

# **IMPACT OF SOCIAL AND CULTURAL FACTORS ON FOOD SECURITY OF THE DAO**

**(Field study in Lu Village, Tan Son Commune, Cho Moi District,  
Bac Kan Province)**

PHAM DANG HIEN  
TRAN MAI LAN

## **1. BACKGROUND**

Ensuring food security is the first and foremost concern of every family, community and country worldwide. In Vietnam, after 20 years of implementing *Doi Moi* (Renovation), food security was strengthened nation-wide due to improvement in strains of crops and increased crop varieties as well as employment of technological and scientific agricultural advances. To a certain extent, the quantity and quality of food rations have been enhanced, particularly for some ethnic minorities. However, in remote and isolated areas predominately inhabited by ethnic minorities, food security still remains a challenge to overcome. In order to ensure food security for these groups, attention should be paid not only to farmland, infrastructure and investment capital, but also to the impact of social and cultural factors.

In Vietnam, the issue of food security among ethnic minority groups is included in the national strategy on hunger eradication and poverty reduction. It is closely aligned with other State policies and programs on agricultural and rural development, such as Program on seeds

and animal breeds, Poverty Reduction Program, Program 135, National Plan of Action on Nutrition 1996-2000 and National Strategy on Nutrition 2001-2010. The Vietnamese Government has set targets to meet international standards on energy intake per capita (2,600-2,700 Kcal) and attaining food security by 2010. However, there remains many constraints and barriers in achieving these targets. The question then becomes a matter of how to ensure a sufficient supply of food, food quality and safety, and food availability suitable for ethnic groups through sustainable agricultural development. Many international organizations have proposed that the best way to ensure food security is production, processing, preservation distribution and avoiding negative market's impacts on food (FAO, 2000). They have promoted the use of suitable food production technologies in order to bring about benefits for humans and the environment. They also tried to raise awareness about gender issues and the role of gender in food security, especially pertaining to poor and vulnerable groups.

Vietnamese researchers approached tackling food security issues from different

angles starting in 1990. Economists and nutritionists were interested in nutrition from a household food security perspective (Pham Van Hoan, et al., 1995; Tu Giay, 1996, Nguyen Thi Loan, 1998). Ethnologists and anthropologists were concerned about behaviors of social groups, impact of family, clan and community relationships, traditional institutions in culture, society, local knowledge, entitlement of land and natural resources on food security of the population. Anthropological approaches are significant to the development of policies and programs in ensuring food security for communities and ethnic groups. Yet, research studies have been conducted only in certain ethnic groups such as the Ro Mam and Hmong (Vuong Xuan Tinh, 2001; 2002; 2003; 2004) and are limited in both approach and research content.

## 2. Overview of research site

This field study is conducted in the Dao community in Lu Village, Tan Son commune, Bac Kan province.

Bac Kan is a mountainous province in northern Vietnam. The province has a natural area of 4,857.21 km<sup>2</sup>, where more than 90% is hilly and mountainous and only 6% is used for agriculture. The average farmland is only 0.6 ha/household (Chu Viet Luan, Ed. 2003: 120). Land use coefficient is low, only 1.79 times/year<sup>1</sup>. The province's population is 275,165 persons, which 80% are ethnic minorities such as Tay, Dao, Nung, San Chay,

Hmong and Hoa (General Statistics Office, 2001). In 1997, the average food share of this province was only 217 kg/person per year. During the pre-harvest period, food aid were provided to 10,000 households<sup>2</sup>. For this reason, the provincial authorities created an early plan for food development, and raised the per capita food share to 400 kg in 2004. However, food security is difficult to sustain in part due to the large disparities among regions and with ethnic minorities, the food share is only 120 kg /person per year<sup>3</sup>. The provincial Party Committee and People's Committee have collected demographic data on the province's economic, social, ethnic and population characteristics in order to help monitor the effects of programs focused on hunger eradication, poverty reduction and socio-economic development. Some research studies have briefly introduced the province's socio-economic issues (Chu Viet Luan, 2003), and cultures of ethnic minority groups (Bac Kan provincial Party Committee and People's Committee, 2003; Cultural identity and tradition of ethnic groups in Bac Kan province, 2004). With the special characteristics of Bac Kan province, the issue of ensuring food security is closely related to the implementation of policies toward ethnic minorities, including the Dao. This ethnic minority group has a population of 45,421, and ranks second behind the Tay as the largest ethnic group in the province (General Statistics Office, 2001). This ethnographic study will

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<sup>1</sup> Statistics Department of Agriculture and Rural Development, Bac Kan Province 2004.

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<sup>2,3</sup> Statistics of Mass Mobilization Department of Bac Kan provincial Party Committee 2004.

examine the impact of cultural and ethnic factors on meeting the food security needs of the Dao in Lu Village, Tan Son Commune, Cho Moi District, Bac Kan Province.

Lu Village is one of six villages in the northeastern region of Tan Son commune, and is situated in the northeastern part of Cho Moi district. It is one of 101 poor communes in Bac Kan province. It borders the villages of Nam Dat, Na Khu, Khuoi Deng 1 and Khuoi Deng 2 of Tan Son commune to the west and south; and Con Minh and Quang Phong communes of Na Ri district to the north and east. Lu Village lies on the southwestern side of the Ngan Son mountain range, which is 1000 m above sea level. This village has varying types of climate based on three seasons: 1) Monsoon season is hot from the fourth to seventh lunar month; 2) Hot summers in the eighth and ninth lunar month; and 3) Winter last from the eleventh to third lunar month of the following year. Lu Village, similarly to the entire mountainous region of Bac Kan province, never has hurricanes. Instead, it is often hit by whirlwinds and hail storms during the early and late part of winter. Hoarfrost occurs in late winter and fog appears in late spring. The lowest temperature in winter is  $-2^{\circ}\text{C}$ , and the highest in summer is  $30^{\circ}\text{C}$ . The average humidity ranges between 80 and 85%, with an average rainfall of 1400 – 1800 mm/year mainly between the fourth to seventh lunar month. Lu Village is located upstream from a network of five big tributaries: Khuoi Lu, Khuoi Sao, Khuoi Than, Khuoi Vay and Khuoi Thom. These

tributaries converge to form the main stream winding through Lu, Khuoi Deng 1 and Khuoi Deng 2 villages of Tan Son commune, which flow into the Cau River. Lu Village has two hamlets, Trong (inner) and Ngoai (outer), which account for 85% of the total number of households. The main stream naturally divides the two hamlets, and houses fall along both sides of the stream. In 1999, the inter-village road was expanded from Trong to Ngoai Hamlet, and to Highway 3B, which also runs along the main stream. The forestland and climate greatly affect production activities of the local population.

The Dao community in Lu Village was first established in 1940s when the first households migrated and decided to settle here. They received land and forests from the Tay. In the subsequent three decades, many households moved in and out of the village. From 1960 to 1980, the Dao in Lu Village were mobilized to resettle in the lowlands in order to establish agricultural cooperatives. This ethnic group and their land entitlement underwent several changes. Households lost most of its economic function. Since the implementation of Resolution 10 on Piece Work System and due to the allotment of land and forests to households, the economic function for families was gradually restored. In 2004, Lu Village had 60 households with 284 persons, which 129 (45.4%) comprise the main labor force. In comparison, there are 273 households with 1311 persons in the Tan Son commune, which 600 (45.8%) make up the main labor force<sup>4</sup>. The Dao in Lu

Village primarily thrive on farming. They grow wet rice in small fields along streams, and dry rice and maize on upland fields. In 2004, most (95%) households in Lu Village reported having more than 15.2 ha<sup>5</sup> (34%) of one crop rice fields in a total area of 43.6 ha<sup>6</sup> in Tan Son commune. In addition, they also have over 8.3 ha<sup>7</sup> (7%) of the total area of 117 ha<sup>8</sup> of upland fields in the commune. Due to the lack of regular water availability and long, cold winters, most of the food and subsidiary crops (such as rice, soy beans, ground nuts, taro and cassava) can only be grown once a year. Short-term hybrid maize can have the potential of three crops per year, but in actuality even with favorable weather conditions and enough land for rotation, they only produce two crops per year. Cattle and poultry breeding play an important role in the economic activities of most of the households in Lu Village. Buffalos and cows are raised for the purposes of special occasions, such as ceremonies and festivities. In 2004, there were 99 buffalos, 10 cows and 86 pigs<sup>9</sup> in Lu Village, compared to 421 buffalos, 273 cows and 508 pigs in the entire commune<sup>10</sup>. In recent years, new crop strains, animal breeds and farming techniques have been introduced, resulting in better yields. However, many households, particularly the poor, still retain traditional and less effective farming practices and livestock breeding.

Agriculture and forestry play an important role in the livelihood of the population in Lu Village. The main source of income for all (n=57) surveyed households were from agriculture and forestry. Within these households, 5.3% of (n=3) households also receive social benefits, while 3.5%(n=2)of households receive additional income from services (such as trading of sundry and selling home-made wine) and 1.8%(n=1) of households earn supplemental income from selling gathered waste and scraps. Since 2000, households started to be granted with Red Book of land use right for their farmland and forestland. Some households were piloting high-yield crops, such as bamboo shoots and anise. In Lu Village, there is a rather high proportion of machines in the entire commune: 28% motorbikes (46<sup>11</sup>/164<sup>12</sup> units); 35.7% plowing machines (5<sup>13</sup>/14<sup>14</sup> units); 17.6% rice husking machines (3<sup>15</sup>/ 17<sup>16</sup> units); and 46.7% rice threshing machines (14<sup>17</sup>/30<sup>18</sup> units). Based on the assessment of Tan Son Commune People's Committee in 2004, when 60 households in Lu Village were compared to households in the commune, they fell into certain categories: no well-off households, 22.5% (n=29 of 129) average households, 21.7% (n=28 of 129) poor households and 17.6% (n=3 of 17)<sup>19</sup> very poor households. However,

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4, 6, 8, 9 Statistics from the Tan Son Commune People's Committee in 2004

5, 7, 10 Statistics of the household survey in 2004

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11, 13, 15, 17 Statistics of the household survey in 2004  
12, 14, 16, 18, 19 Statistics from the Tan Son Commune People's Committee in 2004

when asking local residents about households' socio-economic status classification (n=66), a different picture is depicted based on group discussions conducted in 2006: 22.7% (n=15) well-off households, 45.5% (n=30) average households, 19.7% (n=13) poor households, and 12.1% (n=8) very poor households. Among the very poor households, 62.5% (n=5) face extraordinary difficult circumstances<sup>21</sup>. Implementation of Program 135 and other projects have brought about positive changes to the lives of residents in Lu Village, particularly related to improving their food security situation.

In the next section, an assessment of the relationship between social and cultural factors and food security among the Dao households in Lu Village will be presented.

### **3. Research outcomes**

#### **3.1. Role of traditional social institutions in ensuring food security**

##### ***3.1.1. Role of family type***

In Lu Village, the nuclear family (consisting of the husband, wife and children) has been increasing popular. A Dao family in this Village follows a patriarchalism, which favors the power of the father and the husband. After marriage, women move in and live with the husband's parents. In 2005, Lu Village had 60 household families with an average size of 5.11 persons/household; the

smallest family having 2 members and the largest family having 9 members. These figures are slightly higher than the average family size compared to the Tan Son Commune (4.79 persons/household). Extended families were limited up to three generations, with 26.6% (n=16) households. Furthermore, the make up of households with three generations living together vary slightly between socio-economic status: 53.5% (n=8 of 15) well-off families with three to nine members, 19.2% (n=5 of 26) average families with three to seven members, and 13.3% (n=2 of 15) poor families with two to seven members. Thus, a linkage can be implied that living in an extended family type of environment can possibly be more advantageous in regards to higher socio-economic status and lower risk of food insecurity. For example, most households seemed to be better off economically when there were several members from three generations living under the same roof. This advantage can be related to the characteristics of an agricultural economy, which is embedded in the Dao culture, where families consist of several members of varying age groups, and there is a division of labor based on age. Moreover, according to the local population, well-off families often are households that directly inherit the "wealth" (such as property, means of production and work experience) from previous generations.

More recently, the trend in Lu Village is increasing number of nuclear families. When a married couple (that may have unmarried children) is able to afford to live

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<sup>21</sup> Statistics of the household survey in 2004

on their own, they become independent and move out of their parents' home. In May 2006 alone, there were six households in the village that moved into their own housing and no longer lived in a three-generation household. There is a desire from the couple's parents as well as by the young married couples themselves to gain independent legal status so they can reap the benefits from State policies on socio-economic development that consider households as the targeted unit. When separating, household has to make social and utility contribution. However, the household is viewed as an autonomous economic unit, and that is the unit used for allocation of benefits from policies on investment and development. In Lu Village, households that just gain their independence are allowed to establish new residence land, exploit timbers for construction of their houses and reclaim land for cultivation to ensure their food security. At present, the relationships between Dao households in Lu Village are expanding. In addition to existing traditional labor exchanges, now hired labor help has developed in agricultural production, forestry and timber exploitation.

### ***3.1.2. Role of family clan relationship***

The Dao in Lu Village belong to the Du Tsang group of the Red Dao in Bac Kan province (Identity and Tradition ... 2004:161-169). In this Dao community particularly among those who come from the same clan, families are closely bound together and help care for each other in their daily lives. They share to each other

experiences in production, provide labor support in all activities, offer food assistance when someone experiences a food shortage, and lend money to each other without requiring interest or a set time frame for repayment. In those cases, both the lenders and borrowers have achieved a level of trust where no signed agreement is needed and transactions are based on verbal agreements. The loan recipients are able to make ends meet in a timely manner when such support in kind (such as rice, cattle or poultry) or in cash is available, and repayment is planned on a feasible timeline without the fear of accruing interest. This type of mutual help is advantageous, particularly for families of average socio-economic status when overcoming difficulties due to major events (such as home construction, weddings, "qua tang" ceremonies and funerals). This also benefits poor households that encounter the most difficult time and risk of going hungry during the pre-harvest season.

During 2005, the Dao in Lu Village has various family clans: 3 Trieu, 2 Ban, 2 Hoang, 1 Ly and 1 Tran (comprising 58 of 60 households). There also Tay and Kinh households living in the village. In general, the size of family clans is small. Unlike before, households of the same family clan typically do not reside or have farmland close to each other, or are concentrated in the same area. The mutual assistance offered by neighbors from different family clans is more common. At present in Lu Village, mutuality between families of the

same clan is relied upon in addition to reciprocal assistance between families of different clans in the community. The development of this latter type of relationship has reduced the influencing role of family clan on one's economic livelihood, which was considered more important in the past. However, the relationship between household families of the same clan continues to remain important. Based on interviews conducted in Lu Village, the kinship or close relationship between household families is a basis for economic and social association. For example, members of the same family clan take part in joint ventures in production. In addition, households help each other by offering assistance with cash and rice to prevent food shortages, such as in the case of the households of B. Thi V.), support of capital, animal breeds and strains, loans taken out for production development without accruing interest and resources pooled when there is a major expense (such as a wedding for the Tr. T. T. household or organization of an adulthood transition ceremony for the households of Tr. V. T along with his father and four brothers and sisters). In the context of Doi Moi, the kinship relationship in Lu Village is not limited to labor assistance or exchanges as seen in a traditional Dao society, but can include joint ventures, associations or cooperation at a higher level in order to work together on production development.

### **3.2. Impact of traditional cultures on food security**

#### ***3.2.1. Behaviors of household groups in economic restructuring***

Traditional activities of Lu Village residents in ensuring food security include upland farming and wet rice cultivation, cattle and poultry breeding and exploitation of forest resources. In recent years, the structure of crops and livestock breeding have undergone positive changes due to the Party and State policies on socio-economic development and the benefits of changing to a market-based economy. Prior to agricultural collectivization, the Dao in Lu Village already practiced wet rice cultivation but using very rudimentary techniques and absence of fertilizer use. Since then, this practice has gradually evolved for the better despite the utilization of some traditional farming practice in cultivation and livestock breeding. Household families in Lu Village use buffalos as draught animals. Over the past several years, as the market of buffalos and cows in Bac Kan province has developed, many households have switched to raise them as commodities. The study's survey conducted in July 2005 reported that 86% (n=49) of surveyed households raise buffalos, with the least having one buffalo/household and the most with 7 buffalos/household. Among these households, only 2 households also raised 10 cows.

Lu Village is situated at a high altitude with steep slopes and has cold weather, which usually not suitable for raising cows. Among the remaining households (n=8) that do not raise buffalos or cows, 7 households are considered poor by fellow villagers. As in many other ethnic minority areas in mountainous regions, buffalos are raised in this type of setting since they are free to graze. Since 2000, when the forestlands near villages were allotted to households, buffalos also were raised in this type of setting. Other households that were economically well-off instead hired laborers to tend to their buffalos at a rate of 3,000 – 5,000 VND/person per day. A few households have built stables and start to grow elephant grass to feed their buffalos and cows. Pigs are raised in pigsties, which are simple to build since it resembled a big cage with a roof located along streams. Households which raise poultry in a large number of dozens of them still use bamboo wattles to round them up outdoor (the highest number one household raises is 40).

The Dao in Lu Village do not consider vaccinating their cattle and poultry. In 2004, all household families in Lu Village suffered a great loss caused by the birth flu. In the latest vaccination drive in May 2005, the rate of vaccinated cattle in Lu Village was pretty low: 32% buffalos (46/144), 0% cows (0/10) and 33.3% pigs (20/60). In Tan Son commune, the rates are higher, with 36% buffalos (102/284), 20% cows (50/251) and 41.2% pigs

(178/432) that were vaccinated<sup>22</sup>. In livestock breeding, local races of cattle and poultry still predominate partly due to the animals adapting to the topography and climate of Lu Village as well as people maintaining their traditional practices.

In 2004 - 2005, there was one household that was poor that raised 14 goats. Other households also turned to raising fish. A household survey conducted in July 2005 reported that 19.3% (n=11) of surveyed households had raised fish, which about half (n=5) were well-off households and the other half (n=6) were average households. Fish are bred in water holes along streams or in water logging fields in mountain creeks, which have been improved into ponds. All these households purchase fish fingerlings to stock the ponds so the families do not have to actively tend to them. Whenever they need fish, they just use their fishing nets. In this way, fish farming is not much different from raising buffalos. In general, livestock breeding in Lu Village is still characterized by traditional practices without any dramatic changes to both how animals are raised nor the type of animal races.

Lu Village residents have made great strides in cultivation development, particularly pertaining to main food crops such as rice and maize. In the language of the Dao in Lu Village, *b'iiio m'ey* means "rice paddy," but it also means "food." Thus, there is little difference in the concept of household food security and

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<sup>22</sup>Statistics from the Tan Son Commune People's Committee in 2004

rice farming (both wet rice and upland rice). Some households in Lu Village still prefer to grow traditional upland rice varieties even after being exposed to new rice varieties. Since late 1990, new rice varieties have been introduced and widely used by the people in Lu Village. At present, most of the households in the village grow new rice varieties, such as Tap Giao (Tap Giao 1 since 1998), Khang Dan, Nhi Uu and San Uu, as well as new hybrid maize varieties, such as Bioxit9698, CP999, CP888 and NK4300. At the time of this survey, most household groups used new rice and maize varieties as crops to help ensure food security: 100% well-off households, 95.8% average households, 90.5% poor households and 60% very poor households (where two of five households did not use them because they do not own any farmland). There is a 95% rate of households using new rice varieties in lowland farming in Lu Village, which is the same rate for the entire Tan Son Commune and Cho Moi district. The application of new rice and maize varieties on a large scale demonstrates a shift in households' use of technological and scientific advances in agriculture to ensure food security through direct food production.

Although most use new rice and maize varieties, many households in Lu Village still devote part of their farmland (mostly upland) to growing old varieties. This represents the desire to preserve traditional farming practices and retaining the old types of food crops. Traditional upland rice varieties continue to be grown because people still prefer the taste, particularly

*b'eo chai nau* rice variety (broken back rice), and this type remains one of the high-yield traditional rice varieties. The role of traditional practices on food production in Lu Village also is seen in some other aspects, especially among poor households.

From interviews conducted in 2004, we found that 2 of 56 (ones of an average and poor economic status) surveyed rice farming households still grew *doan ket*, a rice variety existing since the period of agricultural collectivization. Despite producing lower yields (80%) and having a longer growing period (grown one month before and harvested one month later) than new hybrid rice varieties, it has good resistance capacity, requires less labor. In addition, a major reason why the two households still grow this rice variety is because it provides food sufficiency, and these two families did not experience food shortages.

Other households still cultivate wet rice with traditional practices of not using fertilizer (or only use the volume of fertilizer subsidized by the Government), thus their rice yield is only 170 – 240 kg/bung (one bung is 1,000 m<sup>2</sup>). In contrast, the common rice yield in Lu Village is 450 kg/bung and 425 kg/bung in Tan Son commune. Unfortunately, poor households have a difficult time maintaining the use of new rice varieties and often resort to keeping old varieties since they cannot afford new varieties or encounter poor quality of seeds in the previous rice crops.

People in Lu Village have lived for a long time in a forest environment; therefore, the structure of their production activities for food security is not confined to only food farming. In addition to growing rice, maize, seed and tuber plants, residents also grow industrial crops and exploit forest products. In recent years, the structure of these activities has been changing, with an initial shift of traditional practices in production, crop harvesting and animal breeding to a market-oriented economy that employs application of new farming techniques and scientific advances. Regarding non-food crops such as different types of small bamboo (*truc sao*, *truc cau*, *mao truc* and *truc bat do*), anise, high-yield ground nuts and ginger, the cultivating ways are differences among households. These new crops are piloted most commonly among well-off households (13.3 - 100%), followed by average households (12.5 -100%) and poor households (4.7 - 90.5%). Very poor households usually do not grow these crops for several reasons. The main two is that initial investment and tending techniques are beyond their capacity, and it is not practical to learn how to grow them since they have more immediate needs for food. However, some poor households have tried. In 2006, the Tr. V. S. family was interviewed. They were one of five households constantly struggling with food shortages for many years in Lu Village. This family already invested 1,750,000 VND in growing ginger on a bung of land (1000 m<sup>2</sup>) in the early part of the year. Another example was the B. T.

H. household. They pioneered how to grow *mao truc*, a type of small bamboo that is valued at a higher rate. In 2004, they were being sold for 25,000 VND/kg, and are particularly popular in the Taiwanese market. They still continued to venture in this crop knowing that the crop can only be harvested after seven years. In addition, they do not receive any preferential interest rate (0.45% per month) when borrowing money from the Policy Bank and used the “Red Book” of their forestland use right as collateral when they took out a loan in June 2004 for 5,000,000 VND that had a high interest rate (0.85% per month) for the purpose of investing in growing 0.45 ha of *mao truc*.

### 3.2.2. *Effect of consumption customs*

The Dao in Lu Village have always been autarkic farmers. In general, they never sell products that they have produced, such as rice. Well-off Dao families sometimes have a surplus of rice, and they keep it in storage for their families for the coming years. During the 2005 household survey in Lu Village, researchers found this was the case with Mr. B. K. P.’s family. He had a surplus of rice that was enough to last for several years as well as a pig he was raising for the past 7 years. This case could be considered an extreme example of a self-sufficient household with no problems of food insecurity. However, most of the households having a surplus supply of food use it for distilling wine. In the past, when availability of rice paddies was scarce, people often used maize to distill wine, but have since been replaced with

rice. On the other hand, many households continue to suffer from chronic food shortages and do not have any plans since the start of the harvest to balance their food consumption with availability. So when they run out of rice, they are forced to borrow rice or consume maize or cassava as substitutes. The habit of not planning and budgeting in advance often occurs in poor households, and can greatly affect their food safety in terms of both quantity and quality. During group discussions with villagers, some participants mentioned that families which experience annual food shortages do not know how to balance their food consumption. For instance, they often have surplus rice after the harvest and use it for wine distillation and offer it to buffalos. Then during pre-harvest months, they run out of food and have to borrow rice or cash, and later spend their time working to repay the loan during harvesting season. In other words, working to repay the loan is the top priority during the farming seasons, instead of devoting more time to growing crops during the most ideal time of the season; thus, resulting in a lower crop yield.

For daily meals, most of the households in Lu Village consider the amount of rice, salt, fat and vegetables consumed, thus, resulting in poor nutrition. Meat and fish consumption is limited to occasions. So when nutritious food is available, it is readily consumed within one or two meals, and then there is a long pause before it is available again. Often times meals end up only including rice or maize. These same

households consider food crops, such as rice, maize and cassava, as a priority, and have to spend money on purchasing other types of food; thus, they end up with little to no capital to invest in production expansion. In recent years, households in Lu Village have experienced a high yield of new rice varieties, which may help in changing the composition of daily meals as well as strengthen food security. In the past, maize was an important component in the food rations of the Dao, even among well-off households. Today, families in Lu Village, including households with food-shortages tend to consider rice their main source of starch and maize is used for selling or livestock breeding. The eating and spending habits of the Dao influence the way business is done, while at the same time, changes in the use of new varieties cannot be ignored and also affects business practices.

The daily life of the Dao includes major events and traditional customs that have incur a lot of expenses, and subsequently, play a role in increasing risk for food shortages. These events include construction of a new home, weddings, funerals, festivals and transition to adulthood ceremonies, and all require a lot of money and purchase of food. As discussed earlier, the common trend is for newlywed couples moving out and living independently from their parents in order to start their own family. This would require them to saving towards construction of a new home. Some of these recently married couples decide to build a

house even though they may not have enough money. This can later affect their ability to invest in production as well as have a stable economic status and household food security. According to Lu villagers, each new house usually made of wood is about 50 - 60 m<sup>2</sup> and may require an additional 10 m<sup>3</sup> of timber for furniture. The total expenditure for the wood can cost up to 10,000,000 VND. Poor households often cannot afford timber or have the money to hire laborers to cut timber; thus, they often times have to stay in poor living conditions in temporary, worn out homes. Overall, this puts these households in a difficult economic situation not easy to surmount, which eventually goes on to affect their level of food security.

The Dao in Lu Village celebrate Lunar New Year for about two weeks (from the 20<sup>th</sup> day of the 12<sup>th</sup> lunar month to the 3<sup>rd</sup> day of the Lunar New Year). During this occasion, each household sacrifices a pig typically weighing about 30 - 40 kg and worth 400,000 - 600,000 VND. They also make sticky rice cakes, buy fruit and flowers and prepare parties with dishes made from pork and cereals. This is a major cultural event when people often spend a lot of money and make lavishly food purchases. In the last days of the lunar year, families invite shamans to hold a ceremony to thank ancestors, drive away evil spirits and bad luck of the previous year, ask for good health for family members and wish for good luck for the upcoming year. After the ceremony, the

head of the household gives the shaman 1 kg of pork, bowl of rice and some money (usually 500 - 10,000 VND). During the New Year Festival, adults give children under five years of age are given money for luck (usually 2,000 - 5,000 VND). Also during this festival, each adult spends on children on average from 50,000 to 60,000 VND. In addition, there is another festival on the 15<sup>th</sup> of the first lunar month and the 15<sup>th</sup> of the 7<sup>th</sup> lunar month known as Wandering Souls Day). This is time when people need to buy a lot of food, such as chicken, duck and rice in order to make noodles and cakes.

The life cycle rituals of the Dao in Lu Village also involve a lot of major expenditures. Just recently have new cultural practices been implemented. The village has adopted specific guidelines on the content and amount for wedding presents, including no more than 80 kg of meat, 80 liters of wine and 2 million VND in cash. The custom of exacting wedding presents of silver coins was eliminated in 1990. Nowadays, the average amount spend on a wedding is about 6,000,000 VND. Items needed include about 20 - 50 tables each seating eight persons, labor for making clothes, bags, cloth band, scarves and enough gasoline to operate the generator for up to two days and car rental to pick up the bride in the case that the bride's family lives faraway. If the bride's family organizes the wedding instead of the groom's family, then the expenses would be doubled. The Dao often gives cash as the wedding present. Invited guests

and relatives often give 50,000 - 100,000 VND at each wedding. Neighbors, depending how close is the relationship, can give between 20,000 -50,000 VND. The wedding is normally planned for one entire day, and villagers engage in drinking wine, singing songs and playing cards throughout the night. The next day they often are too tired to work because of staying up late or becoming drunk, which make them less productive for work.

The rite of passage into adulthood is the most important as well as one of the costliest events for the Dao, often requiring 3,000,000 - 4,000,000 VND. The person participating in this ritual has to have 20 m of white fabric, 1 m of red fabric, 5,000 - 6,000 sheets of yellow paper, 50 - 100 sheets of red paper, 3 - 5 pigs each weighing at least 50 kg, 100 - 150 liters of wine, 100 kg of rice, 4 - 5 large chickens, 8 pig's trotters and payment to shamans for 2.5 - 3 million VND. This type of ritual often lasts 3 full days. The shamans first have to write enough papers for offering (takes an entire day), the ritual is held right afterwards for the next two days. A large banquet is held for family clan members, relatives, friends and fellow villagers. The Dao think that the more guests eat, the more lucky the person who is being celebrated will receive.

However in Lu Village, 90% of eligible males do not partake in this ritual since it requires so much time and money. The remaining 10% are forced into having this event, and later face hardship in recovering

financially from hosting it. According to tradition, they run the risk of misfortune, illness and business loss since it is believed that deceased ancestors demand them to hold this ritual. Only when the ritual actually occurs, the participant may be able to escape from this possible misery in the future. Therefore, families have to contemplate which of the two consequences they are willing to accept - having to figure out how to pay for organizing the ritual and then later struggling to recover from such large expenses or putting the child at risk for prospects of a bleak and hard future.

A funeral for the Dao in Lu Village typically costs 3,500,000 - 4,000,000 VND, which includes expenses for the coffin, food for those who come to help and payment for the shamans. For a funeral, at least two to three shamans are invited (chief shaman, assistant shamans). Men who pass away and held a 7-lamp maturity ritual earlier in life are entitled to a 3-day and 3-night funeral ceremony that requires continuous rituals to be performed. This is very costly and tiresome, especially compared to a typical funeral that only takes one full day.

After the ceremony, the host often gives the chief shaman two pig's trotters, a pack of steamed sticky rice and bottle of wine. Payment is given to all three shamans as well as to persons who have come to help during the funeral. Poor households usually offer the shamans 500,000 - 700,000 VND, while well-off families give 1,00,000 - 2,500,000 VND.

A funeral ends up costing the host family as well as the entire community. Family clan members often bring offerings to the funeral (such as incense, flowers, fruit and a chicken), while other attendees often bring cash offerings (50,000 - 100,000 VND denominations). According to the Lu Village's regulations for funerals in 2005, each family must send at least one member to help and present the host with 1 kg of rice and 5,000 VND. For those who unfortunately pass away at a young age, the host has the invited shamans present so they can ask for a peaceful life for the deceased. The cost of this ceremony is about 400,000 - 500,000 VND.

Besides those rituals, the Dao have to pay for other events, such as for fortune telling services during times of illness and misfortune, and praying for health and longevity. These may not cost as high as funerals and weddings, but nevertheless, it still require time and some money that could have gone towards something else.

If we compared expenditures for any one of the big events previously discussed to the average household income, it would be apparent to see how the expenses could cause financial shortcomings, and ultimately affect a household's economic stability and food security. Overall, a family can spend on average 400,000 - 500,000 VND for Lunar New Year festival, 3 - 4 million VND for a wedding, 3 - 4 million VND for passage to adulthood ritual, 3.5 - 4 million VND for a funeral and 6 - 10 million VND for construction of a new home (totaling at

least 12,900,000 VND). On the flipside, 57 surveyed households in 2004 only had an average annual household income of about 8,492,300 VND. It is no surprise there is a proportional relationship of economic status with food security. These types of expenses are particularly hard for very poor households to afford when the average income is about 50,000 VND/person per month. One good consolation for them is they have support from relatives and the community..

### **3.2.3. Role of women**

The Dao culture is a patriarchal society. The decision makers in the family are the father and husband. Among the 60 households in Lu Village, there was only one female-headed household. Women still play an important role in achieving food security for the household. They may not only take part in all food production activities, but is responsible for nutritional meals in the family. The Dao women often take on more jobs and work longer than the men. They engage in field work, such as preparing soil, sowing seeds, transplanting rice, watering, weeding, harvesting and transporting the rice, In addition to those tasks, they also are responsible for most of household chores, such as collecting firewood, fetching water, washing dishes and clothes, cooking, raising pigs and chickens, tidying up the house, distilling wine and preserving food. The overwhelming majority of all production and domestic activities are performed by women. Men take on such duties, such as cutting timber,

slaughtering pigs and holding ceremonies and rituals.

In households with food shortages, it is up to the wife to initially attempt to overcome this problem and find food sources to feed her family. The wife also is the one who tries to make both ends meet and has to first cope with difficulties when her husband gambles and loses money, as in the case for Mrs. B. Thi K. As in the case of Mrs. L. Thi M., she kept the responsibility of taking care of meals for the family, despite simultaneously being the caretaker for her children who needed to seek medical care and coping with a drunk and possibly violent husband. These are examples of women who often come from poor households that face food shortages. Most of them have far upland fields, lack information and do not take part in meetings or agricultural training workshops. They have less opportunity to access credit loans and understand or be aware of production development policies. The responsibility of ensuring food for the entire family is a heavy burden that rests on their shoulders. Women sometimes are forced into working as hired laborers, collecting forest vegetables for their daily meals and collecting firewood, medicinal herbs, orchids and waste scraps in order to later sell.

Beside those type of women who have been discussed above, other type of women in Lu Village have to be proactive in achieving household food security and trying to maintain a stable household economy. They take the initiative to learn

about policies regarding land and forests, as well as about farming techniques in order to improve their household economic status. Similar to B. Thi K. and H. Thi T., they were among the first to receive farmland and forestland allotted for production, protection and livestock breeding, take part in agricultural training courses and pilot new crops and animal breeds to ensure household food security. Other women from poor households, try to employ more immediate measures to overcome food shortages and escape poverty by relying on the support of relatives and the community. This is the case with Mrs. B. Thi V., who is very industrial-minded and works as a hired laborer to overcome food insecurity problem. Due to the opportunity made available by the Village Women's Union, she was able to be approved for a credit loan used for production development since her husband was not trying to help. Another good example of a hard working woman is Mrs. B. Thi N., who is dynamic and persistent in her work ethics. She was able to retrieve reclaimed land for food production while boldly joining other farmers in growing new crops and breeding new animal races as an attempt to alleviate poverty for the family and community. She has used the family's Red Book of forestland use right as collateral when borrowing money from a commercial bank with high interest rate. With the help of her older sister, she used that money to invest in growing *truc sao*, *truc mao* and raising dogs, and later use earned income to repay the bank by winter.

Although there is only a single household out of 60 in 2004 and two out of 66 in 2006 that are headed by a female in Lu Village, women still play an important role in ensuring food security, tending and protecting forests and exploiting forest, land and water resources for the purposes of developing crop production. In the past few years (2000 - 2005), only a handful of women have borrowed money from the bank and taken part in training courses on farming techniques in agriculture and forestry. Therefore, they need more support to have more women actively participate in economic development, and most importantly, working to ensure food security for their families. The Women's Union branch in Lu Village with 60 members is actively contributing to this issue. In addition to coordinating with the Commune Women's Union and commune authorities in organizing loans for women from the Policy Bank, this village branch has also organized labor exchanges and offered assistance to its members during farming seasons or times of illness.

### **3.3. Impact of education and capacity to access food security policies**

#### ***3.3.1. Relationship between age, educational level and food security***

The age breakdown of 57 heads of households surveyed in Lu Village is as follows: 28.1% (n=16) under 30 years old; 40.4% (n=23) between 31- 40 years old; 17.5% (n=10) between 41-50 years old; 12.3% (n=7) between 51-60 years old; and 3.5% (n=2) over the age of 60 years. The overall average age of a head of household

is 37.7 years. In addition, the only female head of household falls in the 31 – 40 age bracket.

There is a low education level for nearly all heads of households. There are 80.7% (n=46) people that have a primary school education or less. There are 19.3% (n=11) persons with a lower secondary education. Unfortunately, there were no heads of households in Lu Village with at least an upper secondary education or higher. On average, the educational level of 57 heads of households is at a 3.5 grade level, where the female head had a sixth grade level. In general, the heads of Dao households are quite young with a low educational level.

Then a closer examination was performed to look at the age and educational level of household heads within different social-economic groups. Using data from 2005, fifteen poor households were found to have five heads (33.3%) under 30 years old, seven heads (46.7%) between 30 –50 years old and three (20%) over the age of 50 years. The average age was 41.3 years old. The educational level ranged from never attending school to grade 5, with an average educational status at the second grade level.

Among 15 well-off households, two (13.3%) heads of households were under 30 years old, nine (60%) were between 30 – 50 years old and four (26.7%) were over 50 years of age, with the average age of 42.7 years. The range of educational level among well-off households ranged from

never attending school to seventh grade, with an average educational status between the third to fourth grade level (3.7).

Thus, there seems to be a relationship between age and educational level of the heads of households. The heads of poor households were older than households in general (41.3 compared to 37.7 years old), but yet had a lower educational level (grade 2.2 compared to grade 3.5). The heads of well-off households had a higher average age than general households (42.7 compared to 37.7 years old), but similar educational level (grade 3.7 compared to grade 3.5). One's level of education (along with the capacity to access new knowledge and farming techniques) can play an important role in economic development as well as protecting household food security. In actuality, there is not a clear, distinct difference in educational level even though it can have an effect on a household's economic situation.

### ***3.3.2. Access to economic development policies***

In Lu Village, the policy on allotment of land and forests has been welcomed by households in various ways. When the Contract No. 10 was implemented in 1989, households were concerned about the right to land use. Together with the process of dissolving agricultural cooperatives, households gradually confirmed their land use right over the land inherited from their parents and ancestors. At the same time, many households have reclaimed land and expanded their wet rice cultivation area. Like other ethnic groups, the Dao in Lu

Village feel a strong attachment to farmland, where more farmland symbolizes more food security and greater wealth. Therefore, when land and forests were allotted to households in 1990s, the authorities of Lu Village and Tan Son commune settled the dispute of 20 *bung* of farmland (2ha). However, not all households recognize the benefits of the implementation of land allotment policy.

Mrs. B. Thi K. stated that when the district allotted land use right of farmland and forests for livestock breeding and protection, some households initially refused. A few other households, after getting farmland and forests, ended up selling the land use right certificate for 5,000 VND because they did not fully understand the policy. They also thought that the forestland was vast so they could exploit it to whatever extent. So by signing the certificate of land use right and contract for forest protection, they assumed they would need to bear heavy responsibilities for such little benefits. It was not until after implementation of the policy of hunger eradication, poverty reduction and socio-economic development in Lu Village did these households realized the advantages and wanted to get their farmland and forest back after previously selling them. In 2004, the allotment of farmland and forests in Lu Village was completed. Each household owns at least one certificate of land use right of farmland and forest. According to 57 surveyed households in Lu Village, each household is allotted 15.2 ha of lowlands, 8.3 ha of uplands and 580

ha of forestland. The average land of per person is 533 m<sup>2</sup> of lowlands, 293 m<sup>2</sup> of uplands and 23,362 m<sup>2</sup> of forestland.

In land and forest entitlement, there are differences between groups of households. Most well-off households have more than 4000 m<sup>2</sup> of lowlands, 1000 – 2000 m<sup>2</sup> of uplands and 10 - 40 ha of forestland. There was only one household of H. V. N. that only owned 6 ha of forestland (no lowlands or uplands). Most poor households only have 2000 m<sup>2</sup> of lowlands, 2000 m<sup>2</sup> of uplands and less than 10 ha of forestland. Only two households do not have forestland, while one household had neither lowlands nor uplands. Thus, the level of entitlement of land and forest for households is directly proportional to the level of household economic status and food security. It also reflects households' capacity to access policies on land and poverty reduction in this commune, which is one of the most disadvantaged communes supported by Program 135. The implementation of the land policy in Tan Son commune needs to be accelerated. Every year, the commune People's Committee allots quota for reclamation of lowlands to villages. Lowlands is considered a decisive factor for food security in the commune. Moreover, every year, more new households are established that need lowlands and forestland. At present, Tan Son commune as well as Lu Village still have land for reclamation and expansion of the wet rice cultivation area. In 2004, 5,000 ha of forestland in the commune

have not been contracted yet to any household for protection.

### ***3.3.3. Access to hunger eradication and poverty reduction policies***

According to the assessment of Tan Son commune authorities, mass organizations such as the Farmers' Association, the War Veterans' Association, the Youth Union, and the Women's Union have been increasing active in supporting their members since 2002, such as helping to secure bank loans to boost household economic development. The Project household survey reported that 56.1% (n=32) households have access to credit loans from the Social Policy Bank, worth up to 107.5 million VND. Among the fifteen households that took out a loan, 40% (n=6) were poor households that borrowed a total of 19 million VND (averaging 3.15 million VND/household). Among 26 average households that got credit loans, 61.5% (n=16) borrowed a total of 54.5 million VND (averaging more than 2 million VND/household). Among 15 well-off households with loans, 66.7% (n=10) households had loans totaling 34 million VND (averaging 3.4 million VND/household). In two loan drives that occurred in 2005, the Tan Son commune Women's Union that 99 loans would be available from the Social Policy Bank (total amount of 361 million VND). This, all types of households in Lu Village should have had access to credit loans from the Policy Bank, although the need and amount of the loan varied. Apart from households borrowing credit from the

Policy Bank, two households also took a loan out with private lenders (one is well-off and the other is specially difficult).

In 2004, 64.9% (n=37) surveyed households took part in training courses on farming and livestock breeding techniques that were organized by both village authorities, Farmers' Association and the Women's Union. There were training participants from 8 of 15 (53.3%) well-off households, 22 of 26 (84.6%) average households and 7 of 15 (46.7%) poor households. So all three types of households in Lu Village have had access to policies of credit and technical support. This signals a positive trend in crop restructuring and animal breeding in Lu Village, which is an encouraging sign for better prospects for ensuring household food security.

Besides giving a guarantee to its members as a way to encourage loans from the Policy Bank, the Women's Union branch in Lu Village also set up a fund of 2 million VND in 2005 based on annual contributions of 10,000 VND from its members. The fund is also used as another lending mechanism for female members of 50,000 - 300,000 VND, with a 2% interest rate starting the second month and repayment is due time within six months. The aim of this fund is to support members whose families have unexpected circumstances and need immediate assistance. In 2005, 20 women (33% of female members) borrowed money from this fund.

### 3.3.4. Access to other social policies

Lu Village has received financial support and assistance from the Government to help build infrastructure and develop production, particularly through Programs 134 and 135. During the implementation of these programs and other projects focused on socio-economic development, this village has benefited greatly from the construction of inter-village roads. In 1999, a road was built linking the village with Highway 3B. Also, development were seen in healthcare (hiring of two village health workers), support for medical treatment for poor families, construction of schools (primary school and kindergarten in Lu Village), small irrigation works (construction of two water dams, Lu Village 1 and Lu Village 2), rural clean water (development of a clean water system in Lu Village and Hin Phong in 2002), construction of the Village Meeting Hall in 2005, fertilizer subsidies, maize and rice seeds as well as bamboo saplings of *bat do* and *truc* for households. A program to build electricity lines to Lu Village was included in the 2005 plan, and cost 500 million VND using Program 135 funds. Fortunately, all households are equal beneficiaries of these programs and projects. However, some projects need to be upgraded and maintained.

In addition to those common benefits, households facing the most hardship also receive subsidized prices for rice, hybrid maize seeds and fertilizer. In 2004, the

subsidy reached a level of 50%, and 30% for rice, maize seeds and fertilizer in 2005. Rice was provided as food relief during the Lunar New Year and during the pre-harvest season. In recent years, these families have used this support to help improve their housing conditions (such as repairing or building new homes, and getting rid of eliminating temporary, worn out houses). For example, Mr. Tr. V. S. family built a wooden house to replace the shabby house they used for temporary lodging. He noted positive changes in production and improved strides to achieving food security. According to statistics provided by Tan Son Commune People's Committee, half (n=5) of poor households in Lu Village received support and escaped poverty in 2005; furthermore, 48.7% (n=19) escaped poverty in the commune.

#### 4. Remarks and recommendations

Lu Village residents and Dao households strive to ensure food security by producing rice for themselves, thus wet rice cultivation is viewed as the key to achieving food security. The autarchic lifestyle still prevails in their way of thinking and business acumen. Yet, they are initially attracted to the market economy with the prospects of profitable agricultural products such as maize, ginger, taro, orchids and medicinal herbs. They experienced positive impacts (such as crops with higher yield, larger profits and easy marketability and sales), as well as negative impacts (such as uneven quality of

seeds and increased crop preparation prices).

Although there are differences in the level of access between socio-economic household groups, the Dao in Lu Village have generally experienced rapid access to technology (such as use of motorbikes, plowing and rice threshing machines), scientific and technological advances in agriculture and forestry (such as application of new high-yield varieties of rice, maize, ground nuts, anise, *bat do* and *mao truc* bamboo samplings) and socio-economic development policies and programs implemented in the commune. In addition, traditional institutions (such as family clans, women's role, customs of mutuality in community and other customs and habits) are still present but is less important compared to the past.

As discussed throughout the paper, there are both positive and negative aspects on people's lives and in regards to food security. The problem of ensuring food security in Lu Village as well as in the community requires a synchronized, coordinated effort in order to successfully implement policies and local measures for socio-economic development. From a cultural and social anthropological perspective, we recommend the following: 1) In the immediate future, land reclamation should be controlled in a suitable way to ensure farmland for food production and food security; and the remaining land and forests should be allotted on the contractual basis to households which have no or little

ownership of land and forests; 2) Activities of mass organizations (such as Women's Union, Farmers' Association, War Veterans' Association and Youth Union) should be increased in providing supplies and services in the areas of agriculture and forestry (particularly regarding quality and seasonal timing of credit, materials, seeds and breeds, as well as farming technique and technological consultancy and plant protection). and boost the educational level of workers through practical training courses for heads and key labor force of households; 3) The socio-economic infrastructure of the village needs to be upgraded (such as building and upgrading water dams on Lu Stream, electricity supply from the national grid, upgrading the clean water system, inter-village road and other public projects); 4) Efforts should be made to mobilize people to develop a better lifestyle and reduce expenditures relating to customs especially if they cannot afford them, as well as to promote mutual assistance of the Dao in economic development and household food security; and 5) More investing in education should be considered such as upgrading educational facilities and promoting importance of education so all persons attend at least achieve some level of schooling) as a way to improve the educational level for future generations and human capital.

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