sources of livelihood: paddy rice agriculture, livestock raising, commercial vegetable gardening, soft broom-making for which they extract rattan from the forest, seasonal hunting of migratory birds, and sometimes forest gathering of wild orchids for sale. Brooms are sold to merchants who reside in the village and who sell them to wholesale buyers from Aritao and Santa Fe. These brooms are later sold in Manila and Baguio City in Benguet Province. A number of Kalanguya also engage in commercial vegetable farming, selling their produce to wholesale merchants in the municipality of Bambang, the vegetable trade center of northeastern Luzon.

I have employed an ethnographic and historical approach to this study as a means to explore the ideas, conditions and relations that have shaped the gender divisions of labor have changed and why. By studying social interactions historically, one is able to explore how gender relations are shaped by the complex, contradictory and uneven processes of social, economic and environmental change (Moore, 1988: 79). Leach (1994: 37-38) details these concerns by pointing out that through the historical approach, it is possible to see which ideas and social relations structure gendered resource use persist over time -- and when and why the terms of resource access and control change.

³ The Treaty of Paris was signed in December 10, 1898, through which Spain ceded the Philippines to the United States.

⁴Igorot from the word, i-gulot meaning “from the hills”

In order to investigate the changes in people's resource use practices and the environment in the site under study, I drew heavily from women's and men's oral histories and archival sources.

Gender and resource use in Canabuan: the pre-war years, 1900-1941

Resource use and management strategies before World War II conveys the heavy reliance of the Kalanguya on their forests. Virtually all their subsistence needs were met by harnessing forest resources.

Childhood recollections of Fermin Balasuit, for example, describes a young boy's socialization with his environment, and his relatives' dependence on available resources at the time:

During mid-afternoons, my mother would take me to the river to fish. Her paraphernalia were simple: a meter-long reed stalk, a tray (tallaka) that served as a container and a can full of earthworms. She would insert a thread-like fiber lengthwise into three or four earthworms and strap these at one end of the stalk. She dipped the stalk into the crystal clear water where fishes are playing about. The river is always a special place to me because through its crystal clear water, I could see fishes chasing one another. I could see when a fish bit into the bait my mother had prepared and which she pulled abruptly so that her catch landed on the tallaka she held ready on her left hand. Crabs were abundant too such that you could catch them with your bare hands.

Towards the end of the akik (bird-hunting) season, the planting season of inuma (swiddening) began. Families and neighbors helped one another through a system of bataris (exchange labor with meat distribution) to work on an inuma from the period of clearing, planting and harvesting. Towards the end of the summer, planting of upland rice begins in great earnest. Every Kalanguya family tries to accumulate favors by going to as many bataris as they could for they will need the help of those they had helped during planting.

While still young and not a match to the capabilities of an adult, I loved to join others in the planting of upland rice. The role I played well was the ahad -- creating dents on the ground by means of a wooden pole with a dull point. Rice grains are dropped into these dents usually by a woman who also covered these grain-filled dents with earth. I loved the happy atmosphere of this occasion because it was one of the rare times that adults and children, men and women, were involved in the work. The planting season in my Uncle Codieman's and Auntie Godia's swidden was something I did not miss. For me, it was a combination of work and picnic. My uncle always saw to it that everybody was fed and each family who helped out brought home some meat. He also cooked the meat with balagnet (wild palm shoots gathered in the forest) which we rarely did at home.

Bulyunan is one elder who was particularly skilled at catching eels from the river. Hamban, his assistant, was passing through our house one day carrying a jute sack half full with eels, their sticky substance dripping down his shoulder. Mother met him in the yard and pleaded to barter one eel with rice. Hamban grinned, his lips red from chewing betel nut, and said: “*Laway bagah unpupud!*” (no, rice is no good). (Balasuit, u.d., 1, 4-6).

People’s oral histories in the village and the unpublished narratives of Augusto Balasuit describe a ‘thick rainforest’ in these parts, which Kalanguya migrants up to the 1960s referred to as ‘hovering darkness’ and dense vegetation in Canabuan. With the forest as a vital resource for their subsistence, the pre-war residents of Canabuan observed a regular and elaborate cycle in the use of their forest resources.

February was the end of the bird-hunting season (akik) in Canabuan yet signalled the beginning of the planting season, inuma, or the season when the Kalanguya began to clear land for their swiddens. Swidden agriculture (inum-an) was at the core of Kalanguya livelihood in pre-war Canabuan. The Kalanguya practised a system of dry-field cultivation that raised about four varieties of sweet potatoes as their major cultivar and alternatively, planted rainfed upland rice on a separate field. Sweet potatoes, the staple of both people and domestic hogs, dominated the swiddens and were consumed in such great quantity as to totally color the memories people had of pre-war existence in Canabuan. Subsidiary swidden crops, such as peanuts, corn, the brushy kardis (Cajanus cajun), taro (Colocasia spp.), cassava (Manihot esculenta) and ginger (Zingiber officinale) provided seasonal supplements, but were never in abundant quantities in Kalanguya households. The Kalanguya diet consisted of sweet potatoes as staple, its boiled vines, occasional meat from hunted game or fish from the river, salt and hot chili.

Swiddens were always irregularly-shaped, extensive clearings made on gentle slopes which Kalanguya women made sure were not prone to landslides. Areas with clay-rich soils, usually black in color (natuling)⁵, were the most preferred swidden sites since these soils held moisture long enough for a year-round cycle, and produced sweet potatoes even during the dry spell of November to April. These areas were usually near the forest since thick biomass would have accumulated from decaying foliage, organic matter, and thick litter which formed the fertile topsoil that produced the most robust tubers, especially in the wet, soggy season from May to October of the second planting. Men often looked for spots where two specific tree varieties stood (alumnit and balete), since these indicated a good amount of soil fertility. Ease of clearing was another criteria for site selection and secondary forests were preferred since trees were smaller and had thinner vegetative density than virgin forests. Men, who were responsible for clearing, usually preferred more easily cleared areas while the women, on the other hand, wanted more productive sites. However, the men’s decision usually prevailed.

At the heart of the Kalanguya swidden was the sweet potato patch, usually unhampered by any other crop so that its vines could crawl in mat-like abundance

⁵Other soil types were: balangaba (red soil) and ahi-ahin (sandy soil)

forming a canopy that guarded the soil from severe erosion. All other crops were relegated to the fringes, together with a few fruit trees like banana, jackfruit, avocado and citrus.

In pre-war Canabuan, the Kalanguya observed an annual agricultural cycle which provided them with a steady supply of their staples, sweet potatoes and rice in alternate manner. In the summer month of March, men cleared extensive portions of the forested slopes for swidden farming by cutting and burning woody vegetation prior to planting. Shrubs and vines were first cut to allow for easier manageability when the big trees were to be cut. Small tree trunks and branches were carefully selected and put aside to be used later for fences. After the clearing, a waiting period of at least 10 days was allowed for the matting to dry before the clearing is put to fire. Barker (1984: 6). In a contemporary on-site agronomy study in Imugan, Santa Fe, a Kalanguya settlement, Barker further explains that burning felled fallow or forest accomplishes three things: vegetation is cleared to allow planting, ashes provide fertilizer and, a good seed bed can be prepared (*ibid*).

In the months following the extensive clearing and burning, women cleared remaining underbrush and alternately weeded adjacent fields which had already been cultivated months before. Just before planting began, men had built wooden fences (alad) around the cleared portions in order to protect swiddens from roaming wild animals. They fenced the swiddens with wooden shafts taken from young tree trunks and thick branches of old trees which they later left behind when it was time to leave the land to fallow. Alingay, the village elder, said there were far too many trees then to worry much over their eventual depletion. It usually took 5 to 6 days for the men to construct the alad.

Women began planting sweet potatoes as the first rains of May ushered in the wet season. In planting sweet potatoes, women buried old sweet potato vines and cuttings and followed this general pattern: first, (vine) cuttings were gathered 2 to 3 days before planting and allowed to partially dry. Such root conditioning was necessary to prevent shock upon planting if the soil was not saturated. Under very moist conditions, the planting could proceed the same day as cutting and collection. Cuttings were selected from healthy plants judged by color and thickness of the youngest leaves. Feeling the leaves with the thumb and forefinger, the women judged whether the cutting was mature and smooth. In Imugan, Barker (1984: 6-7) observed that cutting length averages about 30cm. with (each) cutting having about 15 to 20 leaves. About two cuttings were placed in a pit about 5 cm. wide, 15 cm. long and 15 cm deep, thereafter covering the pit with soil, allowing the leaves of the cuttings exposed.

They planted sweet potatoes as well as intercropped these with other cultivars in a staggered way from May to July. Usually those with wider fields (more than .5 hectares) cultivated monovarietal patches of cultivars which have proven more manageable than intercropped ones. Elderly women said they generally benefitted from their system of staggered planting since the demand for labor was distributed in the sense that the timing of the weeding and harvesting was spread out, and, staggered planting prevented labor bottlenecks which allowed for a steady supply of mature tubers for their households. Moreover, plants at various stages of maturity provided

some insurance against disease, pests, droughts or damage from slides and wild pigs. Once sweet potatoes were planted, other crops were added within and around the fringes of the swidden. Intercropping was something women generally decided on, according to the taste and texture preferences in food of household members.

At about the same time, in an adjacent, usually smaller field, women also planted upland rice with the help of the male members of their households. Women dropped rice grains in holes punctured on the ground by the men which they later covered. The grains took about four months to mature. In September, they harvested the rice by cutting and bundling rice stalks heavy with grain to be stored at home above the hearth to dry. They later pounded rice when the need arose. They ate rice only when they were short in sweet potato supply, which happened quite rarely. Moreover, pounding rice intruded into the women's daily visits to the swiddens, which they merely squeezed into their busy routine. Rice-pounding, an integral step in food preparation, was part of women's responsibilities as food providers. Due to the tediousness in its preparation, rice was therefore a 'fallback' staple for most households in pre-war Canabuan.

Immediately after the rice harvest, the second planting of sweet potatoes for that year began on the same dry ricefield, by then already cleared of its former crop⁶. Thus by November and December, or about the time the second patch of sweet potatoes would have matured, women were simultaneously cultivating at least two adjacent sweet potato fields, since by December, the harvest of the second crop of sweet potatoes would have been ripe for harvesting.

Women weeded their swiddens in between clearing, planting and harvesting; these weeding intervals were referred to as habal. During the rainy months, weeds became abundant, among them the most disliked cogon grass (imperata cylindrica), a grass they said was extremely difficult to uproot, also a sign of a severe loss of soil fertility. The less tenacious weeds were runo (Miscanthus) and punawel (Eupatorium spp). Women recall that weeding consumed the biggest portion of their labor during the entire agricultural cycle and time spent for it increased as soil fertility diminished, which gradually took place after successive croppings. The women often referred to the appearance and ubiquitousness of weeds and grass as the sign that "the forest was taking over" their swiddens.

Unlike harvesting mature grain that normally grew in uniform fashion such as rice, harvesting sweet potatoes was done in more complicated and gradual paces. Women used a thin iron rod (dupdop) to loosen the soil and to locate the ripening tubers. They began to harvest sweet potatoes at the precise point where they had first planted the first cuttings. Upon seeing bulges and cracks on the soil, the women plucked out one or several of the largest tubers. They worked their way up until they reached the last rows of planted sweet potatoes usually lining the contours of the swidden. This process was altogether considered one full harvest and each harvest interval may take

⁶ The harvest of rice was not done in such a uniform and sweeping pace as the present monocropped green revolution types today; however, rice harvest was neither done in such protracted and staggered pace as in sweet potato harvests otherwise the rice stalks and their grains would inevitably rot if not harvested within a reasonably short time

up to about three to four months, depending on the size of the swidden and the rate of maturation of each sweet potato variety. The harvest of the first tubers was usually in October. These tubers were still fibrous and of inferior quality while those harvested in the second harvest interval, usually in January-February were plump and chewy. The third harvest interval was done in May which then led to a new planting beginning September, since as sweet potato vines aged, the volume of sweet potatoes harvests became smaller, and their quality, poorer.

Harvesting sweet potatoes was therefore a matter of calculated timing: leaving too many behind may result in rotting due to waterlogging, or, in the dry season, worms could attack the tubers leaving them discolored, bitter and unpalatable. On the other hand, they also had to guard against gathering too many tubers as these spoiled easily at home when stored. Kalanguya women thus had to carefully calculate their cropping management decisions, dutifully providing a steady food supply for their households, yet keeping in mind the limited productive capacities of the soil and the care of multiple cultivars they had planted.

The Kalanguya believed that only the women had the skill for managing swiddens and harvesting sweet potatoes in such manner that the supply for the staple never ran out, as the younger tubers were left undug for another time and the remaining vines remained undamaged and thus continually productive. As Lewis observed of similarly situated Kalanguya, Ibaloi and Kankana-ey women in pre-war Buguias in Benguet Province, northwest of Canabuan:

the multiple plantings of differentially maturing sweet-potato varieties coupled with (partial) seasonal rotation with other crops and complicated with the differing physical attributes of each field, required a fine-tuned seasonal labor schedule. [Swidden] work was also highly skilled; even the harvest was demanding, since individual tubers had to be removed at their most palatable stage without damaging the vines. Only carefully tended plants could produce through an entire year (Lewis, 1992: 25).

A Kalanguya woman might have more than one swidden, and these were usually adjacent to each other. Thus a full workday would consist of alternately weeding and harvesting sweet potatoes or any of the other cultivars or fruits in season from any of these fields. They lugged their daily harvests home in a kayabang (woven rattan basket with an elastic sling for the forehead and carried on a woman's back) which could carry the quantity of food they required for a day. The sizes of kayabang differed for every woman as this depended largely on the number of household members and hogs to be fed. During the dry season, women also sun-dried surplus amounts of sweet potatoes which they ground into a flour with which to make cakes and bread (bakol) to tide them over the lean season just before the rains come in May.

After a full sweet potato cropping cycle, sweet potato vines would have already undergone four harvests, thus Kalanguya women began to hoe the soil using a long wooden sharp-edged rod (hanggap) that the women themselves had made, to surface the nutrients of the soil, to prepare it for the next planting.

Kalanguya women always guarded against soil erosion. They employed technologies passed on to them by their mothers and decided which of these technologies best suited the fields they were cultivating. These decisions mainly had to do with how steep the slopes were⁷.

Gen-gen combined the methods of soil terracing and composting. When the sweet potato vines are already old or the yields of the tubers begin to decline (usually after 6 to 8 months after planting), women separated those stems that were good enough to be replanted and stored these cuttings under the shade for at least 3 days before planting, while the rest of the old vines are buried, including other leaves and weeds, in a contour trench dug across the length of the swidden. The result is a series of contoured humps that look like mini-terraces and filled with composting materials which added fertility to the soil while preventing erosion (Dolinen, 1995: 4).

Day-og is done by digging a series of holes in the ground about 8 or 9 inches deep along canals built earlier and filling these holes with weeds and leaves from trees. The excavations were next covered with soil and on which women planted crops. Each day-og section was about 3 or 4 square meters and each separated by a canal. Women planted sweet potatoes or other cultivars a few days after the preparation of day-og. The result was a fertile and productive garden where the canals provided good drainage (ibid).

Balkah which means “belt” in Kalanguya, was a form of vegetative terracing using what was commonly known as tiger grass (*Thysanolaena maxima*), later used as broom straw, which were planted following the slope’s contour. The steeper the slope, the closer the balkah to each other. After 4 to 5 years of doing this, a semi-terrace structure appeared, thus reducing the sliding nature of the slope to prevent erosion (ibid).

Kalanguya women decided which soil conservation technology was best adaptable to the slope conditions of their swiddens. Sasdiay used to apply gen-gen on swiddens laid out on flatter areas while she applied day-og to those on steeper ones. The women usually worked their swiddens for two years and thereafter lay these lands to fallow; and once fallowed, these lands are referred to as kinaba. This means each swidden has undergone four sweet potato croppings and two croppings of upland rice. Another site -- carefully chosen by their husbands -- would have to be cleared for the new two-year cycle. The number of fallow years of swiddens in pre-war Canabuan is difficult to determine since women simply moved on to cultivate a new site without ever returning to a kinaba, as there was still ample land to clear in those days. None of the women interviewed ever recall having returned to one during this period. However, the kinaba was always regarded by the community as land privately owned by its first cultivator. To re-cultivate it, one must secure permission from its owner, something often readily granted.

⁷ A study on the on-site cost of soil erosion in Imugan, Santa Fe, Nueva Vizcaya (a Kalanguya settlement) has shown that the rate of soil loss was only 1.76 cm/ha per year in plots where a traditional erosion control technique (gen-gen) was applied, compared with a rate of soil loss of 2.5 cm/ha. per year where no such technique was applied (Lasmarias, 1989). Barker (1984) has also cited why Kalanguya cropping techniques apparently keep soil losses to a minimum: (a) timing of production events; (b) canopy maintenance; (c) gen-gen; (d) staggered planting and harvesting; (e) intercropping; (f) day-og.

While women were busy tending to their swiddens daily, their husbands remained at home taking care of the children, making a few brooms or baskets, or occasionally joined hunting parties in the forest. Husbands remained home to free their wives from the task of childcare in order that they tend to their swiddens and dry fields the entire day. Depending on the distance from their homes, some women visited their swiddens as much as thrice daily. Older children, girls and boys, in their adolescent years if they were not yet married, also helped their mothers weed the swiddens and sometimes harvested sweet potatoes. Mothers also brought babies to the swiddens to nurse them.

Upon returning home, the women still cooked food for the family and their domesticated hogs⁸. Older women interviewed said that they needed to visit their swiddens daily since their hogs needed to be fed huge amounts and that their kayabang could only carry enough food for a day's supply. The only time women did not go to the swiddens was when a pedit (prestige feast) was held in the village and the feasting stretched for as long as five days. The Kalanguya believed that their ancestors' spirits forbade them to work during pedit.

The Kalanguya considered the forest a male enclave since it was men who hunted through its fastnesses, using spears (pahol) and dogs to hunt wild game while women were confined to the forest periphery, cultivating their swiddens. The dogs chased the wild animal and once cornered, the men attacked with spears. They also dug deep holes and covered these with grass which trapped a scampering wild boar. They hunted wild deer, boar and fowls, brought their catch home and distributed these among immediate kin and neighbors to form part of their protein diet. When the meat was consumed, men took off to hunt again. Hunting parties consisted of 3 to 4 men who would stay several days in the forest. While the men hunted, women and elders took turns taking care of children. It was also possible that the women took them to the swidden site.

Rice (1974: 41) has pointed out that one of the words defining Kalanguya masculinity is magduweng which literally means one who hunts with dogs and spear. The Kalanguya knew who were the great hunters among their ancestors within a clan. Aside from hunting wild boar and deer, the men also trapped birds and wild fowls. Akik is the traditional way of trapping migratory birds passing through the Caraballo mountains in the cold months of October to January, just before the swidden clearing season. Men used torches to attract the birds which were easily caught by net or hand once they approached the light.

A variety of fish (biya, dalag, udingan), river crabs and edible frogs (batog) from the river and streams, elders recall, were plentiful. Women caught fish out of the river with thread, rod and hook (bantak) which they left submerged overnight, returning to collect the catch the next day. Together with boiled sweet potatoes, fish and sometimes game from the forest would make up their daily diet. Women also tended small backyard gardens where they grew vegetables like squash, string beans and

⁸ Food for the hogs usually consisted of a swill of sweet potato peelings, sweet potatoes rejects and taro boiled in a cauldron daily and fed to them

kardis. In their hunting sprees, men gathered honey in the forest, heart of rattan (ubod) plants and balagnet, a coconut-like fruit which was often grilled.

Rattan grew wild in the forest of Canabuan. Kalanguya men gathered the creeper as raw material for the baskets they made for different purposes: gi-yag for winnowing and ling-gaya, a flat container for fruits and vegetables. From the rattan the men gathered, women made their own baskets (kayabang) which they needed to haul root crops home through the mountains.

Alingay, Dumalangay and Hibgan, elders of Canabuan, recall that during the American period, only men from a few households engaged in marketing local handicrafts such as brooms and backpacks made of rattan and tiger grass straw which a few skilled men made. These men carted such items to Aritao or to other, more distant, places. Alingay pointed out that those who sold handicrafts were regarded as the poorest (nabitag) in the community since they cultivated only few sweet potatoes, had few or no livestock at all, and resorted to buying rice from outside. They purchased rice with the cash earned from their handicraft sales. Hibgan remembers that the men who brought products to Aritao hauled these items on foot as there was yet no road. They travelled for as long as half a day. They would leave Aritao the next day after having spent the night with an Ilocano acquaintance in town. On other occasions, the men, Hibgan remembers, worked in road construction projects under American supervision. Hibgan himself was sometimes employed to work in the construction of Balete Pass for the entire stretch of a month. He was paid 40 centavos a day and given meals consisting of rice, dried fish or bagoong (shrimp paste). The women, on the other hand, very rarely went to town as they were busy tending to the fields.

The men also gathered fuelwood; they chose and preferred dry deadwood (kiyaw) as these burn easily and evenly in the hearth. If unavailable, they brought fresh pieces of wood from trees which women cut into shorter bars and stored them above the hearth to dry from the heat of flames. The men also gathered a resinous material (saleng) from more distant areas with abundant pine stands. They used this to ignite and build fires in their hearths, as well as burn through the night as a source of light.

Both Kalanguya women and men also clothed themselves from the bark of trees which men gathered from the forest and made pliant by their repetitive pounding. They also preferred a particular tree species (tangile or balkeh) to use for the construction of their homes. Most trees during the pre-war period were of this variety, attests Alingay. They did not have chainsaws to cut trees at the time, thus they used a metal implement that resembled a hoe (dampag) which they used to chip away the tree at its trunk. For the roofing of their homes, they gathered runo, or sturdy reed-like stalks, which grew abundantly in the existing grasslands at the time. Whereas another type of grass, ha-kati, was used to feed the few heads of cattle (usually water buffaloes) owned by only a few people during the pre-war period, which were later slaughtered in religious ritual feasts.

The accounts above convey that men and women had distinct resource use tasks, spaces and strategies, and that the forest was indeed a source of food, clothing and shelter. Women observed a daily routine of managing swiddens and food preparation,

since on these rested the sustenance of their households and livestock. Men, on the other hand, had less regimented agricultural work patterns, but claimed to know the forest and the potentials of its flora and fauna for food, shelter and clothing, and its spaces and soils to make for the choicest swidden sites.

Relations of gender were affirmed and re-affirmed through the spaces Kalanguya women and men cultivated and occupied during the swidden cycle. Male status came with the clearing of forest space, which women and younger dependents cultivated and maintained. Each swidden site 'spoke' differently after some time: former male dependents became husbands who had to carve out their own new spaces in the forest. Husbandless women mobilized male kin or paid male labor, usually with livestock the women themselves had raised, in order to gain access to cleared spaces. Kalanguya women were also chiefly responsible for raising livestock, fed from the produce of their swiddens. A huge herd indicated the cultivation of more extensive swiddens and women's heavy labor contributions. Thus, new and old social relations cut into the forest thickness, making room for more clearings to produce more food for everyday.

Interhousehold labor arrangements during this period involved the participation of male kin and neighbors in the heavy tasks of land clearing. Custom had it that a number of pigs would be slaughtered to provide for the meal of the working men and distributed equally among them to later bring home. This system was called bataris, and only the wealthier households were able to slaughter more than one pig at a time. This also meant that wealthier households cleared more extensive forest land for their swiddens which women from other households, with debt to repay, cultivated and weeded. Another predominantly female labor arrangement was referred to as habal -- which involved crop repayment after a definite period of weeding swiddens or dry, upland rice plots (bangkeg). Thus the access to extrahousehold labor was governed by one's capital in livestock, the amount of indebted labor available and availability of surplus crops for labor repayments.

As men cleared and felled trees for a new swidden site, they also established themselves as the owners of this site: "The land is the property of the person who works it first" (Moss, 1920: 249). For the Kalanguya, the headship of men and their ownership of the land were legitimated by a pudong. In marriage, pudong was a rite which secured a couple's engagement, lest anyone take interest in the prospective bride. This same sense of ownership had its counterpart in resource use. In resource use, pudong was a rattan bow tied to the tallest tree nearest the cleared site to indicate that ancestors recognized the clearer's claim to the land -- thus anyone who usurped this claim risked retribution from dead ancestor spirits believed to be lurking in the place.

After sometime, Canabuan became a mosaic of cultivated spaces and clusters of forest in various stages of growth and regrowth. These spaces 'spoke' of the mosaic of social relations that were instantiated in resource use: relations of ownership and claims to labor -- some competing, others most often believed to be complementary. Thus in former times, the Kalanguya of Canabuan *viewed* their environment as 'spaces of the ancestors' who demanded the fruits of the land as their rituals demonstrated; and *harnessed* the environment by carving out clearly 'gendered spaces' for subsistence and ritual prestige.

Reactions to logging and the swidden ban

The people of Canabuan began to see the trees in their forest cut by outsiders in 1957. Many of the men were employed by the logging concessions and the Santa Clara Sawmill. As tree cutters, the Kalanguya men had to make daily visits to the forest to cut as many trees as they could in a single day in order to collect the equivalent payment for these from the contractors. Others were paid to clear a road into the forest interior to make the transport of logs easier.

The operations of Santa Clara Sawmill also opened some opportunities for women. They were able to bring some of their crops to sell in Santa Clara's weekly market since they could not venture as far as the town center due to farming chores which confined them to the village most of the time.

Mina Sabila's troubles however began when her husband Basilio started socializing with the male employees of the sawmill. Basilio began to gamble heavily, using income both he and she earned from selling vegetables and brooms at the Santa Clara market to merchants who came from Aritao. Mina was an industrious farmer who worked the fields even when the mud during the rainy season was once so high that it reached the curve of her pregnant belly. They were losing too much money in gambling so in exasperation, she decided to return to her hometown, Bokod in Benguet Province, leaving Basilio behind. He realized his weaknesses, pursued her and implored her to return with him to Canabuan, which she later did.

Sasdiay Balasuit, on the other hand, assisted her husband, Dugit, in cutting trees since he was employed as a tree cutter. After about five months, she asked him to quit this job since because of it, it seemed to her that they were abandoning their original plan of building a ricefield. Earlier, they moved from a nearby village to Canabuan, her husband's birthplace, where he had inherited land. They were one of the first households to embark on paddy rice farming in the village, which she is very proud of, since it was through rice farming that they were able to educate their children.

Most women benefited from logging since it provided them with new, large clearings for potential swidden sites. For many of them whose husbands were busy working for the logging concessionaires and the sawmill, hardly enough male labor was available to cut the big trees down for new swidden clearings. Logging speeded up the clearing process and all the women had to do was to further clean up the logged-over spaces by ridding them of underbrush and leftover vegetation. The entry of the logging industry in these parts boosted swidden agriculture and at the beginning, this gave the people good yields. However, it was also during this period that women were increasingly bringing their children along to their swiddens. For example, Sultina used to bring her 11 children to the swiddens with her while her husband Hibgan was a security guard for the logging concessionaire. She and most other women had no other recourse since their husbands could no longer stay home and watch over the children. Others, however, had their older children or aging parents look after the younger ones.

The women and men reacted differently to logging. For one, it was a source of cash as well as an avenue for increased linkages with lowland people who made up the bulk

of workers in logging. Cash began to trickle into the households, simultaneously changing peoples' consumption patterns. Women themselves were beginning to purchase items they had never bought before, although their purchasing power largely depended on the wages their husbands earned through employment in logging. They earned much more than their wives who occasionally sold farm and forest products in the twice weekly market of Santa Clara. The women, for their part, gradually broke through the confines of the village and began to engage in forms of irregular petty trade. Some sold their farm products in Santa Clara, whereas others sold their wares in the bigger market of Aritao. Thus the opening of the road for the transport of logs inadvertently opened cash-earning opportunities for both women and men in Canabuan, and for women in particular, relatively more mobility than before.

Male elders recall that a good number of men from Canabuan were employed by logging concessions and the Santa Clara sawmill. Gradually men became associated with cash income and the breadwinner role, which was enhanced in their new peer groups within the largely male network of logging operations from the lowlands. Some of the women resented the influence of the lowlanders on their husbands, especially the effects of gambling and drinking⁹. Moreover, male labor was becoming increasingly scarce and this left women largely on their own to both tend to the fields and take care of the children. On the other hand, logging left a lot of cleared areas which enhanced swidden farming since these newly logged-over areas produced sweet potatoes in abundance. Thus the women of Canabuan were quite ambivalent about logging and its effects on their lives. Their perturbations grew worse as the ecological effects of logging were increasingly felt as the years wore on.

In the early 1960s, when forest rangers were deployed by the Bureau of Forest Development (BFD) to inspect 'illegal kaingin (slash-and-burn) activities' in the area, the women of Canabuan simply continued their daily farm activities. When the rangers' warnings grew stronger, women went about clandestinely cultivating their swiddens. Once the rangers were spotted anywhere near the vicinity, a resident immediately ran to report the rangers' presence to warn the villagers. The women (those who heeded) quietly left their swidden sites. Once interrogated by the rangers, villagers simply said that these sites were cleared by outsiders -- a plausible story since some lowland and upland non-residents rampantly came to Canabuan to clear spaces for swiddens, to which they would periodically return to gather their crops.

Sasdiay said the women complained that the government was 'robbing them of life.' They also resented the fact that nothing was explained to them about the reasons for the prohibition of swiddens. They were simply but sternly warned that their homes would be burned once they persisted with their farm activities. In later years, rangers put some huts on fire to serve as their severest warning to the villagers. This marked the demise of swidden farming in these parts.

Gendered experiences of environmental degradation, 1960s - 1970s

⁹ Drinking in Kalanguya society was ceremonial. This changed when men increasingly socialized with lowland men for whom drinking was an occasion for leisure, male bonding or to drown one's frustrations and anxieties.

In the late sixties, women farmers were gravely concerned over the decline of their sweet potato harvests. Logging operations since 1957 further eroded the soil on the slopes which significantly reduced soil fertility necessary for good harvests. Even the women's erosion-control techniques were not sufficient to arrest the rate of run-offs and the incidence of gully erosion that resulted from massive clearings due to logging and road-building within the forest interior. At the same time, the increasing number of permanently cultivated and privately-owned land spaces already existing in the village by this period, made it increasingly difficult for the people to shift to unoccupied, open-access and more fertile sites on which to create new swiddens. This phenomenon was partly due to villagers' compliance with the kaingin ban, and, the growth in the number of cultivated spaces due to the growth in population¹⁰. Thus, farmers saw no other recourse but to intensify the cultivation of their own previously-cultivated fields (kinaba), the ownership of which had also been legitimated by the state's first cadastral survey in the village and surrounding areas.

This mode of intensified cultivation on permanent sites as well as the greater number of land spaces under cultivation exacerbated the rate of soil erosion. The situation in the 1960s was thus a spiral of commercial logging, more intensive land use, more cultivated spaces, soil erosion and a compliance with the swidden ban enforced in the early 1960s. The aggregate effect on the forest was further denudation which reached 60% in the 1990s (ERP/SFLGU, 1995). Ironically, the Canabuan experience has shown that the government's enforced kaingin ban did not slow down the rate of deforestation which the ban had intended to do in the first place. This is because government had behaved ambivalently towards forest management: while the kaingin ban was being enforced, logging was simultaneously allowed to continue unabated with minimal monitoring¹¹.

Kalanguya women who were still active swidden farmers during this period remember that they had to double their efforts at making their swiddens produce the volume of sweet potatoes needed by their households. Sultina recalls that she weeded more vigorously so that the weeds would not compete with the growth of sweet potatoes, already weakened by declining soil fertility, one of the results of soil erosion. She planted all four types of sweet potatoes varieties she knew, whereas normally she planted only one. She applied gen-gen to prevent the soil from eroding, as well as planted more sweet potatoes on adjacent and available spaces just to keep the supply of sweet potato harvests stable¹². Other female farmers, including Sultina, employed different and sometimes multiple strategies to immediately offset the decline of their sweet potato harvests during this period, as summarized in Table 6.1:

¹⁰ There are no actual population statistics on Canabuan during this period (1960-70) since Canabuan was only then a hamlet of Santa Clara. In 1970, Santa Clara registered a population of 2,471 persons. At the provincial level, the municipality of Aritao registered 11,209 persons in 1960, and, 18,098 persons in 1970, or 61% increase in population in the span of ten years (NCSO, 1970).

¹¹ Commercial logging had its own share of regulations under the selective and seed-tree method systems. However, the forestry bureau has been known not to have enough personnel nor infrastructure to properly enforce the regulations under these systems of logging.

¹² According to Lasmarias (1989), the gen-gen technology does not have any long term advantage in maintaining soil fertility, despite its short-term advantages on soil conservation.

Table 1
Women's Immediate Strategies to Offset the Effects of Declining Sweet Potato Yields

	Women's Immediate Strategies
Mina	planted other root crops such as yams and taro as sweet potato substitutes; eventually learned to make compost to restore soil fertility
Sasdiay	sold ginger, yams, bananas in Beti (village near Aritao) in exchange for rice
Salome	engaged in wage labor in neighbors' dry ricefields (<u>bangkeg</u>) for a rice wage
Milya	planted other root crops such as yams and taro as sweet potato substitutes
Lurding	planted other root crops such as yams and taro as sweet potato substitutes
Milyana	urged her husband to make brooms to sell to Pablo Soryata; her husband never used to make brooms in the past
Sultina	began to gather heart of rattan and bamboo (<u>ubod</u>) from the forest and sold this together with yams in Beti

Another female elder of Canabuan, Apolinaria Daniel, maps out below the number of swiddens she cultivated since she first settled in the village and the different strategies and decisions she had to make in the course of being a farmer and food provider since 1959:

My husband chose land by the river to be our first swidden in Canabuan since we, together with our five children, settled there in 1959. Canabuan at that time had wide areas of open land on which migrants like us settled and later cultivated. We did not have to seek anyone's permission, but squatted on these areas. We simply built a home and began planting on the land we chose. I planted obi (sweet potatoes) on this first swidden -- but only after we had harvested the first crop of bangkeg (dry upland rice). Later I discovered that the sweet potato harvest on this field was not sufficient to feed my entire family and five hogs, so I decided to engage in lagbo (waged or remunerated labor) in a nearby hamlet, Tinadmak. I used to fill up my kayabang with sweet potatoes for half a day's work in which I helped harvest sweet potatoes and did some weeding of the swiddens there.

My husband and I soon cleared another site for the second swidden on the higher slopes, but not too far from the first one. I was always annoyed that my neighbor's pigs kept destroying my plants and eating my young obi. I later complained about this at the tongtongan. By the time I abandoned this second swidden after about two years of working on it, we cleared our third swidden beside which we also built a new house. It was useless to stay close to a neighbor whose pigs

destroyed one's crops. We began the same process of making a bangkeg first and then a sweet potato patch.

On our fourth swidden, I decided to plant tiger grass which my husband could use to make a few brooms to sell, although I only began planting them after harvesting the final crop of obi so that they would have the widest space to grow. Other women in the village were doing the same thing since we all began to see that selling brooms brought us some money, with which we could buy some rice. Our sweet potatoes were slowly getting smaller in size and fewer in number, so we had no other choice but to buy rice.

While I worked on my fourth swidden, my husband began converting our kinaba (the abandoned first swidden) into a rice paddy field. The ricefield was constructed after one year with the help of Ifugao farmers whom we paid with pigs. To speed up the building of the ricefield, we also engaged in amuyo (reciprocal exchange labor) with other households. Other times, we had to hold a bataris (meat distribution) and my husband had to slaughter a pig, feed and distribute the meat among the workers. I had to make sure my pigs were healthy so that we could slaughter them to pay the laborers. It was a big change from before when we used to slaughter them for kanyaw. I had to work very hard to get better obi harvests and had to keep working in Tinadmak so I could earn additional food.

My husband's broom sales brought us some money since merchants came to Canabuan to buy them, or sometimes we sold them to Pablo Soryata. The money from the brooms and my obi harvests were really not enough to feed my growing family. I had no other choice but to keep on visiting Tinadmak daily to earn additional obi. There was still no rice from my husband's ricefield.

My fifth swidden was also planted to rice (bangkeg), followed by obi and finally, tiger grass. By this time, our ricefield was almost finished and we were already harvesting rice from portions of it. I began to spend lesser time in my swidden because I had to plant and weed the ricefield, while my husband continued to make brooms. Our young son was also helping plow and prepare the field for planting. He was only 5 when we arrived in Canabuan. He was 15 by the time my obi were no longer enough for us all.

Today, Apolinaria, already a widow, lives with her unmarried daughter in a house her husband built for her, which sits on her second swidden, where pigs owned by a neighbor used to dig up and eat her precious sweet potatoes. All her kinaba have been registered under her husband's name in the two cadastral surveys in the village.

Most other women in Canabuan had similar experiences, and the men were getting busier. They began to build their first wet rice paddies and terraces, they squeezed in some time to make brooms to sell and at times, were employed by Ilocano farmers in

adjacent villages to repair irrigation dikes and level the rolling landscape on which Ilocanos also constructed new rice paddies. These were wage-earning opportunities for them.

Almost in concert, Canabuan villagers began constructing ricefields as their sweet potato yields declined. In the past, elders explained that the water used for irrigation was ‘too cold’ to grow rice. Tiger grass, usually cut and gathered in the months of January-February, also became a common household crop in many swiddens since this was used in broom-making. Rattan was gathered in the high forest, which was still relatively abundant but decreasing due to the felling of trees to which rattan creepers had clung. Moreover, rattan cutters came from nearby Carangglan (Nueva Ecija) to gather rattan, which they sold to lowland merchants. The rattan industry was booming in the country at the time.

All throughout these new resource use activities spurred by the rapid changes in their natural environment and their growing links with the cash economy, the women continued to cultivate and care for their swiddens. These still provided the bulk of their households’ food supply despite their increasing dependence on cash with which to purchase rice.

The women farmers sold their labor power and their farm and forest products (ginger, tubers and fruits) in exchange for sweet potatoes or sometimes rice. The men, for their part, on occasion sold their labor power and brooms instead for cash. They gradually became more identified with the cash economy and its vagaries whereas women’s identities were linked to the cultivation of sweet potatoes --“*a woman is only good for [growing] obi!*” In reality, as events unfolded, Kalanguya women were also quite active economically and were engaged in petty trade, albeit irregularly, with people from adjacent villages and in the town center of Aritao. Further, many of them began making brooms and were involved in the broom trade. By then swidden farming was already considered backward and a harmful type of agriculture by state agriculturists and foresters --- and eventually by the farmers themselves. Despite women being active in paddy rice farming and petty trade, they were still, however, associated with swidden farming.

Food production, as a social activity “reproduces social identities. Such production occurs via symbolically mediated, norm-governed social practices” (Fraser, 1995: 203).

The advent of sedentary rice farming in Canabuan significantly altered the labor schedules and agricultural calendar of most households (see Figure 1). Olalya recalls that her husband abandoned land preparation tasks in swidden farming when their ricefield was constructed since he began plowing and strengthening the embankments between the paddies. She increasingly began to prioritize work on the ricefield over weeding her swidden. “Sweet potato harvests were no longer sufficient, therefore we had to work longer in the ricefields to make sure our rice harvests were abundant,” she

explains. Sultina also recalls that her daily visits to her swiddens were reduced to a single day weekly, since they began working on their ricefields. By that time, she passed on the task of weeding her swiddens to her older daughters.

Nora and Pina are cousins, and both learned the rudiments of rice farming when they were just adolescents. Nora discovered that weeding in rice farming was more difficult than weeding the swiddens. She began to work on her Uncle Dugit' and Auntie Sasdiay's ricefields for which she was usually paid rice after the harvest (atang). Nora needed to help her mother, Sultina, feed her 10 other brothers and sisters. Pina, on the other hand, began to work on her father's ricefield when her mother's sweet potato harvests were declining. She remembers that she began to limit her visits to her mother's swiddens to only once weekly after her father had completed their second ricefield.

Sasdiay Balasuit recalls that in this period of rapid change, a big number of village women came to work in her husband's ricefields. "They worked on our fields because they were afraid of government men burning their huts and swiddens. They could no longer make new swiddens. We paid them palay (unhusked rice) after every harvest. They also had fewer sweet potatoes for their families, so they had to work for rice." The Balasuits¹³, one of Canabuan's first rice producers and ricefield owners, absorbed

AGRIC

CALENDAR

Figure

1

¹³The first households in Canabuan who embarked on rice paddy farming were the Balasuits, Bugnays, Barico (Ilocano), Carreon while the others were Ibaloi and Ifugao migrants who came to settle in Canabuan in the 1960s and early 1970s.

some of the village's supply of female labor in need of rice to supplement dwindling sweet potato harvests.

The village elder, Delfinito, explains why people resorted to rice paddy farming: "One can experience bad harvests in rice farming, but can also reinvest labor in the next cropping with a fair chance that the next one would be a better harvest. Rice farming was therefore istedi (steady). In inuma (swidden farming), succeeding harvests are insecure because of deteriorating soil fertility." The women, for their part, thought swidden farming was insecure due to the threat of weeds and grasses on their plots. For them, "the forest was taking over." Further, the returns to labor for rice are more commensurate to the returns to labor of sweet potatoes. (See Appendix I at the end of this paper for a cost/benefit table on sweet potato and rice yields). They did not abandon swidden farming earlier due to their religion, the presence of still ample open-access lands and the unavailability of male labor to construct paddies and terraces. It was less time and energy-consuming to clear forest spaces than to carve terraces and slopes for rice paddies.

The men organized amuyo groups to build their ricefields where construction work lasted from one to two years. Delfinito recalls how work proceeded in those days:

"We brought our own food to the field sites and did not rely on the owners of the field to provide our meals as was the practice in the lowlands during the rice planting and harvesting seasons. Nobody could afford to feed a huge army of farm workers during this construction phase. During our breaks, we smoothed out strips of cut rattan so that we could make and sell brooms to Pablo Soryata, the broom trader. We could not make as many brooms as we would have wanted since our time was used up for building the ricefields."

Those like Apolinaria who had good enough livestock, were able to mobilize male labor for the construction of ricefields. The more livestock one had at one's disposal, the sooner the completion of the ricefield. Thus the construction of ricefields gradually took precedence over rituals in depleting a household's livestock. Hog-raising for ritual purposes also had to take a back seat since Christianity was making deeper inroads into the village, and villagers had to respond to the exigencies of food scarcity while they were shifting to paddy rice agriculture. Instead, as Apolinaria's experience shows, many households used their livestock to pay for labor. The women, however, had to make sure there was enough livestock for this purpose, which explains why Apolinaria and those in similar straits also had to find ways and means to augment their sweet potato supply during this difficult transition period.

Kalanguya women, meanwhile, began to learn the rudiments of broom-making and assisted their sons and husbands in the various stages of making them. Broom-making and basket-making were never women's activities, since they were often in the fields while the men stayed home to make them. My host Consuelo's mother, Agustina, for example, was proud that she had learned how to make an entire broom at a time when women in the village only knew how to wrap the broom handles with braided rattan strips (bilot).

Women did not oppose the construction of ricefields because they believed rice farming could alleviate their growing food supply crisis, as well as placed them on an equal footing with lowland neighbors who were largely rice-eaters. This, despite the fact that they later re-channeled their labor to paddy rice farming from their traditional tasks in swidden farming. A new index of social acceptability and validation emerged, no longer based on the number of prestige rituals a couple sponsored, rather on how much a couple was in pace with permanent rice agriculture alongside neighbors and the Ilocanos in the adjacent villages. Kalanguya women also wanted to carve out their niche in rice farming, albeit to a lesser degree, than the men who had now become the chief resource managers in the village.

Moreover, female labor became so crucial in the ricefield construction period since their food crops continued to feed their families and livestock at a time when the ricefields were not yet productive and the broom trade's cash sales were too little to secure their purchasing power and access to food. Finally, Kalanguya women began to squeeze in time to help make brooms, once a traditional male activity. Thus, Kalanguya women's labor largely subsidized the transition from a dominant shifting mode of agriculture to a more permanent one, during a period characterized by food scarcity, environmental change and changing terms of land use and ownership. They also became more responsible for childcare, a task men had abandoned due to the demands of constructing and cultivating ricefields and employment in logging. From being food providers, Kalanguya women have gradually become food crisis managers.

Debt and food crisis management

Just before her death in 1997 (after my fieldwork), Sultina, already in her 70s, re-cultivated kinaba where she thought planting sweet potatoes and ginger was possible. Among kinaba owned by her husband, she chose those spaces which had the least cogon grass (*Imperata*) since abundance of cogon indicated that the soil was already too dry, hard, and infertile, thus unfit for sweet potato cultivation which requires a considerable amount of soil moisture. She has also noticed new kinds of weeds growing on her swiddens today, quite different from the "stout kind of weed" she was familiar with in the past. "Now, it is harder to weed our inum-an and I get too tired trying to clean my field free of these weeds," she lamented.

Mina, for her part, today hoes the soil of her kinaba, once thickly covered by cogon. She learned soil regeneration techniques in her younger days in Bokod, Benguet when forest cover thinned out and people had to re-cultivate kinaba since availability of open-access areas was declining, a similar process Canabuan is currently undergoing. Four years ago, she helped her son Tomas make biomass compost in order to add fertility to a kinaba he had transformed into a vegetable garden. Another elder of the village, Milya, also hoes the soil of her kinaba: "I have to do this to uproot the cogon. Before, our swiddens never had so much cogon. If there were some young trees growing on a kinaba, this meant the soil was still somewhat fertile and I could easily plant some obi on this site again. But these past years, too much cogon has covered our kinaba."

Apolinaria plans to re-cultivate kinaba, which was once her third swidden, by first cutting the tall grass, hoeing the soil to bring nutrients to the surface and to loosen the

roots of the ubiquitous cogon grass for easier uprooting later. She plans to plant sweet potatoes and ginger for a year since she is aware that immediately after one cropping, the soil “immediately turns red” and is useless for growing crops.

Lita, the only daughter of Sasdiay Balasuit, has little time to spend applying gen-gen to prevent soil erosion the way her mother used to, since she only plants ginger once a year and no longer plants sweet potatoes unlike the women of her mother’s generation. Being a widow, her time is consumed by work in the ricefield, since she cannot rely on any grown children nor her brothers to help her out. Lita was never provided as much educational opportunities by her parents as her brothers.

Lita continues to cultivate a parcel of land her youngest brother inherited while her own piece of land has been mortgaged. She needed the money to pay for her own hospital and medical bills when she was stricken by hepatitis. Her mother Sasdiay, has made sure her only daughter would have land. She did not want Lita to undergo the same miserable experience as a landless, disenfranchised daughter of a widowed father who married a second time. Lita has since made good use of the land her parents had left her, being her safety net when she fell ill some years ago. Today, Lita’s preoccupation over rice farming represents most of the concerns women also have today. Many of them have placed priority on work on the ricefield and no longer attend to swiddening as much as their mothers did in the past. Today, younger women have abandoned soil conservation strategies since they have less time to do so and because the life span of a swidden these days does not extend beyond a year. The current state of soil infertility in the hill slopes has rendered these conservation technologies impractical since they are time and energy-consuming and do not generate comensurate crop returns for the labor expended.

Instead, the tasks in paddy rice farming are today considered priority tasks for both women and men. As a departure from the past where women largely shouldered crop and farming management decisions, today, men are the principal resource managers in paddy rice agriculture and more recently, in commercial vegetable gardening which a few men in the village have already embarked on.

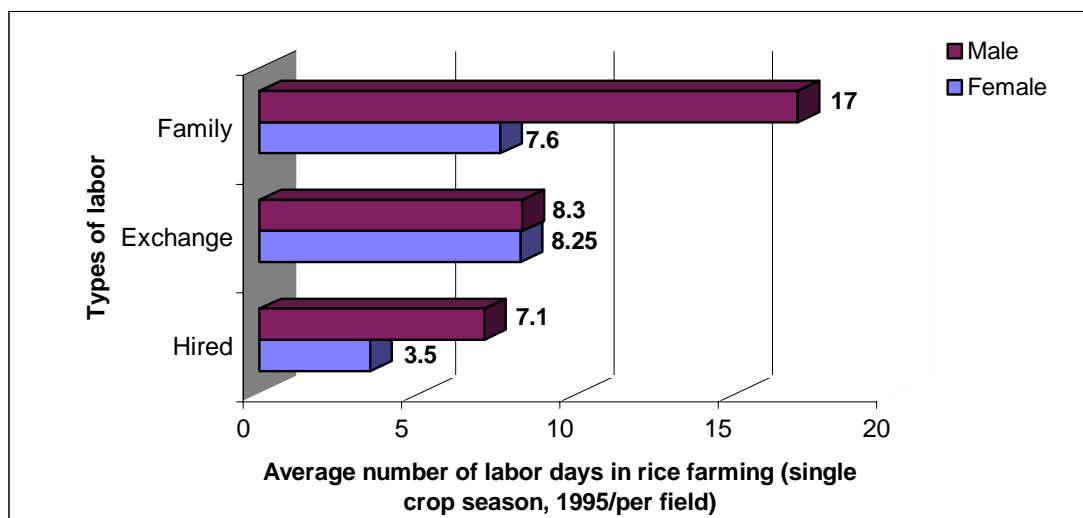
The technologies of the green revolution introduced in the Philippines in the early 1970s have also found their way to Canabuan. These were introduced not by government extension agents but rather copied from Ilocano farmers nearby. The town center of Aritao soon became a marketing hub for farming inputs such as mechanical farm implements, HYV seeds, chemical fertilizers and pesticides. For those in the low-lying portions of Canabuan, it became possible to embark on two crop seasons within one agricultural cycle, instead of only one. These technologies rapidly spread to farmers whose terraced rice paddies were in the higher slopes and who were lured to the idea that two crops could bring them more food. These concerns fell under the purview of male management.

Today, men purchase or make loans of farming implements and inputs as well as decide on the schedules of planting, harvesting and other stages of rice production. Whatever loans are made for rice farming are usually paid after the harvest. For every

sack of fertilizer loaned, men have to repay two sacks of unhusked rice.¹⁴ They also decide to accommodate sharecroppers and determine the nature of sharecropping arrangements¹⁵. Decisions on emergency measures such as crop failures, irrigation problems and pest management are all within the purview of the male farmer. They also have the right to dispose the ricefield for mortgage or sale, just as in the past, they did the same on former swiddens.

Men's labor has become more crucial to paddy rice agriculture than female labor. Men in the village have also learned the rudiments of commercial vegetable farming from migrants and from forays into provinces in the north, notably Ifugao and Benguet, where this is a major source of cash income for upland households. The graph below shows the extent of male and female labor in rice farming:

Figure 2
Types of labor in rice farming, by sex



Sample size: 89 ricefields operated by 89 households with an average of 0.75 ha.

Source: Household Survey, May-June 1996, Canabuan

Figure 2 shows that men participate more actively in rice farming than women in three types of labor: family, exchange and hired, although in exchange labor, the number of labor days men and women spend in rice farming are almost equal. The activities which women and men engage in are land preparation tasks, gathering and

¹⁴The system of loans and repayments for rice farming itself is different from the system of loans and repayments in food crisis management where women make loans of rice from local merchants who require brooms as a payment for these loans. In rice farming, men repay all loaned inputs and services (land preparation and mechanical threshing) by setting aside a standardized amount of unhusked rice from the harvest which will go to the creditor(s). 1 sack fertilizer = 2 sacks unhusked rice after the harvest; for every 15 sacks of unhusked rice threshed, one sack is set aside for the owner of the threshing machine as payment for the use of the machine and services of the operator(s)

¹⁵Usually in sharecropping arrangements, the harvest is divided in half between the sharecropper and the land owner. They both decide who is to spend for farming input requirements and who is to provide food for the labor party during planting and harvest periods. In most cases, it is the owner who is responsible for all the expenditures while the sharecropper is generally in charge of all the labor requirements.

bundling seedlings, transplanting, weeding, applying inputs, cutting, bundling and post-harvest tasks such as hauling, threshing and milling which all take place in one entire crop season. This graph, however, does not include the number of hours or days women spend to prepare food for the labor parties during the planting and harvest seasons. It also does not express the physical experiences of women and men as regards the types of work they perform on the ricefields, which will be otherwise discussed in the last section of this paper.

Paddy rice farming has been largely associated with men. Paddies are the spaces of men since their construction and maintenance are managed by men. In the uplands, men carved out rice paddies out of the contours of the hilly and mountainous slopes which required substantially more time and effort than in the lowlands due to erosion and unstable, foundering embankments. Paddies, compared with swidden sites were permanent spaces, thus its association with gender was that men had introduced “steady” livelihoods -- so men *were* “istedi,” compared with women who were “*only good for obi!*” Women were thus associated with the backwardness of sweet potato and tuber cultivation, or swidden farming, and were instead now perceived as secondary hands in rice farming. Thus, ricefields were men’s spaces, and the rudiments of rice farming itself, was learned from other Ilocano men. On the other hand, swiddens, though selected and cleared by Kalanguya men were considered women’s spaces because women primarily managed them on a daily basis.

A new hierarchy of land use has also emerged with the advent of permanent rice farming in Canabuan. The consensus often heard from residents today is that swidden farming is uncertain (since the soil loses its nutrients after sometime, they say), while rice paddy farming was “steady” (“istedi”).

In short, as more and more people practised permanent rice farming, rice paddies became men’s spaces and (sometimes imaginary) swiddens or kinaba were understood as women’s spaces. Today, people also view the environment as less uncertain, due to the *permanence* (‘istedi’) of rice paddy agriculture (despite the increasing rate of erosion in the upper slopes).

Within the rice agricultural cycle, there were also “women’s seasons” and “men’s seasons.” Each season was gendered according to the type of labor associated with it: men were associated with heavy labor, therefore they were indispensable in the various land preparation tasks and the repair of embankments. Women were identified with repetitive, light labor, which meant they took up the tasks of weeding, transplanting and harvesting. However, post-harvest activities that require mechanization, such as threshing and milling were men’s activities, or at least managed by men. Such relations were re-affirmed year after year as villagers began and ended their agricultural cycle. The landscape of Canabuan was thus transformed into a new mosaic dominated by permanent spaces of cultivation where altered relations of resource use, among women, men, elders and children are enacted and take place. Women and men work on these permanent spaces, while a number of women and surviving female elders re-cultivate small parcels of kinaba for food crops to tide over their households during periods of scarcity. Children stay home, lest they fall into the rice paddies’ mudpools. Parents may also leave them with elders or with older siblings. Residual forest spaces remain in the higher and steeper inclines of the

village, where today women and men search for increasingly vanishing rattan. Even pigs, which were allowed to roam in the past had to be placed in pens or tied up so that they don't destroy the rice crops¹⁶. Recent aid from the European Union cemented embankments in between paddies in low-lying portions of Canabuan and constructed sturdy hanging bridges over portions of the river so that people have walking spaces, easing the movement of goods and people in and out of the village.

Male labor, thus gaining both in status and necessity in permanent rice farming today, has not been readily accessible to some in the village. Women from female-headed households face difficulties getting access to male labor especially for the tasks in land preparation. For them, gaining access to male labor, is a question of how much social, economic and physical capital they have. The cases of Carmencita and Lita below exemplify this point.

Ifugao by ethnic origin, Carmencita came to settle in Canabuan in the mid-seventies, having sold her small ricefield in Ducligan, Banaue, Ifugao Province. She used her earnings to purchase land in Canabuan where relatives have come to settle before her. About a year ago, her husband had a stroke and since then could no longer do strenuous rice farming tasks, and finally confined himself to staying at home while Carmencita sees to all his daily needs.

She has also become quite popular in the village due to her pleasant nature and has been elected as the only woman in the village council, earning Php 600 monthly. In the period December 1995 to December 1996, she was able to harvest 32.5 cavans of rice which were able to tide her family (husband and adopted daughter) over for the entire year. They did not experience any period of scarcity; on the contrary, she was able to sell some of their surplus. Moreover, she buys garments and dry goods from Aritao and sells them to her neighbors in Canabuan. Occasionally, if she has a buyer from Aritao, she purchases brooms from her neighbors on her buyer's behalf. However, Carmencita faces the perennial problem of getting men to work on her ricefield.

It sometimes takes her a week to organize a team of men for land preparation and by the time a party is organized, the rice seedlings may be too mature to guarantee an optimal yield, despite the application of fertilizers. The men also prefer to be paid in cash which she does not always have on hand. Instead, she offers them remuneration in the form of atang¹⁷. Sometimes she offers her own labor in exchange for theirs (amuyo) -- which translates into more days of labor repayment for her than for them, especially in the crucial tasks of land preparation.¹⁸ Making her debtors repay their

¹⁶ Sometime in the early 1970s, a village ordinance was issued to all Canabuan residents requiring them to keep their pigs in pens to prevent rice crops from being destroyed. Recently, a couple who wanted to maintain a swidden had to relocate their home to the upper, steeper slopes so that they could be nearer their swidden as well as allow their pig to roam about without destroying neighbors' rice crops.

¹⁷ Payments for labor are only collected at the end of the harvest but with an interest incurred.

¹⁸ For plowing (accompanied with a water buffalo or hand tractor), the amount paid is Php400, or equivalent to 8 full days (8 hours per day) of labor repayment; for repair of paddy footpaths, Php50 per day is paid or what is considered equivalent to 1 full day's work. The following are the accepted forms of remuneration and their equivalents in time:

One form of waged/remunerated labor (**lagbo**):

debts through labor is also another strategy. People make cash loans from Carmencita once word gets around that she has some cash available. But to make her male debtors repay her through their labor sometimes requires great effort, imploring them with tears, on her part.

Carmencita also repairs paddy footpaths, applies fertilizers and purchases the chemical inputs needed, tasks largely performed by men in the village. It is necessary that she generates ample earnings from her trade in order to pay male laborers, otherwise, her household will have no rice. Because of the pressure to earn, Carmencita cannot commit herself to labor exchange arrangements, which would secure male labor for her ricefield. Between earning cash through trade and making labor exchange arrangements which is a common strategy of other women from female headed households, she prefers the former since she is no longer too young to work for others, being in her fifties.

The case of Carmencita underscores the importance of male labor in Canabuan today. It also shows that despite coming from a relatively rich household owning prime agricultural land in the village with potential to yield comparatively abundant harvests, a woman is helpless without male labor working the land. She has had to rely on her economic and social capital to convince male neighbors to prepare her land for cultivation.

Poorer women like the widow Lita, who do not have economic capital with which to engage in trade like Carmencita and thus pay male labor with cash, have no other choice but to enter into reciprocal labor arrangements as the only way to secure access to male labor. In turn, Lita would have to repay male labor with more working days, usually by weeding, transplanting or harvesting. The exchange 'rate' for land preparation tasks in Canabuan (and in nearby places) is rendering three female working days for every one day of land preparation done by a man with a carabao (water buffalo) or a hand tractor. Thus, Lita has to devote more time working in others' fields every crop season. Her only daughter has married and now lives elsewhere, whereas her son is only 8. She has thus no one to help her in the fields. No small wonder Lita has always been ill and had to mortgage the land her mother had given her to pay for her medication. She has only her physical strength with which to secure and gain access to male labor. "Women's inability to call on the labor of others is a function of their lack of social power, and is clearly related to their position both in the household and within a wider set of social relations outside the household" (Moore, 1988: 59).

While male labor has apparently become so crucial in rice paddy farming, this, however, does not mean that women in Canabuan today have less work and that men

1 day's work (8 hours)	= 1 bundle of rice stalks, or
	= 1/2 (kerosene) can of unhusked rice, or,
	= Php40-50 per day
3 day's work (8 hours ea.)	= 2 kerosene cans of unhusked rice

Another form of remunerated labor to be paid after the rice harvest (**atang**):

1 day's work (8 hours)	= 1 (kerosene) can of unhusked rice
3 day's work (8 hrs. each)	= 3 (kerosene) cans of unhusked rice

have more. A new, although not neat, division of labor has emerged where women take up the cudgels of food crisis management during the lean, rice-deficit months while men take over the main task of cultivating rice and attending to its day-to-day requirements. But before I discuss women's responsibilities in food crisis management, I will first show the different lengths of time households experienced rice sufficiency in 1995-1996 in the following table:

Table 2
Frequency Distribution of Households by month/s of Rice Sufficiency**
December 1995 - December 1996

Rice supply (number of months)	Absolute frequency	Relative frequency (%)	Cumulative frequency (%)
less than one month	1	1.1	1.1
< = 1 month	2	2.3	3.4
> 1 month to 2 mos.	7	8.0	11.4
> 2 mos. to 3 mos.	5	5.7	17.0
> 3 mos. to 4 mos.	9	10.2	27.3
> 4 mos. to 5 mos.	7	8.0	35.2
> 5 mos. to 6 mos.	13	14.8	50.0
> 6 mos. to 7 mos.	13	14.8	64.8
> 7 mos. to 8 mos.	5	5.7	70.5
> 8 mos. to 9 mos.	5	5.7	76.1
> 9 mos. to 10 mos.	6	6.8	82.9
> 10 mos. to 11 mos.	1	1.1	84.1
> 11 mos. to 12 mos.	3	3.3	87.5
> 12 months	11	12.5	100.00

N = 88 households

Source: Household Survey, January-February 1997

** rice sufficiency refers to the sufficiency of a household's supply of its own cultivated rice

Table 2 shows that only 12.5% of the sample population had a sufficient supply of rice for the entire year that came from their own rice yields (or 87.5% experienced rice shortages). Fifty per cent of these households experienced rice sufficiency for only six months or less, while roughly a fourth of the entire sample produced rice that lasted them only four months or less. Meanwhile, 6% of the households surveyed generated a rice surplus. Therefore, most households experience a period of rice deficiency.

The table also shows that three households (3.4%) had a rice supply for only a month or less. Members of one of these households did not cultivate rice at all in during this period since they were involved in a dispute over ownership and irrigation. The respondent, Anita Taydan said, "Nobody wanted to repair the irrigation canals. Besides, after we mortgaged the ricefield to my husband's half-sister, she made claims on the land as her own. So, for what are we going to repair the canals?" The other two households, meanwhile, had relatively small ricefields (400 sq.m. and 1000 sq.m) which each generated very low yields.

Out of the 11 households (6%) which produced rice surpluses, 7 sold their surpluses. These 11 households were mostly old Kalanguya families of Canabuan, or Ibalois and Ifugaos who had purchased the prime agricultural land of Canabuan's flatbelt areas from Ilocanos in the 1960s-1970s. According to village history, these parcels of land were originally Kalanguya-owned, but were usurped by these Ilocanos who produced land titles to validate their ownership.

Since members of most households in Canabuan run short of rice they had produced for a definite period, they have devised means and ways to procure rice. My survey has also revealed the kinds of food crisis strategies people in the village employ. They are the following: lagbo, which is understood as labor paid in kind or non-wage labor, payable usually in the form of rice; broom-making; cultivation of ginger as a cash crop; making rice loans from merchants and/or neighbors; cultivation of sweet potatoes to substitute for rice, which was the reverse in the past; and, engaging in wage labor within or outside the village. No longer can women and men rely on riverine and forest wildlife for food since many of these have already disappeared as the river's depths are now packed with silt, while the forest is no longer a haven for wildlife due to thinning cover.

All rice-scarce households engage in non-cash wage labor (locally referred to as lagbo) in varying degrees. In the period 1995-1996, survey results show that those who had the longest period of rice scarcity have tended to engage in lagbo more than the other rice-scarce households (Resurreccion, 1999). Lagbo has become the most common coping strategy for rice scarcity. Wages are often in the form of a rice wage. In a village with hardly any landless households yet characterized as largely labor-scarce, lagbo provides an opportunity for all to earn rice, as rice is generally the currency for exchange in Canabuan.

For example, an Ilocano woman, Anabel, who has settled on one of the ecologically marginal parts of Canabuan due to the thick cogon grass growing on those parts, often asked Pina to give her some work in exchange for rice. Pina belongs to Canabuan's oldest families (Balasuits) who own choice agricultural land in the village. Another woman, Ana, who has 11 children owns land but has many mouths to feed and produce from her ricefield is thus not enough. Foreseeing the quick depletion of her household's rice supply and thus the need to augment it, Ana offers the members of her family as an entire band of ricefield laborers to neighbors during the peak labor periods of transplanting and harvesting. On her own, she sometimes works for Anita, an Ifugao woman whose husband purchased extensive land planted to bananas and vegetables in the late 1970s, so that she could have a portion of these crops in exchange for her weeding.

Wage labor (cash-remunerated), on the other hand, is hardly practised by any of the households due to the small cash reserve in the village as well as the lack of wage opportunities immediately outside the village. Evidently, rural labor cannot be easily absorbed by employment in town centers. I might add that cash available is concentrated in the hands of local village merchants, notably only two of them (Rita and Basanita), who use them as their own revolving capital for their trading ventures, as well as those who own public transport vehicles and earn salaries as petty

government employees. Residents sell their farm products to these local merchants so that they could be spared from going all the way to sell in Aritao market.

Lagbo, as it is generally understood in the village, involves the following rice farming tasks: weeding, transplanting, threshing, repairing paddy footpaths and irrigation dikes, and plowing. The repetitive tasks like weeding and transplanting are usually done by women while those which require the use of huge implements, inputs and machines are done by the men.

Cultivating ginger, on the other hand, is not considered an ‘emergency’ measure during food-scarce months, in the same manner as broom-making and lagbo. It has been a traditional Kalanguya women’s cash crop which they cultivate to a greater degree today. The village elder, Hibgan, recalls that ginger was sold in small amounts in the past not in can-fulls¹⁹ as it is today. With the growing absence of rattan for brooms, women are more compelled to grow ginger as a ready fallback during periods of rice scarcity, thus generating some cash income. Ginger can be harvested in the months of June to December²⁰, and may also be sold to the two local merchants, Basanita and Rita. The women grow three varieties, two of which are native, and the other referred to as the ‘Hawaiian’ variety introduced to them by agronomists from the Kalahan Educational Foundation in Imugan, Santa Fe.

Some women store ginger²¹ and then sell it once they hear that the market price has gone up. In the 1970s, the ginger trade experienced a boom due to the heavy influx of merchants into Canabuan who bought ginger. Since then, a number of women cultivated ginger as a monocrop in kinaba.

Broom-making appears to be the third most employed food crisis strategy among the rice-scarce households. With the growing depletion of rattan in the forest, Canabuan residents today either buy or increasingly make rattan loans from local merchants. It could be deduced that broom-making superseded lagbo as the foremost food crisis strategy years ago when rattan was still abundantly available. Women or their husbands transact big rice or cash loans with local merchants in order to offset the food deficit. When these loans are made, they are then obliged to repay their debts by the equivalent number in brooms or cash with interest.

Contemporary inter-household labor arrangements thus include lagbo and its cash and crop-based variants: amuyo, a reciprocal labor arrangement; atang, which involves a later wage repayment usually crop-based (see footnote 14 for the labor-wage equivalents). Bataris (traditionally, meat distribution during land clearing) is only employed rarely for non-agricultural tasks such as house repair or house transfer. There were fewer interhousehold labor arrangements in the past since swidden agriculture entailed fewer tasks, usually divided between cultivation (for women) and land clearing/fence building (for men). Today, labor arrangements are more complex and cash-based arrangements are largely male-cornered, especially the task of land

¹⁹ Kerosene cans.

²⁰ These period, however, does not coincide with the lean, food-scarce season in the village -- which is usually in the months January to June.

²¹ This is the second harvest of ginger, where crops stay longer and may be stored; this is referred to locally as gadang.

preparation with draft animal or machine. This adds value to male labor already considered so crucial in rice production and management. Crop-based repayments, on the other hand, are usually given in the predominantly female tasks of transplanting, weeding and harvesting. Both women and men engage in exchange labor, amuyo, which adds to the list of Kalanguya women's and men's responsibilities. The Kalanguya custom of debt repayments through labor on the swiddens has been extended to rice paddy farming. Today, when couples incur unpaid broom debts from having made rice loans, they repay their debts through female labor in the ricefields, especially in the tasks of weeding and planting. In the past, women's labor repaid animal loans. Kalanguya women used to be chiefly responsible for livestock care for both religious rituals and loan repayments. Thus, access to extrahousehold labor today depends largely on one's cash reserves, time available and capacity to grant loans whereas in the past, it depended greatly on one's capital in livestock and propensity to grant animal loans.

Women, more than men, are also the principal food crisis managers in Canabuan households. Food crisis management tasks (earlier mentioned) such as lagbo, ginger production and marketing and broom-making are principal responsibilities of women in rice-scarce households. As their households' food providers and food crisis managers, the women are also the first to know when their supply of rice has run out. They may quickly make small rice loans from neighbors, or, make bigger rice or cash loans together with their husbands or by themselves. However, survey results have also shown that the highest incidence of women's response to food/rice scarcity was in households which had the shortest period of rice scarcity (Resurreccion, 1999). Such obligation and attendant tasks are unlike those of women in more rice-scarce households who would have to resort to multiple strategies to be able to get some rice, and for which they would have to enlist men as well. Thus, the contribution of husbands is hardly ever felt in households with shorter rice scarcity periods.

Ideas that shape gendered resource use

Leach (1994: 214) has also pointed out that "just as ideas about gender shape resource-using activities, so these acts, in turn, shape [new] ideas about gender." For example, certain resource use activities, such as searching for rattan in the high forest and broom making, have shown signs of weakening as an exclusively traditional male task. Women are increasingly performing such tasks. However, certain gendered resource-using activities persist to be identified as being either female or male. The following excerpts from Florencia's diary demonstrates this point:

Table 3
A Woman's Four-day Diary
(excerpts)

Florencia is a busy woman, cultivating a ricefield, swidden and a vegetable garden together with husband, Tomas. They also have four children. Here is a short four-day diary of Florencia's activities.

August 26.

Florencia was winnowing rice at about 5 in the afternoon to prepare it for cooking. She later boiled the rice and cooked some river ferns she had earlier gathered after planting rice in Agapito Lawit's ricefield where she joined an amuyo party. She left

her youngest child with her mother. Tomas, on the other hand, went to repay a loan of food (vegetables) from Alban, a neighbor, by working on his vegetable garden.

August 28.

Florencia weeded her sweet potato field. Tomas was also out in search of iron roofing for his father's house. Their eldest, aged 11, took care of the youngest child. Florencia spent the whole day working on her swidden.

September 2.

Florencia hoed their vegetable garden and brought along her youngest child. She could not accomplish much hoeing the entire day since her child was quite disruptive. Tomas, meanwhile, went to gather yams for their pigs in their swidden plot uphill.

September 4.

Florencia had to go to her mother-in-law's (Mina) swidden to harvest sweet potatoes for her brother-in-laws' hogs. Her brother-in-law had never harvested sweet potatoes in his life before since his mother used to do it. Today, Mina is ailing with rheumatism and arthritis thus she can no longer harvest the tubers for her son.

Source: Work-day diaries of six households, Canabuan, April 1996 to February 1997

On September 2, Florencia took on more male tasks, like hoeing, while Tomas, her husband went to harvest on her swidden, usually considered a female task. Exigencies of time and survival have compelled many young couples, such as Florencia and Tomas, to overlook the gendered norms governing the division of labor, especially at a time when they are engaging in multiple resource use activities. However, when it came to pleasing her mother-in-law, Florencia had to concede to the traditional gender norms on labor. This is also an example of the tendency for the gender division of labor to be more flexible in intra-household arrangements than in interhousehold ones.

The state and morphology of bodies, as well as one's subjective experiences of pain and discomfort affect one's capabilities. To recall, Carmencita's inability to engage in reciprocal labor arrangements in exchange for male labor rests largely on age and time limitations. Inhabian's refusal to work on rice paddies has much to do with her fear of leeches. Most of the older generation of women complain that work in the ricefields causes them great discomfort because they are more subjected to water-borne diseases as well as rheumatism and arthritis are common diseases which afflict the elderly.

Seemingly light, repetitive and soundless work is for the feminine body; while heavy, short-term, publicly displayed work is for the masculine. Thus, there are differences between 'being a woman's body' and 'being a man's body.' These social inscriptions on the bodies of Kalanguya women (for that matter, in most ethnic communities in the Cordillera) are not only ideas, they acquire material form. Most of the Kalanguya female elders have stooping, curved backs and shrivelled, bronzed skins because of years of working long hours under the sun daily, repetitively planting and alternately weeding on their swiddens and dry ricefields, and carrying heavy baskets brimming with tubers on a daily basis²². On these women's bodies are inscribed the imperatives

²² In fact, the distinguishing marks of the Igorot woman -- that of a stooping woman with a curved back -- has been used in many forms of popular media.

of Kalanguya female work, the 'disciplinary history' of women, as defined by Kalanguya institutions of marriage and religion.

On the other hand, today's generation of Kalanguya women (women in their 40s to 50s), who were then young wives in the early 1970s when the villagers of Canabuan began to shift to rice paddy agriculture, do not seem to show the same signs of aging as their mothers. Their participation in agriculture does not require them to visit the ricefields daily nor haul heavy baskets of tubers home from the fields. Younger women in Canabuan have imbibed the standards and mien of femininity identified with urban women: smoother hands, erect profiles and slower gaits compared with the older generation of stooping farm women, tied to the daily rigors of farm work..

The body is molded by a great many distinct regimes; it is broken down by the rhythms of work, rest and holidays . . . its constitution as labor power is possible only if it is caught up in a system of subjection (Michel Foucault in Grosz, 1994: 148, 149).

People in the village are also conserving their labor assets -- which has become a source of tension between women and men in households. A number of women mobilize and 'mortgage' men's labor by committing this to broom-making, having to repay debts women had incurred in the name of food crisis management. Men, for their part, protect their labor by asserting their right to decide any debt to be made. Men also employ 'body capital' when they are in need of cash as they are well aware that labor-scarce households are in dire need of male labor. Male labor has become a crucial bargaining chip in food production.

Thus, the gender division of labor is also an embodied, yet differential, experience for women and men. It is more than just a breakdown and allocation of resource use activities performed by women and men. It is the historical product of social hierarchical and discursive valuations placed on distinct types of work by those who perform it and by the community at large. It is also the outcome of re-affirmed strategies and negotiations women and men employ to achieve certain states of well-being and social acceptability throughout their working lives, shaped, as it were by particular physical and social constraints and enablements.

Conclusions

The intent of this paper was to trace the changes in female and male labor in resource use over time, and the factors that have influenced and affected such changes. Findings show that gendered labor in resource use has altered largely due to environmental degradation, economic change and changes in the meanings and values people attach to female and male labor.

Commercial logging and continued conversion of forest land to agriculture have eroded hillsides and slopes, causing severe shortages in sweet potato production. Kalanguya women and men shifted to paddy rice agriculture in order to replace their former staple.

Increasing linkages with the cash economy have enabled some households to accumulate capital assets with which to easily gain access to extrahousehold labor in

paddy rice agriculture. Sufficiency in rice supply from one's cultivated fields has also determined to what degree women became their households' food crisis managers, and whether men should be enlisted as well in managing food shortfalls. Such differences in rice sufficiency have thus also led to disparities in the gender division of labor between households in the village.

Over time, Kalanguya women have become regarded as secondary farm hands in paddy rice farming whereas in the past, they were the principal resource managers in swidden farming. Paddy rice agriculture has become largely associated with male management and status-wise, has become regarded as a "steady" source of subsistence. Women, on the other hand, despite their participation in paddy rice farming, are still associated with the backwardness of swidden farming as "women are only good for *obi*." People have therefore attached higher value to male labor over female labor. Further, the norms that govern Kalanguya women's roles in resource use and management have changed over time. In the past, women were expected to be industrious swidden farmers and livestock raisers, whereas today, they are expected to assist the men in paddy rice agriculture and respond to the exigencies caused by food scarcity. These norms have shaped the disciplinary history of Kalanguya women, as they have complied with such norms and the demands of subsistence, which, in turn, has affected the state and morphology of their bodies. The gender division of labor is therefore also an embodied experience. Finally, just as ideas about gender shape gendered resource use, women's new tasks and activities also shape new ideas about gender. Tasks which have been regarded as exclusively male in the past are now being performed by women. Over time, new definitions of what constitutes male and female work will have emerged.

Therefore, the nature of the gender division of labor in resource use in this study is a historical outcome of environmental and economic change, and an ongoing construction of female and male labor, and the values people ascribe to them.

REFERENCES

Afable, Patricia 1989

Language, Culture and Society in a Kallahan Community, Northern Luzon, Philippines. Ph.D dissertation, Yale University, 1989.

Balasuit, Fermin, u.d.

The growing up of Kindot. Unpublished manuscript.

Barker, Thomas 1984

"Shifting cultivation among the Ikalahans." Working Paper, Series 1, Los Banos: Program on Environmental Science and Management (PESAM), University of the Philippines.

Boserup, Ester 1970

Women's role in economic development. London: George Allen & Unwin.

Bourdieu, Pierre 1977

Outline of a theory of practice. Cambridge: Cambridge University Press.

Connell, Robert W. 1987

Gender and power. Society, person and sexual politics. Cambridge: Polity Press

Dankelman, Irene and Davidson, Joan 1988

Women and environment in the Third World: Alliance for the future. London: Earthscan Publications.

Deere, Carmen Diana, 1982

“The Division of Labor by Sex in Agriculture: A Peruvian Case Study,” Economic Development and Cultural Change, Vol 30, No 4, pp 795-811.

Deere, Carmen Diana, 1995

“What Difference does Gender Make? Rethinking Peasant Studies”, Feminist Economics, Vol 1 No 1, pp 53-72.

Dolinen, Lourdes 1995

“Enriching upland development through indigenous knowledge systems: The case of Kalahan, Nueva Vizcaya.” Paper presented at the seminar-workshop, Application of Indigenous Knowledge Systems in Sustainable Development held at the Institute of Forest Conservation, UPLB College of Forestry, Los Banos, Laguna.

Feldman, Shelley, 1992

“Crises, Poverty and Gender Inequality: Current Themes and Issues,” in L. Beneria and S. Feldman (eds), Unequal Burden. Economic Crises, Persistent Poverty and Women’s Work. Boulder: Westview Press.

Fraser, Nancy 1995

“The case of Habermas and gender.” In The Polity reader in social theory, pp 201-212. Cambridge: Polity Press.

Giddens, Anthony 1984

The constitution of society. Outline of a theory of structuration. Cambridge: Polity Press.

Grosz, Elizabeth 1994

Volatile bodies. Toward a corporeal feminism. Bloomington and Indianapolis: Indiana University Press.

Hart, Gillian 1995

“Gender and household dynamics: Recent theories and their implications,” in M.G. Quibria (ed), Critical issues in Asian development pp. 39-68. Hong Kong: Oxford University Press and the Asian Development Bank.

Leach, Melissa, 1994

Rainforest relations. Gender and resource use among the Mende of Gola, Sierra Leone. Edinburgh: University of Edinburgh Press.

Lewis, Martin, 1992

Wagering the land. Ritual, capital and environmental degradation in the Cordillera of Northern Luzon, 1900-1986. Berkeley: University of California Press.

Mackintosh, Maureen, 1981

“Gender and economics: The sexual division of labor and the subordination of women,” in K. Young, C. Wolkowitz and R. McCullagh (eds), Of marriage and the market: Women’s subordination in international perspective, pp 3-17. London: CSE Books.

Mies, Maria, 1986

Patriarchy and accumulation on a world scale. London: Zed Books.

Mohanty, Chandra, 1988

“Under western eyes: Feminist scholarship and colonial discourses” Feminist Review, Vol 30, pp. 61-88.

Moore, Henrietta 1988

Feminism and Anthropology. Cambridge: Polity Press.

Moore, Henrietta L. 1994

A passion for difference. Cambridge: Polity Press.

Moss, Claude R., 1920

“Nabaloi law and ritual.” American Archaeology and Ethnology. October, Vol 13, pp. 207-342

National Census and Statistics Office (NCSO), 1970

“Nueva Vizcaya. Final Report, Vol 1.” Census of population and housing. Manila: NCSO.

Resurreccion, Bernadette (Babette) 1999

Transforming Nature, Redefining Selves. Gender and Ethnic Relations, Resource Use and Environmental Change in the Philippine Uplands. Maastricht: Shaker Publishing.

Rice, Delbert, 1974

“Integration of the Ikalahan.” MA thesis, Negros Oriental, Philippines: Silliman University.

Rodda, Annabel, 1991

Women and the environment. London: Zed Books.

Sontheimer, Susan, 1991

Women and the environment: A reader. London: Earthscan Publications.

Van Halsema, Ineke, 1991

Housewives in the field. Power, culture and gender in a south-Brazilian village.
Amsterdam: CEDLA.